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Two sister organizations, the Gaia Liberation Front (GLF) and the Voluntary Human Extinction Movement (VHEMT), each believe that the death of humans is the only feasible option to restore balance. Proclaiming in their central slogan, "Live Long and Die Out!" VHEMT remains dedicated to "voluntary extinction" by refusing to procreate, while GLF supports "involuntary" acts of extinction. According to GLF humans are "genetically programmed" to destroy the Earth, thus only through the complete eradication of the human species will the Earth be able to heal.

CoE claims 300 members in large cities within the United States and smaller numbers in Europe and South America. The majority of CoE members are young and male. Although they call themselves a church (with tax-exempt status as an educational foundation) they do not own buildings nor engage in activities commonly associated with churches. Rather, most of their protests, selling of merchandise, and newsletters are organized via the internet.

Dedicated to their mission, CoE has received national and international attention. They have appeared on the Jerry Springer Show and performed and protested in the United States, Germany, Spain, Bosnia and South America. They have established a website, an e-magazine, a merchandise catalogue, and distributed fifty thousand "Save the Planet – Kill Yourself" bumper stickers.

Matthew Immergut

See also: Death and Afterlife in Jeffers and Abbey; Green Death Movement.

Church of Jesus Christ of Latter-day Saints

Joseph Smith, the founding prophet and president of the Church of Jesus Christ of Latter-day Saints (the Mormons) taught that all of God's creations, humans, animals, plants, and the Earth have eternal spirits. Rejecting the doctrine of *ex nihilo* creation, Smith taught that God took these eternal spirits, combined them with indestructible matter, and organized them into living beings.

We do not know how God created each, except that he used the power of the priesthood. In the cases of human beings, however, a revelation to Joseph Smith said that our Father in heaven is a being with a body and a spirit. A statement of the Church's First Presidency in 1909 said that humans have "heavenly parents," and Mormon tradition calls one of them our Mother in heaven. The difference between humans and other creations is that human spirits are the literal children of God, the Father, and our Mother in heaven. We are created in his image.

The relationship of these creations to the Creator has implications for their treatment by human beings. Since

the essence of the Earth, animals, and plants has existed eternally and independent of God, he could not in justice grant humans permission to abuse any of them. Nevertheless, since he organized each of them, he gave humans, the only entities created in his image, the responsibility of caring for his creations.

Revelations to Joseph Smith and commentary by Mormon theologians clarify the biblical account in Genesis. Instead of "subdue" these revelations use the word "till" to refer to treatment of the Earth. Mormon theologian Hugh W. Nibley has written that the word "dominion" means that humans have the responsibility of caring for God's animal creations for him. Abuse of the Earth, Nibley says, is part of Satan's effort to thwart God's plan for salvation by drawing men and women away from God and making nature their enemy.

Moreover, revelations received by Joseph Smith in 1832 and clarified by Brigham Young in 1862 clarify that Christ's atonement, the resurrection, and salvation reach all of God's creations, human, animal, vegetable, and mineral. In contrast with humans who sin regularly, however, nonhuman creations obey God's commandments. A revelation that Joseph Smith received in November and December 1830 linked moral and environmental pollution. The revelation says that the Earth "the mother of men" is "pained" and "weary because of the wickedness of my children. When shall I rest, and be cleansed from the filthiness which is gone forth out of me? When will my Creator sanctify me, that I may rest, and righteousness for a season abide upon my face."

Smith's successor, Brigham Young, elaborated on the teaching.

The soil, the air, the water are all pure and healthy. Do not suffer them to become polluted with wickedness. Strive to preserve the elements from being contaminated by the filthy, wicked conduct and sayings of those who pervert the intelligence God has bestowed upon the human family (Young 1861: 79).

Although the teachings of prophets like Smith and Young admonish the Mormons to care for God's creations as they would for their own morals, like most people they have not always done so. In 1834 while Joseph Smith led a volunteer militia group from Kirtland, Ohio to Independence, Missouri members of the party found three prairie rattlesnakes. They intended to kill the snakes, but Joseph urged them to leave them alone. "Men must," he said, "become harmless, before brute creation; and when men lose their vicious dispositions and cease to destroy the animal race, the lion and the lamb can dwell together," and in an allusion to Isaiah 11:6–8, he said "the sucking child can play with the serpent in safety" (Smith 1948: 71).

Clearly, however, these leaders did not oppose killing animals or plants for sustenance. They did, however,

counsel as Young put it that Mormons should not take “any more” than needed for subsistence. Nevertheless, in some cases, Young, himself, and others in the pioneer companies that came to Utah beginning in 1847 killed predators apparently in an attempt to protect their food and crops.

Consistent with the ideal of caring for God’s creations, Joseph Smith and his counselors proposed a plan for an ideal city designed to exert a minimal impact on the land and its resources and to promote environmental democracy. These cities were to provide a pleasant environment in which people could live in relative equality, raise gardens, and keep a few domestic animals. As they laid out the cities on a grid pattern with central blocks reserved for public buildings, planners placed the larger farms outside the town boundaries. After the cities reached 15,000 to 20,000 those who wanted to live in a city were to move beyond the farmlands surrounding the city and build a new one. When the Mormons settled in Utah, they used the city plan that Smith had proposed to lay out many of the cities, but they did not limit the city growth to 20,000 people.

After the Latter-day Saints settled in Utah, they linked the concept of multiplying and replenishing the Earth found in Genesis 1:28 to the importation and nourishing of a wide variety of plants and animals. In 1862, Heber C. Kimball, Brigham Young’s first counselor, taught church members that they should help the Earth “multiply and increase her productions, vegetation, fowls, animals and all manner of creeping things” (Kimball 1862: 337).

Wilford Woodruff, then a member of the Quorum of the Twelve Apostles and later church president, experimented with imported plants during the 1850s. In September 1855 he joined with others to organize the Deseret Horticultural Society. Members of the society planted and grafted a wide variety of fruits to determine which would flourish in Utah’s climate and soil.

In 1856 the territorial legislature chartered the Deseret Agricultural and Manufacturing Society. DAMS imported animals and plants and seeds for fruits, grains, and vegetables from other parts of the United States and from Europe and Australia.

As Mormon immigrants continued to pour into Utah, they transformed the land. Along the Wasatch Front they founded communities with families, homes, churches, and schools. They also changed the lush grassland they found there into verdant fields and orchards. With considerable difficulty and a number of failed efforts, between 1847 and 1890 they established more than 500 settlements, the majority of which have persisted to the present.

Although the settlements generally flourished, the Mormons also caused the eradication of some wildlife and environmental damage to their pasturelands. Populations of various species of wildlife such as bears, wolves,

mountain sheep, elk, rattlesnakes, fish, and crickets declined or disappeared under predator eradication, harvesting, and competition from domestic crops and animals. By 1865, recognizing the destruction of pastures caused by overgrazing, leaders like Orson Hyde, then serving as president of the Quorum of Twelve Apostles, the second highest governing body in the church, chided members for destruction of land and vegetation.

In spite of such admonitions, the expansion of Mormon participation in the market economy during the 1880s led to the introduction of increasingly large herds of cattle and of sheep. Overgrazing by these animals caused extensive watershed damage in the uplands in northern and central Utah. Such destruction denuded the land and led to summertime rock-mud floods that further eroded the land as they caused millions of dollars worth of property damage.

As watershed destruction mounted, after the turn of the twentieth century church leaders began to reemphasize the principles of stewardship and care of God’s creations that nineteenth-century leaders had taught. Declaring, “As children of God, it is our duty to appreciate and worship Him in His creations” (Handley 2001: 195), President Joseph F. Smith denounced the “wicked” destruction of wildlife (Smith 1963: 265).

Consistent with this view, he favored watershed protection. As the federal government encompassed timber stands and watersheds into national forests, under Smith’s direction, church priesthood leaders voted on 7 April 1902 to urge the federal government to withdraw from the market for protection of all public lands in the watersheds above Utah cities.

Continued overgrazing and flooding, however, led to the appointment by Utah Governor George H. Dern of a committee headed by MIT engineering graduate and church Presiding Bishop Sylvester Q. Cannon to determine the reasons for the damage. The committee attributed the damage to extensive overgrazing and urged measures to reduce the number of livestock on the mountain watersheds. This report led directly to Forest Service grazing reductions and range rehabilitation projects.

Other early twentieth-century church leaders set examples of caring for God’s creations. Reed Smoot, a member of the church’s Quorum of the Twelve Apostles, served as a Senator from Utah from 1903 to 1933. He actively supported the conservation programs of Theodore Roosevelt and Gifford Pinchot. Among other things, he favored the designation of National Forests and opposed the Hetch Hetchy dam slated for construction in California’s Sierra Nevada Mountains. After Smoot had introduced legislation for the organization of the National Park Service in previous congressional sessions, in 1916 he served as Senate sponsor for the act introduced in the House by California Congressman William Kent to create and fund the NPS. In 1920, as chair of the Senate Public

Lands and Surveys Committee, he co-authored the Mineral Leasing Act, which serves as the basis for federal leases of minerals such as petroleum and phosphates. He also sponsored legislation to establish Zion and Bryce National Parks.

In the meantime, Latter-day Saints worked to deal with other environmental damages. In 1904, farmers in central Salt Lake valley secured an injunction against nearby smelters for polluting the air and destroying crops. A number of the offending smelters closed and other remained open only by installing pollution control equipment. John A. Widtsoe, University-of-Göttingen-educated member of the Quorum of Twelve Apostles, conducted experiments to make irrigated and dry farming more productive and environmentally sensitive.

In Salt Lake City, Latter-day Saint leaders worked to improve the physical environment. Sylvester Cannon, then serving as a stake president, worked to protect and maintain the city's watersheds and parks. As city engineer, Cannon, and George W. Snow, the director of the city's Mechanical Department, fought against air pollution. Prominent Mormon women like Leah Eudora Dunford Widtsoe, Susa Young Gates, and Emily L. Traub Merrill worked on civic improvements in Salt Lake City during the first decades of the twentieth century, especially to control air pollution.

During the 1930s and 1940s, Latter-day Saints in various localities worked to stabilize and beautify the environment. In 1936, a number including Robert H. Stewart of Brigham City, William Lathum of Wellsville, and Bishop John O. Hughes of Mendon organized the Wellsville Mountain Watershed Protective Association. Collecting money from depression-strapped farmers, they purchased land in the foothills of the Wellsville Mountains on the boundary between Cache and Box Elder Counties. Then they lobbied Congress to extend the boundaries of the Cache National Forest to encompass the land, which they donated to the Forest Service for watershed protection.

As Secretary of Agriculture during the Eisenhower Administration, Ezra Taft Benson, a member of the Quorum of Twelve Apostles and later church president, advocated watershed rehabilitation. Although J. Reuben Clark, then a member of the church's First Presidency and a rancher, criticized Benson, the agriculture secretary nevertheless supported the efforts of the Forest Service to reduce numbers of livestock in grazing allotments and restore the land and its vegetation. In addition, he spoke out in favor of reverence for life and "for the resources God has given man." "The outward expressions of irreverence for life and for fellowmen," he said, "often take the form of heedless pollution of both air and water" (Hirschi 1995: 3).

Recent church presidents have also spoken out on the need for environmentally friendly attitudes. "We recom-

mend," Spencer W. Kimball said in November 1974, "to all people that there be no undue pollution, that the land be taken care of and kept clean, productive, and beautiful" (Hirschi 1995: 2). "This Earth is [God's] . . . creation," Gordon B. Hinckley said in April 1983, "When we make it ugly, we offend him" (Hirschi 1995: 3).

In recent years, environmental ethicists have concerned themselves with population growth. Unfortunately, it is much easier to find official statements on population control than to provide accurate statistics on the Mormon population. This is in part because the church does not compile such statistics, only about 14 percent of all Mormons live in Utah, and fewer than 50 percent of all Mormons live in the United States. Nevertheless, the *Church Handbook of Instructions* an official directive for local leaders offers the following: "The decision as to how many children to have and when to have them is extremely intimate and private and should be left between the couple and the Lord. Church members should not judge one another in this matter" (Church of Jesus Christ of Latter-day Saints 1998: 158).

In spite of the small representation of Latter-day Saints and the fact that the sample includes fewer than half of all Mormons, using data from surveys in the United States, Brigham Young University sociology professor Tim Heaton has estimated that Mormon couples both expect to and do have more children than average. Statistics from the General Social Survey indicate that an average LDS family in the United States has 2.63 children compared with a national average of 1.99 children. Moreover, Mormons say that an ideal family should consist of 3.89 children compared with a national average of 2.89 children. Both the larger family size and the larger reported ideal probably derive from Mormon belief in the eternity of the family and in the importance of providing bodies for God's spirit children. Moreover, the statistics show that Mormons use contraceptives at the same rate as other Americans.

On the matter of the attitudes of the church leadership toward caring for God's creations, the church's Public Affairs department has published a general packet including a statement of policy. Among other things, the statement says, "The Church does not, institutionally, endorse specific environmental crusades, but instead encourages its members, as citizens, to join with their fellow citizens in supporting worthy programs that will make their communities better places to live and raise their families" (Hirschi 1995: 1).

Although vestiges of the teachings of Joseph Smith and Brigham Young have appeared in the thought and actions of church leaders like Joseph F. Smith, Spencer W. Kimball, Ezra Taft Benson, Gordon B. Hinckley, Reed Smoot, and Sylvester Q. Cannon, many members have forgotten the teachings on the relationship between humans, animals, plants, and the Earth. Some scholars and

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See also: Bahá'í Faith and the United Nations; Earth Charter; Environmental Ethics; United Nations' "Earth Summits".

Epic of Evolution

The Epic of Evolution, like its synonymous terms, "cosmic evolution" and "the universe story," encompasses what Eric Chaisson has labeled "the broadest view of the biggest picture." This epic tells the sprawling story of the evolution of the cosmos, from the first moment of creation to the present state of the universe. It is the attempt to construct a unified and comprehensive narrative of systematic development throughout the history of the universe, including the origins and the diverse organization of matter, life and consciousness. The Epic of Evolution is premised on the insight that the universe as a whole is best

understood as a single unfolding event, beginning with the big bang, about 14 billion years ago, and continuing through the emergence of macroscopic structures (e.g., galaxies, stars, solar systems), and microscopic structures (e.g., atoms, molecules, cells).

The Epic of Evolution has been inspired by the remarkable theoretical unification of scientific disciplines taking place during the course of the twentieth century. The most exciting theoretical advances in science in recent decades are those enabling an integration of the sciences of the large with the sciences of the small. In physics, astronomy has been theoretically coupled with particle physics to produce quantum cosmology. In biology, evolutionary theory has been coupled with molecular biology to produce a grand synthesis. Theoretical breakthroughs have continued into the social sciences, where behavioral genetics and neurobiology are being integrated with cognitive, developmental and social psychology. These advances have gradually revealed what Edward O. Wilson has called "consilience," that is, a fundamental continuity and theoretical coherence among the physical sciences, the life sciences and the behavioral sciences. Consilience among scientific disciplines now makes it possible to construct a coherent narrative of the emergent properties of matter, life and consciousness. Implicit in contemporary science is an Epic of Evolution.

The task of making the Epic of Evolution explicit is not

P Epic Ritual

The "Epic of Evolution" is the 14-billion-year narrative of cosmic, planetary, life, and cultural evolution – told in sacred ways. Not only does it bridge mainstream science and a diversity of religious traditions, if skillfully told, it makes the science story memorable and meaningful, while enriching one's religious faith or secular outlook.

In the early through mid-twentieth century, the Jesuit paleontologist Pierre Teilhard de Chardin promulgated a Christian version of the story, while Julian Huxley (biologist), Aldo Leopold (ecologist), and Loren Eiseley (anthropologist) wrote eloquent tomes from what could be called a "religious naturalist" perspective. But it was not until the 1970s and 1980s that the intellectual and literary expressions of the Epic of Evolution began to be celebrated in ceremony and ritual.

The first ritual expressions were associated with the deep ecology work practiced and promoted by Joanna Macy (California) and John Seed (Australia). Although "The Council of All Beings" is the most familiar of their productions, Macy and Seed (as well as Jean Houston in New York) created solemn processes and guided meditations that helped participants connect with their primate, reptilian, and fish heritage.

In the early 1980s, Sister Miriam Terese MacGillis of New Jersey, a student of Thomas Berry who founded Genesis Farm, created "the cosmic walk," which has become perhaps the most common way in which the Epic of Evolution is celebrated in ritual format. A rope or pathway is laid out in a spiral on the ground, with stations representing major evolutionary events, scaled (arithmetically or geometrically) to the actual time of their occurrence. Thus 14 billion years of evolution is represented along the length of the spiral. Those who take the walk begin their journey at the center of the spiral, at the birth of the known universe, and then advance toward the present as they walk the spiral outward. Scientists refer to this beginning as the Big Bang, but Epic practitioners prefer more sacred terms, such as "Great Radiance" (a term from Philemon Sturges) or "Primordial Flaring Forth" (drawing from Brian Swimme and Thomas Berry). Variations of MacGillis' initial walk are still in use, as well as completely new texts, though still using the spiral format. Many examples of such ritualizing are available on the internet, which is a good place to track the evolution of such spirituality and ritual processes. Catholic retreat centers are increasingly building permanent outdoor cosmic walks on their grounds.

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In his book, *Hidden Heart of the Cosmos*, cosmologist Brian Swimme selects several components of the Epic of Evolution and offers practices for bodily awareness of several of them, including: 1) how to experience the Earth turning rather than the sun “setting”; 2) how to experience the center of the Milky Way Galaxy. To experience Earth turning, Swimme suggests going out at sunset and envisioning oneself “standing on the back of something like a cosmic whale, one that is slowly rotating its great bulk on the surface of an unseen ocean” (1996: 27). To experience the center of our galaxy, Swimme invites us to lie on our backs under the night sky, to gaze at the constellation Sagittarius (which aligns with the center of the galaxy), and then to imagine the stars not as “up” but “down.” Earth’s gravity is the only thing that holds the viewer from falling “down” into the gravitational attraction at the center of the Milky Way. “You hover in space, gazing down into the vault of the stars, suspended there in your bond with Earth” (1996: 52).

Around the turn of the millennium, several people in the United States independently originated a way to experience the Epic of Evolution in a new and very personal way: through the stringing of “Great Story Beads,” “Universe Story beads,” or a “Cosmic Rosary.” Beads are purchased (or made from clay) and strung in a loop to signify major moments of transformation (“grace moments”) in the long journey of evolution. Unlike the public “Cosmic Walk” these loops or necklaces of beads enable individuals to personalize the story: choosing which events are most meaningful to them, including significant events in their own life story as beads in the loop. Instructions for creating Great Story Beads, including a suggested timeline, are available online to facilitate this process.

Seasonal celebrations are yet to develop for the Epic of Evolution. The creation of the chemical elements (carbon, oxygen, iron, gold, and so on) inside of stars that lived and died before our sun swirled into existence is beginning to be celebrated at the winter solstice. But it is such an alluring aspect of the epic that it is celebrated also throughout the year. In a sort of “Cosmic Communion” (which has been performed at Sunday services of Unitarian Universalist churches), participants are anointed with “stardust” (glitter) to signify, as Carl Sagan pointed out in the 1980s, that we are quite literally “made of stardust.”

Connie Barlow and Michael Dowd (whose “The Great Story” website details the stardust ritual) have brought the Cosmic Communion into Unitarian churches and spiritual retreat centers, along with an experiential process to “celebrate your cosmic age.” Barlow also emphasizes how one can see the constellation Orion in a

new way: the Red Giant star Betelgeuse, in Orion’s right arm, is fusing helium into carbon, oxygen, and nitrogen right now (all are elements that we breathe in and out). The blue-white star Rigel (in Orion’s left leg) is fusing carbon and helium into silicon, calcium, potassium, and will one day forge silver and gold when it expires in a brilliant supernova explosion.

Other forms of Epic Ritual, still evolving, are designed to keep the memory alive, and thus honor, extinct organisms – from dinosaurs to passenger pigeons. One example is the “Coming Home to North America” ritual, designed by Connie Barlow which leads participants through a playful and reverential reenactment of the comings and goings of plants and animals in North America for the last 65 million years, since the extinction of the dinosaurs. In it, participants learn that camels and horses originated in North America fifty million years ago, were isolated on this continent until spreading into Asia and Africa just three to five million years ago, and then became extinct in their land of origin just 13,000 years ago.

In 2001, Epic enthusiasts began writing “evolutionary parables” for teaching values congruent with ecological/evolutionary awareness. In these, a major moment of transformation (such as vertebrates venturing onto land) is rendered into an engaging story and scripts for acting out. Although ancestral creatures may be depicted in dialogue, and thus anthropomorphized, the science underlying the narratives is accurate and up-to-date. Because the Epic of Evolution is “the story of the changing story,” as new advances occur in the sciences, these parables, rituals, and other experiential forms will necessarily evolve.

Connie Barlow

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- See also: Berry, Thomas; Council of All Beings; Deep Ecology; Eiseley, Loren; Epic of Evolution; Leopold, Aldo; Macy, Joanna; Gaian Mass; Genesis Farm; Religious Naturalism; Sagan, Carl; Seed, John; Swimme, Brian; Teilhard de Chardin, Pierre; Unitarianism; United Nations’ “Earth Summits”.

itself a part of science, although it is directly informed by scientific disciplines. It may rather be said that the Epic of Evolution is a product of imaginative mythmaking under the critical and watchful eye of contemporary science. As such, we must allow for a relatively wide range of variation on the central theme of cosmic evolution. Here follows an attempt to summarize the broadest view of the biggest picture.

In the beginning was singularity. Everything that would eventually become the universe was contained in an unimaginably small and dense region. About 14 billion years ago the singularity was released in an expanding burst of pure radiant energy, out of which particles of matter distilled into copious amounts of hydrogen and helium atoms. For about a billion years the universe billowed forth in an expanding cloud of cooling gas. Under the influence of gravity, irregularities in the expanding cloud fragmented into billions of galaxies, and within galaxies matter was condensed into stars. At this point in our cosmic history, physics was the only science that would have made any sense. Many stars eventually exploded in supernova events, synthesizing the nuclei of diverse atomic elements in the process. As exploding stars emptied their contents into space, chemistry would begin to make sense. Atoms of many types commenced to form molecules in interstellar space. Second- and third-generation stars were condensed out of interstellar matter, and around some of these new stars there swirled disks of particulate matter, gradually accumulating into orbiting planets. Our own solar system was formed in this process about 4.6 billion years ago. The young Earth was a semi-fluid cauldron of physical and chemical activity, allowing heavier elements to gravitate toward the center and lighter elements to be pushed toward the surface. By 3.8 billion years ago the Earth had sufficiently cooled and settled so that distinct regions of Earth (lithosphere), water (hydrosphere), and air (atmosphere) were formed. Chemical interactions at the interfaces of these regions eventually produced the biosphere, the region of the Earth's surface where living systems emerged from the prebiotic soup. The prebiotic soup was a chemical quagmire of molecular evolution, wherein molecules competed for the attention of unbound atoms. The big winners in this chemical free-for-all were large molecules having special properties, such as those for catalyzing chemical reactions (metabolism), making copies of themselves (replication), or both. Once the functions of metabolism and heredity were coordinated within the membranes of primitive cells, biology would begin to make sense. Living systems diversified aggressively. The earliest prokaryotic cells specialized in pioneering diverse metabolic pathways. Drawing on these biochemical breakthroughs, eukaryotic cells introduced a stunning diversity of shapes, sizes and movements – all variables that prepared organisms to adapt to new environmental niches. The next frontier for

bioexperimentation was to diversify behavior. This eventually led to multicellularity and sexual reproduction. The evolution of behavior took a dramatic leap forward when some organisms developed cell lines (nerve cells) specialized for processing information. Increasingly complex neural systems enabled the capacity for learned behavior and conscious experience. Psychology would now begin to make sense. About a million years ago our human ancestors acquired the rudiments of language, thus introducing potentials for organizing consciousness in diverse ways. Social systems, technologies and ideologies would now develop and diverge rapidly as cultures responded to environmental challenges.

The Epic of Evolution is inherently controversial because it has astringent implications for traditional religious worldviews. Every cultural tradition is nourished by a distinctive myth, a metanarrative providing individuals with a shared orientation in nature and history. Myths engender a collective identity by informing us about our ultimate origins, our common human nature and our shared destiny. The meanings embedded in our cultural stories give us the essential resources for thinking and acting with a unity of purpose. Epic of Evolution enthusiasts have found many of the elements of a religious-cultural myth implicit in the story of cosmic evolution. Any story telling us that we are star-born, Earth-formed creatures, who are absolutely dependent on the integrity of the Earth's (now threatened) natural systems, cannot fail to arouse religious and moral sensibilities. Moreover, the Epic of Evolution engages the imagination in a way that relativizes prescientific mythic traditions. The Epic of Evolution is religiously controversial because it affronts the intellectual plausibility and the moral relevance of traditional religious worldviews.

The many ancient religious traditions of the world originated in historic circumstances very much like our own, that is, moments of deepening crisis when nothing short of a transformation in human consciousness would save the day. Human beings are presently faced with an emergency of global proportions. Every natural life-support system on the planet (air, water, soil, climate, ozone, biodiversity) is in a state of serious and rapid decline, creating a suicidal trajectory accelerated by the very social institutions we have invented to safeguard the future. Human beings presently lack the intellectual and moral resources required to achieve solidarity and cooperation on a scale commensurate with the problems we collectively face. We find ourselves spiritually maladapted to our environmental circumstances.

When faced with comparably dire prospects our ancestors did the reasonable thing: they turned to new sources of wisdom and fashioned new myths of enduring promise. It is in this spirit that Epic of Evolution enthusiasts have turned to the scientifically informed narrative of cosmic evolution as a point of departure for proselytizing a new

religious orientation that sanctifies the natural order. What they hope for is the emergence of Religious Naturalism; that is, new forms of ritual and practice that celebrate and serve the sacredness of the Earth. It remains to be seen whether religious naturalism might eventually replace traditional religious orientations, merely stimulate their radical self-transformation, or prove to be of little influence on religion and environmental practice.

Loyal Rue

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Esalen Institute

Michael Murphy and Richard Price founded the Esalen Institute in 1962 and it quickly became a Mecca for the human potential movement. The institute itself sits on 163 acres of California's Big Sur coast, located in central California, 38 miles south of Carmel. The property, noted for its natural hot springs, belonged to the Murphy family and had been a sacred place for the Esselen, one of many California tribes driven to extinction by waves of European immigrants.

Murphy had studied philosophy at Stanford University and he later spent a year at the Sri Aurobindo ashram in Pondicherry, India. Aurobindo saw the evolving universe as a manifestation of the divine. In humanity, nature becomes conscious of itself and this consciousness is the key to further evolution. Aurobindo called for a yoga practice combining Western scientific method and a personal discipline that seeks illumination from within. We are called, he said, to a greater consciousness that participates in its own transformation and the world's advancement. Aurobindo's thought, through Murphy, shapes Esalen philosophy.

Dick Price, also a Stanford graduate, met Michael Murphy at an ashram in San Francisco. Price had spent a year and a half in a mental hospital and reacted to what he felt was dehumanizing treatment. Price worked with Fritz Pearls, the founder of Gestalt therapy and a resident at Esalen. Gestalt uses imagination, dialogue and movement to more fully enter one's present emotional state. The process is an effort to break through psychological blocks and allow for natural healing and growth. Together, Price and Pearls made Gestalt an Esalen staple. In 1964, the workshops at Esalen shifted from a verbal format to become more participatory. The emphasis was on Gestalt therapy and bodywork (massage and movement exercises).

During the 1960s, the celebrities who came through Esalen represented the driving forces of the human potential movement and included Aldous Huxley, Gerald Heard, Arnold Toynbee, Linus Pauling, Gregory Bateson, Joseph Campbell, Bishop James Pike, Ansel Adams, Norman O. Brown, Virginia Satir, Rollo May, Carl Rogers, Carlos Castaneda, Michael Harner, Ashley Montagu and Paul Tillich. Abraham Maslow, the father of humanistic psychology, stumbled on Esalen by accident during its first year and gave several workshops there, and it remained a guiding force throughout his life.

As a place, Esalen holds a strong attraction. Thickets of redwood trees rise sharply on the Santa Lucia Mountains behind the institute's facilities. A rocky coastline lies at its base while fog and sunlight interact with land and sea throughout the day. Selig Morgenrath was the gardener during Esalen's early days and he brought a special touch to his work. Today, some six acres at Esalen are devoted to an organic farm that produces a considerable variety and quantity of food for the kitchen.

The El Nino storms of 1998 created landslides that destroyed the baths, damaged buildings and closed the access road for three months. The crisis became a turning point in Esalen's development. In rebuilding, the organization shifted its focus to include, not only work on individual human potential, but also efforts to become a model community in harmony with its environment. Plans are underway to conserve energy and preserve the land. The aim is eventually to give back to nature more than we take. The hot springs will be used to provide geothermal heat. Members of the institute are installing solar panels and placing buildings in better positions to utilize the sun. Wastewater treatment will use organisms rather than chemicals and recycle the water to gardens and lawns. Footpaths are replacing paved areas and native grasses are being planted.

Andy Nusbaum, Esalen's executive director, says that they want, "to utilize nature's teaching, to mimic life's underlying proportions in shaping our environment." He cites discoveries that have uncovered and copied natural structures: fuel cells that imitate plant cells, fibers as hard

as abalone shells, and computers that work like the human brain. Michael Murphy calls for a sustainable society that balances inner and outer resources. Personal and social developments are inextricably linked.

Today, Esalen has two major components. There are the public programs, some 450 seminars and workshops that draw 10,000 people a year. There are also research projects sponsored by the institute's Center for Theory and Research (CTR).

Since 1967, Esalen's CTR has sponsored conferences dealing with experience-based techniques in education, Russian-American relations, the place of the body in spirituality, and government systems that would allow for greater equity among people and better stewardship of the environment. The institute has also undertaken a long-term exploration of evolutionary theory. Here, they bring together physicists, cosmologists, biologists, sociologists, psychologists, historians, contemplatives and philosophers to study the evolutionary processes in the physical, biological, and human worlds. Since 1998, Esalen's CTR has also explored the empirical evidence for post-mortem survival.

Esalen today can be viewed against the backdrop of the philosophies of David Thoreau and John Muir. But whereas "nature" with Thoreau and Muir could be experienced at Walden Pond and in the Sierras, "nature" with Esalen is the whole cosmos, which has a history and a future. "Nature" also includes human consciousness and its efforts to understand itself as part of that evolutionary process.

Thomas Splain, S.J.

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See also: Findhorn Foundation Community (Scotland); New Age; Sri Aurobindo.

Estés, Clarissa Pinkola (1945–)

Clarissa Pinkola Estés, a Jungian psychoanalyst, storyteller and poet, is the author of numerous books and articles, including *Women Who Run with Wolves: Myths and Stories of the Wild Woman Archetype* (which remained on the *New York Times* best-seller list for three years and has been published in thirty languages). In this book, Estés, a cantadora or keeper of the old stories (Latina

tradition), presents intercultural stories and myths, along with Jungian interpretations of these tales. She based the book on a study of wolves and begins by stating that "Wildlife and the Wild Woman are both endangered species," thus linking the "instinctive nature" of woman with the wilderness. Estés' roots in Mexican culture and Hungarian culture, specifically in women folklorists and storytellers in these two cultures, lead her to engage story as "medicine." She understands storytelling as a form of activism, with healing powers and possibilities. Estés' other published works include *The Faithful Gardener: A Wise Tale About That Which Can Never Die* and *The Gift of Story: A Wise Tale About What is Enough*.

Another genre in which she works is the spoken-word performance. In this area, she has produced a series of audio works, among them the twelve-part live performance *Theatre of the Imagination*, and performed *woman-life.song* with Maya Angelou and Toni Morrison.

In addition to practicing Jungian psychoanalysis and engaging in various modes of storytelling (both oral and written), Estés founded and directs La Sociedad de Guadalupe, a human rights organization.

Estés holds a doctorate in clinical psychology and intercultural studies from The Union Institute. She served as director of the C.G. Jung Center for Education and Research and has received numerous awards including the Las Primeras Award from MANA (The National Latina Foundation), the Joseph Campbell "Keeper of the Lore" Award (she was the first recipient), the Spirit of Women Award (National Consortium of Health and Hospitals) and the President's Medal for Social Justice (Union Institute).

Laura Hobgood-Oster

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See also: Campbell, Joseph; Ecofeminism; Feminist Spirituality Movement; Jung, Carl Gustav; Men's Movement; New Age.

Ethics and Sustainability Dialogue Group

The Ethics and Sustainability Dialogue Group (ESDG) is an ongoing series of exchanges in the United States between a contingent of environmental and social ethicists and representatives of the Chlorine Chemistry Council and its member companies. The purpose of the dialogue is to

explore the ethical issues associated with the processes, products, and by-products of the chlorine chemistry industry. The partners and their purpose make this dialogue an unusual model of moral engagement.

The ESDG has had religious connections from its inception. The catalyst for the dialogue was a U.S. church's resolution in favor of "sunsetting" most chlorine chemistry products. Four persons with ties to this denomination – a social and ecological ethicist, an industry executive, and two chief officers in a business consulting firm – designed the dialogue to focus on the ethical issues in this controversy. Moreover, industry representatives in the ESDG have generally been participants in Christian churches. Similarly, all the ethicists have been students of Christian social and ecological ethics, and most have been associated with Christian churches – of diverse denominations. Specifically Christian values and norms, however, have rarely, if ever, been invoked in the dialogues. Nonetheless, given the Christian connections of the participants, this moral tradition, in all its diversity, has undoubtedly shaped the character of the conversations.

The ESDG has met twice per year, for a day and a half each time, since November 1998. Some dialogues have included panels of scientists, discussing the state of scientific knowledge on designated problems. Several have used case studies to enhance understanding of the moral dilemmas in decision making.

The agendas have covered a variety of issues, including pesticides, water disinfection, dioxins and other persistent organic pollutants (POPs), endocrine disruption, and national security concerns about the industry. The "precautionary principle" has been a major topic in a couple of sessions. Yet, the central concern, permeating all the others, has been the moral meaning of sustainability for this industry and the global community. The dialogue has begun to outline some of the social and ecological indicators of sustainability.

The Secretariat for the dialogue is Millian Byers Associates, a business consulting firm in Washington.

To encourage candor, participants agree not to quote or otherwise attribute statements to any other participants outside of the dialogue without their expressed consent. No formal records of the conversations are kept by the ESDG – though for reasons of practicality, not principle. Moreover, the partners understand that participation in the ESDG does not preclude public advocacy on the divisive issues under discussion.

The ESDG has had no preconceived "products." These depend on decisions emerging out of the process of dialogue itself. Otherwise, the ESDG has viewed the dialogical process itself as a "product" – a way to discover and deal with differences effectively while enhancing human connections.

For the ESDG, dialogue is not negotiations to reach agreements. Nor is it a consultant–client relationship.

Instead, the ESDG understands dialogue as a process of communication between equal partners with strong commitments and often divergent perspectives for the sake of mutual growth. Such dialogue is a demanding discipline – requiring, for instance, respect for both the rules of rationality and the rules of fairness, as well as a mutual openness to the partners' perspectives on the truth.

The effects of this dialogue on the participants and their institutional behavior are impossible to measure. Some, however, have testified to changes they see in themselves and others – not as transformations in worldviews or even as resolutions of some major differences, but rather as growth in understanding moral problems and responsibilities.

The ESDG offers industry representatives a fuller understanding of the moral dilemmas and responsibilities they face, prompted by the challenges and counsel of the ethicists. Equally, the ESDG offers the ethicists a fuller understanding of the moral dilemmas and responsibilities associated with chlorine chemistry, enabled by the challenges and counsel of the industry representatives. The main value of the dialogue depends on the partners being, and perceiving themselves as being, both givers and receivers in a dynamic that finally contributes to social justice and ecological integrity. Indeed, the bottom line for evaluating the ESDG will be its broader social and ecological benefits.

H. James Byers

James A. Nash

See also: Eco-justice in Theology and Ethics; Environmental Justice and Environmental Racism; Stewardship.

Ethnobotany

Ethnobotany is the study of plants and people in their historical and geographic totality. Ethnobotany traditionally has been restricted either to economic botany on the one hand or to cognitive and linguistic anthropology on the other. Economic botany focuses on the utility of economic plants (such as food, fiber, and medicinal crop plants) in specific cultural contexts and often on the systematic biology of these economic plants, namely, the place of these plants in nature. Cognitive and linguistic anthropology have tended to focus historically on how people in diverse cultural milieus name, classify, and in some cases manage and manipulate plants according to coded and usually orally transmitted folk knowledge. Combining the efforts of both botanists and anthropologists, it can readily be seen that plants constitute an irreducible realm of human experience.

Even though plants pertain to a kingdom of the natural world, plants – at least some plants – have been affected in

their distribution, reproduction, and morphology by the ways people have utilized and managed them over time. As such, many plant resources represent cultural as well as biological artifacts that highlight the intimate connection between people and their local environments over time. Likewise, human cultures have been conditioned by the plants occurring in their environments. The motivation for human use and management of plants is diverse, and essentially represents basic material needs for food, medicine, fiber, fuel, and construction materials. Yet plants not only provide a wealth of material resources for subsistence and economic use (the more traditional focus of ethnobotanical research), they also function as important objects of thought, in the same sense that animals are also "good to think," as Claude Lévi-Strauss said in *A Savage Mind*. Being important objects in the immediate environment, plants are "named, classified, studied, interpreted, and responded to" (Alcorn 1995: 26). Salient plant forms and botanical processes provide important material for symbols, metaphors, mythologies, and legends. Culturally important plants may even exert important influences on religious beliefs and practices. Entire landscapes, such as sacred groves or forests, likewise play an important role in the cosmologies of different peoples.

Certain plants and vegetative associations have been reified in various cultures, such that they are perceived to harbor and radiate supernatural powers, independent of biological needs. To the individual carriers of ethnobotanical knowledge within any human community, plants are experienced as a constellation of different biophysical, economic, social, and mythical connotations from a particular social vantage point within a given cultural setting. Although constituting an understudied aspect of ethnobotany, religious understanding and use of plant resources is therefore embedded within these overlapping spheres of plant use and knowledge. In a sense, religion is the premier locus of human experience, in which plants and people not only interact as mutually important actors in the puzzle of existence, but in which their identities are transmuted. Plants from nature are incorporated into the cultural world, and humans bearing culture are turned into plants. Plants in countless cultures have been perceived and used as fundamental markers of mythology, divinity, and ritual.

The very life cycle of plants provides a rich metaphorical counterpoint to human existence. Whereas human death results in a return of the body to the soil, plants emerge from the Earth and represent the eternal cycle of life springing forth from death. Trees, shrubs, herbs, flowers, fruits, grains and other plant products often appear in mythologies and legends as general symbols of rebirth, decay, and immortality. The ancient Mesopotamian legend of Gilgamesh and his search for the herb of immortality provides an example of the way in which plants symbolize life and the nourishing power of nature.

Certain plants have acquired more specific associations in religious folklore. The mistletoe, familiar to Euro-American culture as both a parasitic epiphyte and as a plant that when properly hung at Christmas time can catalyze romance, was historically associated with mystical qualities. For the ancient Norsemen the mistletoe represented the Golden Bough, a protector-spirit against sorcery and the reincarnation (in plant form) of a priest – the King of the Wood – who was believed to have been slain during a specific ritual of rebirth and renewal.

The origin myths and creation stories of many societies likewise invoke the mystical properties of plants. Frequently egalitarian peoples believe themselves derived from particular plants. In the Brazilian Amazon, the Ka'apor culture hero Mair made the original Ka'apor ancestors from logs of *Tabebuia impetiginosa*, a hardwood tree used in making bows, along with other hardwoods. On the other side of the world, Andaman Islanders of the Indian Ocean believe that the first human being was born inside a giant bamboo stalk. Among societies characterized by totemism, plants, animals, or other natural phenomena that represent group identities (called totems) are believed to be founding members of a unilineal society or clan. In addition to claiming descent through one sex from the group's totem, members of the group may also observe taboos related to their particular plant or animal emblem, generally refraining from killing, eating, or disrespecting it. Spirits or deities may likewise incarnate themselves in the form of a plant or animal totem. Yet while these features of totemism are found among many of the world's traditional societies, they are not present everywhere, nor even necessarily found together. The supernatural forces that traditional peoples associate with plants, animals, and other natural phenomena invoke more than merely special ties between a social group and its totem. Furthermore, plants play an important role in most world religions, not simply those deemed to be totemistic.

At the most basic level, religious beliefs and cosmologies encompass orientations toward the natural world that inform people's responses to plants. Showing respect may be the most commonly prescribed behavior toward plants, and it underlies many religious tenets regarding appropriate relations with the natural world. Conversely, taboos may be imposed on the use of plants to ensure the continued availability and vitality of culturally revered species. Humanizing attitudes and feelings of respect may be interpreted more directly as anthropomorphism, the belief that plants and animals have human qualities. More commonly, religiously prescribed behaviors toward plants imply the ascription of a soul.

According to E.B. Tylor, many religious belief systems are founded upon notions of animism, or the belief in souls. The ascription of souls to plants is most likely for plants of great economic or experiential significance. Both

the Balinese of Indonesia and the Ifugao of the Philippines ascribe souls to their staple food crop, rice. Beliefs concerning the souls of rice plants form part of a complex system of religious belief and practice throughout Southeast Asia. The Huichol of Northern Mexico likewise believe that the sacred peyote cactus, which produces a powerful hallucinogenic drug, yields a soul visible to their shamans.

Perhaps more widespread than the notion that plants have a soul is the idea that spirits or deities are associated with them. Supernatural beings associated with plants include ancestor spirits as well as masters or guardian spirits that protect vital plant resources. Among the Dyak of Borneo, the sacred tree *mahong* is believed to harbor a benevolent spirit that represents the ancestral woman of Dyak legend. As with the ascription of plant souls, plant deities often represent an extremely important economic plant, especially domesticated food plants of high caloric importance. Beliefs in a deity of corn are common in ancient Mesoamerica, as are beliefs in a deity of rice in Southeast Asia. These deities are portrayed unmistakably in iconography so that they impart both human and specific plant properties to the viewer and to the worshipper. In some cases, not all indicators of a deity are plant-related; some deities with essentially human qualities have various markers, both from plants and from animals.

In addition to the spirits and deities affiliated with food plants, religious associations with stimulants and other mind-altering plants are recognized crossculturally. The psychoactive qualities of these plants, in certain instances, have given rise to beliefs in their divine origin and purpose. These plants are literally perceived of as "gifts of the gods, if not gods themselves" (Schultes and Hofmann 1992: 61). The ancient Indo-European god Soma, immortalized in the Rig-Veda manuscripts, provides the most outstanding example. Long considered a mystery, the identity of Soma was discovered by R. Gordon Wasson to be that of the hallucinogenic fly agaric mushroom (*Amantia muscaria*). Ritual use of this species may have spread from Siberia, where it is incorporated in the shamanic practices of reindeer-herding tribes, to India by the second millennium B.C.E. While most hallucinogens function as sacred mediators between humankind and the supernatural, *Amantia muscaria* was deified.

Other supernatural associations with hallucinogenic plants can be found throughout the pantheons of the ancient world. Among the Aztec pantheon of deities, *Xochipilli*, the Aztec Lord of Flowers, was also considered the divine patron of stimulants and hallucinogens. Hallucinogenic mushrooms were known to the Aztecs as *teonanacatl* ("god's flesh"), and were ritually ingested. In the neighboring Mixtec region, Seven Flower was an equivalent deity in charge of cacao, tobacco, sacred mushrooms and other poisonous substances. In the mythology of the Mediterranean, the gods of the classical world were

associated with particular plants or plant products: Athena with the olive, Apollo with the laurel, Demeter with a sheath of grain, and Dionysius with wine. Before these more common co-identifications, however, the botanical associations of the gods may have served as more than just symbolic entheogens. In particular, the Greco-Roman gods were associated with plants having chemical properties that made them function psychoactively in religious rites. Plants that lacked the original chemical properties may have been adopted as surrogates during a time when corporeal components to the experience of spiritual enlightenment were devalued. As the religious use of hallucinogenic plants in the Mediterranean was abandoned or submerged within secretive initiation practices, these plants were gradually replaced by the cultivated icons of civilization.

Religious beliefs about plant resources are clearly embedded within particular cultural and historical contexts. Religious beliefs are manifested and negotiated within ritual contexts that utilize plants both directly and indirectly (symbolically). Plants play a variety of different functions within ritual contexts crossculturally, from providing the central focus of ceremonial activity to performing numerous adjunctive roles within religious activities. Plants may be directly consumed to reach an altered state of consciousness, consulted for divination, prepared as offerings, used for ritual cleansing or healing, and may even supply the sacred landscapes or raw materials for the sanctified spaces in which such rituals are conducted.

Plants with psychoactive or hallucinogenic properties have influenced the ideology and religious practices of numerous cultural traditions throughout the course of history and continue to play an important role among contemporary indigenous religions as well as syncretic revitalization movements. Botanical hallucinogens are perceived to harbor supernatural power due to their extraordinary physiological effects, which can be attributed scientifically to the presence of alkaloids. Within ritual contexts, these properties are directly employed in order to induce altered states of consciousness that are perceived to place the individual in contact with the supernatural realm.

The basic function of the psychedelic experience in non-Western cultures is to integrate the individual into society and revalidate traditional belief systems. By ingesting hallucinogenic plants (via eating, smoking, snuffing, or the use of ritual enemas), the individual experiences symbolic death and then rebirth "in a state of wisdom" as a full member of society. The psychoactive properties in the plant transport the user to the spiritual realm, whose geography is anticipated through folklore and socially shared experiences; what is encountered on "the other side" therefore serves to substantiate the validity of the religious belief system. The use of hallucinogenic plants for magical or religious purposes is strictly controlled by

taboos or ceremonial circumscriptions, and while the general (usually adult male) population may share in their use, these sacred plants are more commonly administered by shamans or other religious specialists.

The ability to transport the user to culturally validated spirit realms is particularly important within the context of shamanic practices. Religious shamans throughout the world act as intermediaries between the seen and unseen realms, and must learn to master the induction of altered states of consciousness to do so. Although ecstatic states may be accomplished through ascetic means, plants with hallucinogenic or similar psychoactive properties may be employed to induce visions and trances. Anthropologist Michael Harner prefers to call these "shamanic states of consciousness" in order to stress the cultural and religious context of these botanical drugs, and to differentiate the experience from the more recreational use of these species. Native peoples in the New World alone have utilized nearly a hundred different psychoactive plants, not counting the numerous plants (such as corn, manioc, or mescal) brewed for alcoholic beverages that, in turn, are used to induce ritual intoxication.

Probably the most famous sacred hallucinogen in the New World is the peyote cactus (*Lophophora williamsii*), which is rich in the psychoactive alkaloid mescaline. As an important part of the peyote-deer-maize ceremonial complex of the Huichol Indians of Northern Mexico, the peyote quest serves to prepare initiates to "learn what it is to be Huichol." The ritual use of peyote, however, has spread far from the Huichol homeland into the United States and Canada, where it functions as an important entheogen in the Native American Church. In South America, the vine *Banisteriopsis caapi*, known as *yajé* or *ayahwasca* ("vine of the soul" in Kechwa), is a powerful botanical hallucinogen used by indigenous groups, such as the Jivaro, throughout the Upper Amazon. Traditionally restricted to the Upper Amazon, the use of this hallucinogen recently has spread into the adjoining lowlands to the east of the Jivaroan area and has been incorporated into religious revitalization movements in urban Brazil. The drug is heavily used in the Santo Daime cult of Brazil, a millenarian offshoot of folk Christianity, founded by a prophet named Mestre Irineu in 1930, whose adherents profess to be able to travel, see, and know phenomena otherwise removed from them in time and space upon taking the drug. Only the proper, group-based ingestion of the "vine" (the "*cipó*", as it is called in Portuguese) affords such visions. Outsiders who refuse to ingest the "vine" are not permitted to attend Santo Daime ceremonies.

Non-hallucinogenic, yet mildly psychoactive plants play a similar role in religious beliefs and practices. Throughout the Andes, coca (*Erythroxylum* spp.) is both a medical stimulant and a unifying cultural and religious symbol among peasant and indigenous populations. The religious and shamanistic use of coca is also very ancient

and associated with the psychoactivity produced by chewing the alkaloid rich leaves. Although mild in comparison to the physiological effect of hallucinogenic plants such as peyote or ayahuasca, or even tobacco, ritual coca chewing enabled religious practitioners to enter trance-like states and communicate with the supernatural world. Although many of these traditions disappeared from the Andes after European contact, shamanic use of coca prevails among the Kogi of Colombia and several tribes of the Northwest Amazon (who prepare coca in a powdered form), where coca consumption is considered vital for communication with the ancestors.

Despite the occurrence of true hallucinogens, and out of the wide variety of aboriginal New World stimulants and narcotics, alcoholic beverages and tobacco have the widest distribution of mind-altering plant products, being particularly associated with farming practices. From pre-contact times well into the colonial era, tobacco primarily served magico-religious and related medicinal ends. The incredible diffusion of tobacco as a ritual intoxicant may be due in part to the ability of nicotine bioactivity to furnish empirical support, in many ways, for shamanic beliefs and practices throughout the Americas. Although the vision-producing alkaloids in hallucinogenic plants are effective in inducing the imagery of the shaman's celestial journey, the biphasic qualities of nicotine as a stimulant-convulsant help to manifest the continuum of dying and rebirth that is so fundamental to shamanic practice. The consumption of large quantities of tobacco via smoking, snuffing, chewing, or eating induces physiological changes experienced mentally as a journey of the soul outside of the body. The tobacco shaman is believed to serve as an intermediary able to travel into the world of the spirits and direct the divine energies of the cosmos toward social ends. Recognizing these powerful qualities, the Warao of Venezuela consider tobacco to be an indispensable part of their spirituality, and have incorporated this pharmacological phenomenon into a complex shamanic lore that involves different ritual specialists and the reverence of a Tobacco Spirit. A parallel example of this form of tobacco religion is found in North America, where the Gitche Manitou (or Great Spirit) complex of the Eastern Woodland Indians was based on the intoxicating and healing effects of tobacco.

Aside from their direct consumption, plants may communicate important worldly and otherworldly information to people through mechanisms unknown to non-initiates in the relevant culture and religion. Through keen observation of the local environment, the behavior of particular plants may be read as portents of the weather, harvest, or community well-being. The responses of plants or plant parts to direct manipulation are also employed for the purposes of divination. Among the contemporary Maya of highland Guatemala, *tz'ite* beans (various legume seeds) are used for divination, and are considered

especially powerful when found at archeological ruins or other sacred ceremonial sites. Throughout the Andes and adjacent Amazonian regions, reverence for the sacred coca plant is reflected in the widespread use of its leaves in elaborate divination rituals, conducted for both shamanistic healing practices and predicting the future (Plowman 1984). Even tobacco smoke, or smoke produced from the ritual burning of other sacred plants, may function as a divination tool.

Plants or plant products that are considered sacred may likewise be used in ritual offerings. Offerings of coca leaves are considered necessary to appease the gods on numerous occasions. In fact, there are few domestic or social acts conducted by indigenous peoples in the Andes that are not solemnized by making offerings of, or by chewing, coca (Plowman 1984). Offerings of plants may also be likened to animal or blood offerings. For instance, the vital energies of fresh sacred plant leaves are believed to possess "blood" (as opposed to dry leaves of the same plants) needed in offerings to gods in the Afro-American Candomblé Religion of Bahia, Brazil. Several South American tribes consider tobacco to represent a food, referring to their shamans as "tobacco eaters," who offer vital tobacco substances to the spirits. Many religious traditions of egalitarian peoples involve the exchange of spiritual food between humankind and supernatural beings according to cosmological principles of reciprocity, principles that are not at all foreign to people living in non-surplus-oriented societies.

Maintaining balance between the natural, social, and spiritual worlds is an important aspect of healing practices, including purification rites that utilize plants to effect changes in the mind, body, and soul. Throughout history there has been a strong overlap between healing practices and spiritual belief systems. Medicinal plants may be directly ingested or topically applied as poultices that function to extract or suck out ailments. Plants may also be utilized by shamans and healers to blow out and expel demons or ailments in the body as well as divine their existence and location. Tobacco smoke is often employed in indigenous and folk healing practices throughout the Americas. Smoke is also blown to demonstrate visibly the life-giving breath of the healer or to feed the supernaturals, or it may be swallowed ("eaten") in enormous quantities to induce trance states that allow the healer to enter the spirit realm for guidance. Tobacco smoke is also used more generally to purify the air during religious or healing ceremonies.

Ritual purification of the air is a common aspect to many religious ceremonial practices. Fragrant plants, flowers, and derived oils and resins play an important role in many purification ceremonies. These may be carefully placed as offerings, burned to release fragrant smoke, or even placed on the floors of temples and churches to be crushed as people walk over them, releasing volatile oils

into the atmosphere. Elaborate flower carpets are laid down for *semana santa* (Holy Easter Week) and on other Catholic/synchretic processions in Mesoamerica they have such an effect. In ancient Mesopotamia, oil-producing plants, many of which may have bactericidal or mycocidal virtues, were placed on hot coals in order to produce fragrant smoke. This ancient ritual from the Near East may be rooted in the censers of contemporary Catholic churches and the spicers found in Orthodox synagogues.

In summary, the knowledge and uses people have acquired about plants have been incorporated into religions worldwide – regardless of the scale of these religions – and in a variety of ways. Plants, like people, live, reproduce, and die, thereby providing important material for religious thought and practice. Under certain circumstances, cultural traditions have devised plant models to stand for patron deities, ancestral spirits, and guardian spirits, such as of rice and maize, in societies where those crops have been very significant economically. Plants also have served to represent people totemically in their origin myths, wherein the original beings are conceived in local systems of thought as plants of one sort or another. In addition, plants may more generally stimulate attitudes of respect and deference, and are sometimes ascribed possession of souls. Sometimes, sacred plants actually contain profoundly hallucinogenic properties that are sought after in religious ceremony (as with fly agaric, ayahuasca, and peyote cactus), whereas in other contexts, the bioactive principle desired for attainment of religious ecstasy and communion with other-worldly divinities is more of a stimulant (as with tobacco and coca). In numerous religious traditions, psychoactive plants are deemed to be central and indispensable, in terms of the physiological and spiritual effects they induce, with regard to the users' ability to contact and negotiate with beings and gods in the supernatural world. Plants also play multiple biophysical and symbolic roles in ritual practices, including the sanctification of ceremonial space in many world religions. Plants represent critical aspects of ceremonial behavior and thought, not only in reference to so-called world religions, but also in the context of numerous shamanic and other egalitarian (non-state) religious systems worldwide. As such, in the comparative study of religion, a distinctive and important role exists for ethnobotany more generally.

Meredith Dudley and William Balée

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- See also: Amazonia; Animism (various); Ayahuasca; Entheogens; Ethnoecology; Peyote; Plants and the Spirit World; Shamanism (various); Traditional Ecological Knowledge; Tukanoan Indian (NW Amazonia); Umbanda.

SP Ethnoecology

Ethnoecology – the study of cultural explications of nature – generates insights into the interface between peoples and the more-than-human world. Ecology is the scientific study of the interrelationships between plants, animals, and the environment, and it has developed into the study of interdependent communities of organisms and their environments. But while most ecologists have been trained to seek knowledge solely from scholarly books or nonhuman nature, tremendous environmental information is stored in the minds, cultures, and arts of indigenous peoples. Ethnoecologists combine ecology and

ethnology to shed light on diverse cultural ways of understanding the natural world and the supranatural cosmos. They strive to formulate theories about how people perceive, organize knowledge about, and then act upon the environment.

We are human, in good part, because of the discrete ways we affiliate, not only with each other, but also with the natural world. Ethnoecology entails focused research on what is termed "traditional ecological knowledge," "indigenous knowledge," or "local knowledge." Such knowledge is being lost rapidly as elders die and their cultures undergo tremendous change. Ethnoecology – the recording, understanding, and appreciation of this knowledge – is thus a pressing matter. Traditional ecological knowledge includes those aspects of culture that relate to environmental concerns directly (such as resource exploitation) and indirectly (for example, totemic prescriptions and religious beliefs). Thus, a culture's ecological knowledge affects subsistence, adaptation, cosmology, and aesthetics, and these things in turn affect the knowledge base. Ethnoecology offers a way to record and analyze human interactions with the natural world. Emphasizing local understandings of environments, it focuses on the importance of cognition in shaping behavior. By pursuing ethnoecology, we are able to gain understanding of the interactions between humans and the natural world.

Ethnoecology entails investigation of systems of perception, cognition, belief, symbols, and uses of the natural environment. It illuminates cultural interactions with the environment, thereby giving us greater appreciation of the depth and scope of knowledge systems as they relate to the more-than-human world. Vignettes of ecological knowledge are precious in their own right, but they also provide grist for a new environmental ethic that we so urgently need. In this light, some of the goals of ethnoecology are to help us: 1) be exposed to the diversity of indigenous perceptions of "natural" divisions in the biological world; 2) understand and appreciate the origins and uses of ecological knowledge and resource management practices; 3) appreciate the connections between aesthetics, religion, and human ecology; 4) develop the tools to acquire effective ways of recording, analyzing, and applying traditional ecological knowledge; 5) discern the variant approaches that peoples have developed cognitively to understand the world around them; 6) recognize the intersections and disjunctions between knowledge and practice; and 7) explore ecological beliefs about relationships between humans and the environment that are shared by Western sciences and Native cosmologies.

Ethnoecology shows us that indigenous practices of land use and resource management are not only adapted to local ecosystems, but have sometimes shaped those ecosystems in ways that have made them more diverse and

stable. Examples of such mutualism are found more often among indigenous groups that have lived in particular places a long time than among recent arrivals. In most indigenous cosmologies, the human and the nonhuman are interdependent, and ecological limits, restraints, and responsibilities are readily apparent and cannot be externalized. The norm is that indigenous religions and cultural ecologies are based on beliefs in the intrinsic value of the land and all that it contains. Romanticized notions of traditional ecological knowledge, however, will help neither the people themselves nor the lands they inhabit, and a realistic assessment of environmental knowledge is essential for appropriate and effective conservation.

Indigenous perceptions of nature, as expressed through social and cultural processes, enrich our collective environmental understanding by providing regional specificity to global issues. Likewise, the application of ethnoecological research can benefit indigenous peoples by helping them gain greater political and economic control over their lands through articulating and exercising their unique environmental knowledge. Ethnoecology provides insight into environmental ideologies and management practices, and gives us greater appreciation of the options available in addressing contemporary concerns. Understanding ethnoecologies can also enable us to grasp more fully our collective humanity while revealing cultural differences.

Indigenous religious ideologies and ecological knowledge often translate into resource management practices, including such activities as performing ceremonies to ensure the well-being of the land, enacting restrictions to ease the strain of resource exploitation, and prescribing burns to "clean up the country." Understanding the environmental knowledge of diverse cultures is beneficial in our consideration of issues of development, human rights, and ecological integrity. The application of ethnoecological research to conservation management and cultural survival thus warrants intensive exploration.

Paul Faulstich

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See also: Entheogens; Ethnobotany; Traditional Ecological Knowledge.

Etsheni Sacred Stones

Scattered about the Port Shepstone area of KwaZulu Natal's South Coast are a series of natural sandstone outcrops that have, over recent years, become the center of religious fervor among local Zulu-speaking communities.

Sandstone outcrops are typical of the lower South Coast and, being a soft stone, are easily weathered into the most curious shapes and forms. Some of these resemble human or bizarre animal shapes, while others resemble faces. On yet others are interesting markings, interpreted as numerals or mystical signs. Also characteristic of such outcrops are shelters and caves hollowed out of the rock face, some of which were inhabited by the southern San in prehistoric times. Evidence of this is still to be seen in the remains of stone tools and faded paintings, including depictions of eland, an antelope held to be sacred by the San.

It has recently been brought to national attention that some of these sites at Etsheni are being used by local communities as ritual centers and attributed religious significance. Certain caves and shelters are regarded almost as shrines, with offerings being placed and candles burnt. These sandstone outcrops act as focal points of prayer and communication with the deity and the ancestors.

Due to the church's presence in the area, a strong Catholic influence is seen in this religious center with the face of the Virgin Mary supposedly manifesting upon one particular rock face. The Virgin, in this instance, is a modern interpretation, under years of missionary influence, of an ancient Zulu deity, the goddess Nomkubulwana. This goddess, also "princess of the Heavens," is associated with fertility of both the land and people. She is often described as an exquisite young maiden, bare-breasted and with long hair of forest plants and flowers. On occasion she is said to manifest in sacred pools as a mermaid. However, the concept of Nomkubulwana is itself a transformation of the much earlier southern San belief in the spirits of the dead who now live in their own complete world under the water. Indeed, certain Zulu traditionalists still hold that Nomkubulwana is a beautiful young San woman.

Yet other images at sacred sites in this general area are said to be apparent as fixed features, and these include, among many others, faces of baboons, an animal associated with witchcraft in Bantu-speaking belief, and even a rock shaped like a huge passenger liner and likened to the *Titanic*. Living animals, both real and mythical, are said to haunt the site. A large antelope known as reedbuck, is said to guard the likenesses of babies situated in a hollow, and a

mythical horse-headed snake, the *inkanyamba*, is said to bask on the heat of the rocks.

Clearly these sites have become a religious node, said to date to the late 1800s, but having become most significant in recent years. San paintings, widely recognized as being religious in nature, do indicate to pilgrims that at least some sites have, for hundreds of years, been used as a religious center, and in this way fuel the religious fervor exhibited by the cult's adherents. Indeed, in an attempt to establish continuity some followers claim that Zulu groups obtained their religion from the San, and that the South Coast sites were "created" by the San. However, the majority, if not all these sites are natural and not manmade formations.

Indeed, the entire area in which the particular site of Etsheni lies is perceived symbolically by adherents to this belief system. The landscape and the features upon it are interpreted in terms of Christian religious concepts. The valley in which the rocks are situated is known as *KwaSatani*, or the "place of Satan," while the river which flows through and below the rocks, is known as *nku-lunkulu*, or the "river of God." Clearly, as in the case of Nomkubulwana, these names and associated concepts are based upon a much older African belief system.

African traditional healers venerate the spirits of the autochthonous San at some rock-art sites in southern Africa. Such places are often used as training schools for apprentice diviners. It is possible that the Etsheni sites had just such an origin as African traditional religion is very fluid, incorporating new, and often alien elements, without any observed contradiction. It is this aspect of African religion that explains the presence of Christian elements today at the sacred rocks.

This fluid reorganizing and transposing of religious concepts and blurring of doctrines eliminates any possible contradiction in the adoption of novel religious concepts. Adherents apparently have no difficulty in incorporating into a single belief system elements from ancient San and Zulu belief and from the later Catholic missionary influence. Indeed, it is true that there are similarities between shamanistic religion as practiced by the San and certain aspects of Christianity and Judaism. For instance, visions and audiosonic experiences so often associated with prophetic practice in the Bible are a regular feature of shamanism.

Reusing ancient religious sites is practiced world-wide, with Stonehenge on Salisbury Plain perhaps being the best-known example. This ancient lithic site acts as the scene of a New Age Druid and Mother Earth movement but, like the South Coast cult, there is no real thread of continuity between the original builders/artists and later religious groups. However, in both instances some relationship is sought in an attempt to validate the adherents' beliefs.

Sian Hall

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- See also: San (Bushmen) Religion.

Evangelical Environmental Network

Despite opposition from conservatives, the Evangelical Environmental Network (EEN) has become a consistent advocate for environmental care among United States evangelicals, engendering the support of many prominent evangelical leaders and lobbying successfully against national anti-environmental legislation. One of four religious groups comprising the National Religious Partnership for the Environment (NRPE), EEN is a ministry of Evangelicals for Social Action, a small but influential advocacy group that was founded by Ronald J. Sider to promote left-leaning politics from within a conservative theological framework. EEN was created in 1993 specifically to include evangelical representation on the NRPE.

The defining document of the EEN is the "Evangelical Declaration on the Care of Creation," which affirms such characteristic evangelical tenets as the "full authority of Scriptures" and the need for evangelism while also rejecting nature worship and positing stewardship as the biblical rationale for environmental care. Human sinfulness caused a perversion of stewardship, resulting in seven "degradations of creation": 1) land degradation; 2) deforestation; 3) species extinction; 4) water degradation; 5) global toxification; 6) the alteration of atmosphere; 7) human and cultural degradation. Christ came to "heal and bring to wholeness not only persons but the entire created order." Christians are to assist in this task by being "faithful stewards of God's good garden, our earthly home." Although attacked by conservatives minimizing environmental problems, the Declaration received the support of many mainstream evangelical leaders, who lent credibility to the EEN's tacit claim to represent evangelical opinion.

Starting in 1994, as part of an NRPE plan to provide churches and synagogues with "environmental awareness kits," the EEN mailed copies of *Let the Earth Be Glad: A Starter Kit for Evangelical Churches to Care for God's Creation* to more than 30,000 congregations. This booklet detailed contemporary environmental threats, presented a theological justification for environmental concern, and

suggested ways for churches to integrate environmental themes into worship.

Although primarily an educational outreach organization, in 1996 the EEN waged a successful campaign to prevent congressional Republicans from weakening the Endangered Species Act. At a press conference heavily covered by national media, EEN representatives called the Act the “Noah’s Ark of our day,” and charged, “Congress and special interests are trying to sink it.” Influential Republicans, who thought they could count on the support of evangelicals, were caught off guard and quickly distanced themselves from the proposed changes. The Sierra Club later acknowledged the EEN as instrumental in this fight. Such political activity raised the ire of prominent members of the Religious Right, who sought to counter the EEN and the NRPE by forming the Interfaith Council for Environmental Stewardship in 2000.

The EEN successfully weathered such criticisms and continues to promote evangelical environmentalism through its *Creation Care* magazine, its recycling programs, and its efforts to convince congregations to observe an annual, ecologically oriented, “Creation Sunday.” It has formed partnerships with 23 moderate and progressive evangelical organizations, including InterVarsity Christian Fellowship, Youth with a Mission, Habitat for Humanity, World Vision, and the Council for Christian Colleges and Universities. Attempting to capitalize on the conservative commitment to “family values,” EEN launched a Healthy Families, Healthy Environment campaign in 2001.

David Larsen

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See also: Au Sable Institute; Biblical Foundations for Christian Stewardship; Christianity(2) – Jesus (and adjacent, What Would Jesus Drive?); Christianity(7i) – An Evangelical Perspective on Faith and Nature; Religious Campaign for Forest Conservation; Stewardship; Wise Use Movement.

Evola, Julius (1898–1974)

Julius Evola is the primary Italian representative of the Traditionalist school of metaphysical thought, who further established himself as one of the most radical right-wing

and anti-modern spiritual philosophers of the twentieth century.

Born Giulio Césare Andrea Evola in Rome on 19 May 1898, little is known concerning his background or early years. As a young man Evola developed strong artistic interests, and was influenced by iconoclastic writers such as F.W. Nietzsche and Otto Weininger. In World War I he served as an officer in an Italian mountain artillery unit; these and subsequent alpine experiences provided powerful inspiration for some of his later spiritual writings. Following the war he made contact with leading avant-garde intellectuals and produced poetry and paintings as the main Italian exponent of the Dada art movement.

Evola’s subsequent philosophical period (1925–1930) saw him issuing detailed expositions of “Magical Idealism” and a theory of the “Absolute Individual.” In these works Evola posited the existence of an Absolute Self – a liberated higher Self that the awakened, active individual may become aware of and identify with only through disciplined, ascetic spiritual practices. His studies of Tantra (1925), Hermeticism (1931), and Buddhism (1943) all reflect this outlook. Of the diverse esoteric thinkers who Evola interacted with in the 1920s – often through his work as the leader of a magical order, the UR Group – the greatest impact upon him was made by French writer René Guénon, whose influence resulted in Evola’s permanent identification with the Traditionalist movement. In 1935 Evola published his own Traditionalist *magnum opus* in the form of *Rivolta contro il mondo moderno* (*Revolt Against the Modern World*).

Evola’s attitudes toward the natural world and modern life can only be fully understood within their larger Traditionalist context. Fundamental to this is a nonlinear view of time, in which history unfolds according to an immutable law of cycles. Humankind is now living in the (Hindu) Kali Yuga, or age of conflict, equivalent to the Greek Age of Iron or the Norse *ragnarök*, and thus the modern world is inevitably defined by dissolution, chaos, and rampant materialism. At the conclusion of this cycle the impure remnants will be swept away as a new Golden Age takes precedence. Some affinities may be seen between this nonlinear view and the theories of Oswald Spengler, who set forth a cyclical “organic” interpretation of history in his *Der Untergang des Abendlandes* (*The Decline of the West*, 1918–22; Evola was influenced by the work and translated it into Italian).

Traditionalism rejects evolutionism, positivism, materialism, and the entire notion of progress. It was also on spiritual-Traditionalist grounds that Evola vehemently opposed humanistic socio-political doctrines such as democracy and egalitarianism. In contrast to the biological racial theories being promoted in Germany and elsewhere, Evola formulated a spiritual doctrine of race that rested upon neither materialistic nor scientific foundations. Although Mussolini officially endorsed

Evola's racial theories in 1942, Evola himself had long harbored mixed feelings about the fascist regime. He held onto a hope that with time the new political system might suppress its plebian tendencies and strive to embody higher spiritual principles, becoming a sort of "transcendent Fascism." But the reality of the situation was a source of perpetual disappointment. In diametric contrast to modern notions of the separation of Church and state, for Evola the ideal expression of true statehood would always remain the sacrally sanctioned empire.

In accordance with its technique of "intellectual intuition," Traditionalist philosophy places greater weight on myths and legends as opposed to the details of profane history. The former are viewed as vestiges of a perennial, sacred tradition with prehistoric origins. (Evola believed that this tradition had emanated from the "Hyperborean" or polar north.) Evola was particularly fascinated by ancient Roman rites and often drew upon Indo-European pagan mythology and religion to illustrate his ideas, although he never espoused any sort of nature religion. To the contrary, his vision was always centered upon the spiritual realm of "pure being," at a vertical apex and high above the material world of "becoming." Evola goes even further in his own interpretations, characterizing the higher realm as a regal, masculine solar culture which is superior to that of the chthonic, feminine, earthly world of the "mothers."

This dualistic symbolism mirrors the physical aspects of human sexuality, but Evola's conclusions bear no commonality with a naturalistic outlook – hence his elevation of the "magical" or transcendental dynamics of sexual activity, and his insistence that mere procreation is not the aim of such drives when these are understood in the highest sense. In later writings he addressed strongly the issue of overpopulation, calling it the "problem of births." He opposed this not on strictly environmental grounds, but rather as a gross proliferation of quantity (masses of rootless individuals) at the expense of quality (higher human beings connected to a transcendent ideal).

In his writings Evola spoke of two "natures," oriented as opposing poles of existence, but "leading from one to the other." The natural world of matter represents a "fall" from the higher realm; it "included everything that was merely human, since what is human cannot escape birth and death, impermanence, dependence, and transformation, all of which characterized the inferior region" (Evola 1995: 4). The higher realm, possessed of a "superrational and sidereal brightness," represents "liberation" from the material world, which it also possesses the power to shape and consecrate. This metaphysical view parallels Platonic doctrines and is intrinsic to the Traditionalist school of thought.

He notes that unlike modern man, primordial man's impressions of nature were not "poetic and subjective," but rather "real sensations . . . of the supernatural, of the

powers (*numina*) that permeated [natural] places" (Evola 1995: 150). Evola acknowledges the importance of geomancy and the performance of rites and placement of temples in terms of "sacred orientations." Such actions established an analogous relationship to higher realms and served to sacralize human affairs by infusing spirit into matter. The relationship between traditional man and the land was, therefore, of a "living and psychic character."

For Evola there is almost nothing of value to be found in today's science, industry, or technology:

In modern civilization everything tends to suffocate the heroic sense of life. Everything is more or less mechanized, spiritually impoverished . . . The contact between man's deep and free powers and the powers of things and of nature has been cut off; metropolitan life petrifies everything, syncopates every breath, and contaminates every spiritual "well" (Evola 1998: 4).

Nevertheless, certain remote features of the natural world exist as an uncontaminated antithesis: these are the harsh and lonely mountain tops, imbued with majesty and offering a rare opportunity for select individuals to test themselves to the core of their being, thereby gaining transcendent knowledge of the spirit.

Only nature can help in this task. I mean nature in whose aspects no room is left for what is beautiful, romantic, picturesque . . . nature [that] ceases to speak to man . . . nature that is substantiated by greatness and pure forces (Evola 1998: 32).

In the icy, unforgiving realm of the peaks – accessible only to those few with the discipline and stamina to make the requisite ascent – Evola found his strongest connection to the natural world and its elemental powers.

Toward the tumultuous end of World War II, Evola left Rome and travelled to Vienna. During a 1945 Russian bombardment there, he was injured by an explosion while deliberately walking alone through the streets to "question his fate," and was permanently crippled as a result. After 1948 Evola was mainly confined to an apartment in Rome where he received visitors, some of them young neo-fascists in search of an ideological guru. In the post-war years Evola wrote critical commentaries on the fascist and National Socialist era, and *Gli uomini e le rovine* (*Men among the Ruins*, 2002), a book detailing his idealized socio-political visions. In 1951 he was arrested in Rome for allegedly "glorifying Fascism" and inspiring extremist groups through his writings; at the trial he was acquitted of all charges. In *Cavalcare le tigri* (*Ride the Tiger*) he advanced the concept of *apoliteia*, advocating a detached spiritual bearing that rises above temporal political

entanglements. Other later works include *Metafisica del sesso* (*Eros and the Metaphysics of Love*, 1983) and a spiritual autobiography, *Il cammino del Cinabro* (*The Path of the Cinnabar*, 1963). After stoically enduring great physical pain in his final years, he died on 11 June 1974. His final requests were to be brought to a window overlooking the Janiculum, the sacred hill where a temple to Janus had once been, and that he might die upright – for Evola this was emblematic of the heroic manner in which a man should confront his mortal end. In accordance with his wishes he was given no Christian funeral and his cremated ashes were later deposited in a crevasse on Monte Rosa, deep within a glacier covering the spot where a legendary town was said to have existed.

Interest in Evola's philosophy has grown since the time of his death, in scholarly as well as esoteric and rightist milieus. Nearly all of his main books have now been translated into the major European languages, and in Rome the Julius Evola Foundation endeavors to increase awareness of his work. As a forceful antithesis to a contemporary Western world that places great value on science, progress, and humanism, Evola's brand of Traditionalism continues to fascinate new generations of radicals who question the entire metaphysical basis of modern secular thought and behavior.

Michael Moynihan

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- See also: ATWA; Devi, Savitri; Fascism.

Evolutionary Biology, Religion, and Stewardship

Religious believers frequently compare their communities to single organisms and even to beehives, metaphors that invoke selfless dedication to corporate goals. Recent developments in evolutionary biology suggest that these comparisons are more than metaphors. Like single organisms and beehives, religious groups are products of evolution that are adapted to survive and reproduce in their environments. Much of the evolution is cultural in the case of religious groups, but that does not alter their fundamental nature as corporate units adapted to their local environments.

This pragmatic interpretation of religious groups is obscured by the other-worldliness of religious belief. How can religious believers function adaptively in this world when their heads are filled with beliefs about an afterlife, supernatural agents whose desires must be appeased with time-consuming rituals, and so on? The answer is that the other-worldly side of religion begins to make practical sense when we ask what these beliefs cause people to do. We must distinguish between what in *Darwin's Cathedral* I termed "factual realism" and "practical realism." A belief is factually realistic when it describes the actual structure of the world. The goal of science is to be factually realistic. A belief is practically realistic when it causes the believer to behave adaptively in the real world. The goal of religion, I claim, is to be practically realistic.

It might seem that the best way to be practically realistic is to be factually realistic, but a little thought reveals many exceptions to this rule. Fictional beliefs can be far more powerful and decisive in the behaviors that they motivate than factual beliefs. Since fictional beliefs can potentially motivate any behavior, there must be some mechanism for winnowing the few beliefs that motivate adaptive behavior from the many that do not. The raw process of natural selection provides one mechanism. If all beliefs are transmitted with equal facility (like genes), then those that cause the believer to survive and reproduce will increase in frequency and ultimately will replace maladaptive beliefs. However, brains are organs that evolved to anticipate the outcome of natural selection and arrive at adaptive solutions without a costly birth and death process. The human brain is designed to filter beliefs rather than transmit them with equal facility. These mechanisms will probably prove to be both numerous and sophisticated when understood in detail, but in many cases they need be no more sensitive to factual realism than the raw process of natural selection.

Suppose, for example, that you observe one person who is bursting with vitality and another who is sullen and withdrawn. You might be attracted to the first person and avoid the second without knowing anything about the causes of their conditions. You might find

yourself imitating the first person, not only consciously but unconsciously (e.g., speech patterns and body language). In this fashion, psychological and cultural processes might be intricately designed to identify, amplify, and transmit adaptive beliefs without knowing anything factually about why they are adaptive (Richerson and Boyd 2004).

I do not mean to underestimate the human ability to understand the factual basis of reality. According to anthropologists, all indigenous people possess the ability to reason on the basis of detailed factual knowledge that we associate with scientific thought. The important point is that practical realism has been the bottom line in human psychological and cultural evolution and that factual realism must be understood as part of this larger picture. Rational thought is not the gold standard against which all other modes of thought must be judged. Adaptation is the gold standard against which rational thought must be judged along with other forms of thought.

I have presented this evolutionary view of religious groups as adaptive units in more detail in *Darwin's Cathedral*. It is not the only evolutionary view of religion. For example, Boyer (2001) regards religion primarily as a non-adaptive by-product of mental facilities whose adaptive value resides in non-religious contexts. For the remainder of this essay, I will explore the implications of the adaptationist view for the "fundamental human question" posed by the editors of this encyclopedia: "What are the relationships between *Homo sapiens*, their diverse religions, and the Earth's living systems?"

If religious groups are well adapted to their local environments, it might seem that they would be responsible stewards of their environments. However, the relationship between adaptation in the evolutionary sense of the word and the kind of stewardship at a large temporal and spatial scale envisioned by this encyclopedia is very complex indeed. Adaptation is a relentlessly relative concept. It does not matter how well a unit of selection survives and reproduces; it only matters that it does so better than the other units in its vicinity. This gives the evolutionary concept of adaptation a short-sighted quality that often results in highly maladaptive outcomes at larger spatial and temporal scales. A male lion who takes over a pride and attempts to kill the offspring of the previous male is not benefiting the females, the group, the species, or the ecosystem – only his own reproduction – relative to males who help raise the young of other males. Virtually every behavior that we call anti-social enhances the short-term interests of the anti-social individual in the absence of punishment and other forms of social control. Similarly, the behaviors that we call prosocial typically involve benefiting others at the expense of ourselves, which make them locally maladaptive. When we appreciate the relative nature of adaptation in the evolutionary sense of the word,

we can begin to understand why it is so difficult for our species to achieve the kind of far-sighted stewardship of the environment that so clearly would be adaptive in the everyday sense of the word.

However, the situation is not hopeless. Anti-social individuals gain at the expense of prosocial individuals within their own groups, but groups of pro-social individuals robustly outcompete groups of anti-social individuals. Natural selection is a multilevel process and higher levels of selection expand the spatial and temporal horizons of biological adaptations (Sober and Wilson 1998). One of the most important recent discoveries in evolutionary biology is called the major transitions of life (Smith and Szathmary 1995). It used to be thought that evolution takes place entirely by mutational change – individuals that vary in a heritable fashion, with some surviving and reproducing better than others. Now it is known that evolution also takes place along a second pathway – by social groups becoming so functionally integrated that they become higher-level organisms in their own right. The single organisms of today, such as you and I, are the social groups of past ages. Each transition requires the evolution of mechanisms that suppress fitness differences within groups, concentrating natural selection at the group level. Social insect colonies represent another major transition, from groups of organisms to groups as organisms. Human social evolution represents the newest major transition, or rather series of major transitions, first at the scale of hunter-gatherer society and then at increasingly larger scales since the advent of agriculture (Boehm 1999). The fact that most of the recent evolution is cultural rather than genetic does not change the fundamentals.

Each transition creates a new corporate unit that manages to limit (at least to a degree) the selfish impulses of its members in favor of corporate goals. The mechanisms required to accomplish this transformation go beyond beliefs that encourage altruism and the abandonment of self-will. Successful religions bristle with social control mechanisms that reward cooperation and punish cheating in material terms, and sociological studies show that actual participation in organized religion (e.g., the number of services attended per year) is more important than religious belief *per se* (e.g., personal feelings of religiosity) in encouraging self-restraint and adherence to group goals (Stark and Bainbridge 1997).

Although a transition makes it possible for individuals to exercise self-restraint in favor of collective goals, even the collective goals are often short-sighted with respect to the kind of stewardship of the Earth that forms the inspiration for this encyclopedia. When we examine the relationship between any particular religious group and its environment, we need to ask the following question: When does self-restraint and wise stewardship of the environment actually feed back to increase the fitness of

the group, compared to groups that exercise less restraint? It quickly becomes clear that adaptive self-restraint should be highly selective and that groups will frequently be as rapacious as individuals in their treatment of the environment. This is true of indigenous religions no less than modern religions. The idea that indigenous people are more respectful of their environments in some general sense is profoundly mistaken from an evolutionary perspective and is not born out by the evidence (Krech 1999). For example, in many cases it is more productive to exploit a local area and move on rather than managing the local area for long-term productivity. Human groups that have the option of moving on should not evolve a conservation ethic, although they might exercise self-restraint in other respects such as sharing the work and profits of environmental exploitation.

The distinction between practical and factual realism makes it necessary to exercise extreme caution when evaluating the content of any religion, indigenous or otherwise. Expressions of respect toward nature cannot be accepted at face value but must be evaluated in terms of what they cause the believer to do. If we want to find examples of religions that genuinely encourage wise stewardship of nature, we need to find situations in which wise stewardship actually feeds back to increase the fitness of the group, relative to less responsible ways of interacting with the environment. Even then, the solutions that work for these groups may not work for the much longer-term and larger-scale environmental problems that confront us today.

Solving the environmental problems of today requires self-restraint and collective action at a larger temporal and spatial scale than at any other time in human history. Modern evolutionary theory and the study of religions can provide insight by showing how collective action problems can be and have been solved at smaller spatial and temporal scales. The challenges of expanding the scale further are daunting but still possible. The human mind is genetically adapted to cooperate in tiny face-to-face groups. No one could have imagined 10,000 years ago that cultural evolution would expand the size of cooperative groups to the modern nations of today and there is no reason to think that the upper limit has been reached. However, a key insight of evolutionary theory, amply supported by existing religions, is that a belief system that sanctifies the environment is only necessary and not sufficient. The Protestant reformer Martin Bucer wrote, "Where there is no discipline and excommunication, there is no Christian community" (in Wilson 2002: 105). By this he meant that even the most compelling belief system must be supplemented by a social control system to restrain the many temptations for short-term gains that undermine long-term collective welfare. Those far-sighted enough to work toward the next major transition in human cultural evolution need to adopt Bucer's tough-

minded stance to achieve the tender-minded objective of the stewardship of nature.

David Sloan Wilson

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Evolutionary Evangelism

Evolutionary evangelism tells as an inspiring sacred narrative the 14-billion year story of cosmic, planetary life and human evolution that comes to us through mainstream science. This story is inspiring in that it helps people find meaning and connection within a universe that is vaster and older than humans have heretofore believed. Such a story is deemed sacred because it addresses the nature of ultimate reality and deals with the ultimate concern and commitments people have. It also provides an overarching context, a grand narrative, and can be used for value instruction in ways similar to the functional roles of creation stories born of pre-scientific times and situations.

Evolutionary evangelists come from a wide range of religious and philosophical traditions. They share a passion for communicating the "epic of evolution" in ways that many find inspiring. Evolutionary evangelists appeal to the heart as well as to the mind, telling our common creation story in ways that offer listeners guidance and

that respond to their emotional, cognitive, and spiritual needs, while honoring bedrock beliefs and faith structures. They seek to transform cold scientific facts and theories into narratives consistent with the science but that also uplift the soul, empower the psyche, and offer comfort and assurance of deep connection with the whole of Reality. They provide ethical exhortation as well regarding the roles each and every one of us might constructively play in the continuing saga of evolution.

Consistent with Thomas Berry's portrayal of the evolutionary narrative as a "metareligious" story, evolutionary evangelists do not see this grand narrative as threatening to replace long-standing religious traditions. Rather, they view the evolutionary story as enriching and enlivening to diverse religious and secular traditions by providing the "big picture," or "great story," that contextualizes the old stories and teachings in ways consistent with contemporary conditions and understandings.

What distinguishes evolutionary evangelism from other forms of evangelism is its grounding in mainstream evolutionary and ecological sciences rather than the Bible or any other religious text. "Evangelism" (proclaiming the "good news") is deeply rooted in American religious culture. Evangelistic revivals in the eighteenth and nineteenth centuries, often referred to as the "First and Second Great Awakenings," transformed the religious and social landscape of America on a large scale, and subsequently spread beyond its borders. History suggests considerable potential impact of a green-spirited, evolutionary evangelism within and beyond North America.

In 2002 Michael Dowd and Connie Barlow launched an itinerant teaching and preaching ministry as evolutionary evangelists, "sharing the Great News of The Great Story and fostering the Great Work" in colleges, churches, and other religious and educational settings as well as living rooms and to outdoor gatherings across North America. Their mission was to promote the marriage of science and religion for personal and planetary well-being. In the first two years of this itinerant ministry, they delivered sermons and lectures in more than 200 churches and other organizations in the United States and Canada, from environmental groups and botanical gardens, to Unitarian-Universalist and Unity/New Thought churches, to a multitude of Protestant and Roman Catholic churches and retreat centers.

Much of the strategy for this revivalism was grounded in Dowd's religious background and experience. Dowd, who grew up Roman Catholic and had a "born again" experience in his youth, becoming a devoted evangelical Christian, developed during this time an interest in and appreciation of the American revivalist tradition.

His own conversion from an anti-evolutionary form of Christianity toward the launching of a form of itinerant revivalism began while he was majoring in biblical studies and philosophy at the Assemblies of God-

Affiliated Evangel University in Springfield, Missouri. It was there he began to embrace evolution as an expression of God's creativity and began to feel God's call to devote his life to sharing the evolutionary epic as an expression of the gospel. Particularly influential was an evening in 1988 when he was first introduced to the Universe Story through a course titled "The New Catholic Mysticism," taught in Boston by Albert LaChance, who had studied with Fr. Thomas Berry.

After seminary Dowd served for a time as a United Church of Christ pastor, an ecumenical peace and justice activist, and a sustainable community organizer. He also wrote *EarthSpirit: A Handbook for Nurturing an Ecological Christianity* (23rd Publications, 1991). Today he seeks to tell the evolutionary epic in ways that audiences, regardless of their theological and philosophical beliefs, will find hopeful, inspiring, and empowering, and he stresses what he calls seven "post-biblical revelations":

1. Evolution is a grand unifying and empowering worldview.
2. Human language is inherently symbolic, meaningful, and consequential.
3. "The universe" is a sacred story of nested creativity and cooperation at ever-wider scales and levels of complexity.
4. "God" is a legitimate proper name for that Ultimate Creative which transcends yet includes all other levels of reality.
5. "Creation" (the cosmos as a whole) is in a process of becoming more than it was before and becoming more intimate with itself over time, and humanity is now an integral part of this process.
6. As a species and as individuals, we are maturing and our self-interest is expanding.
7. Death, destruction and chaos are natural and generative. Said another way, death and resurrection are integral to the cosmos and are necessary for the continuing evolution of life and consciousness.

Such understandings, Dowd believes, provide a basis for reinspiring the faith in his listeners and, with Christian audiences, they offer new ways of understanding death, resurrection, sin, salvation, heaven and hell, the apocalypse, the second coming of Christ, and the kingdom of God.

Evangelism in any form is meant to positively transform lives and lift individuals to commit to higher callings. Something of vital importance is at stake. Beyond personal salvation is a religious zeal for the common good. In the case of evolutionary evangelism, the consequence of such transformation *en masse* would be a transformed relationship between humanity and the living planet. Evolutionary evangelism invites a this-world communion with the divine and a wholehearted participation in what

Thomas Berry calls the Ecozoic Era, a vision of human beings living in “a mutually enhancing relationship with the entire community of life.”

Michael Dowd and Connie Barlow

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Explorer Petroglyphs (Western United States)

Indigenous peoples were not the only ones who either inscribed rocks (petroglyphs), or painted or wrote upon stone surfaces (petrographs) to mark their presence upon the land. As Euro-American explorers, missionaries, and pioneers ventured into the western half of the North American continent, they too left many such traces. In the nineteenth century Lewis and Clark recorded in their journals several instances of men inscribing rocks or trees with their names or initials, and well-documented sites such as Names Hill and Independence Rock in Wyoming contain thousands of inscriptions carved into the soft rock surfaces by explorers, trappers, and pioneers moving west. Every western state has its own sites where people seemingly felt impelled to record their names and/or the dates of their passing through new territory.

Unlike the immense diversity of inscriptions and paintings left behind by indigenous populations, however, the overt religious context of Euro-American rock art is mostly limited to instances in which the Christian cross was either inscribed or painted onto rock surfaces. Although a few such sites may be funerary in nature, the vast majority seem not to be associated with graves at all, but with travelers employing the cross as a calling card of empire, the mark of a foreign culture staking claim in a new land.

This type of religious context may be subdivided further into two categories, the first consisting of those crosses probably carved by priests, especially those made by Spaniards in the southwestern part of the United States. These carvings come from an overt and declared religiosity, and have corollaries with ancient religions that see cultural conflict as a result of spiritual conflict. Thus, the crosses represent a physical manifestation of a new spiritual presence. The Catholicism of the eighteenth and nineteenth centuries encouraged priests to plant crosses wherever their missionaries were likely to encounter indigenous peoples, and the veneration of the cross as icon was well established as part and parcel of the missionary experience.

The second religious context bridges the gap between the widespread veneration of the cross encouraged among the Catholic laity, and the common piety and ambition exhibited by many explorers of the period. Not only were laity encouraged to erect crosses in their everyday travels, but explorers also were known to follow this practice. Kit Carson and John C. Fremont carved a cross and a date on an island in the middle of the Great Salt Lake in Utah, and Fremont himself carved another cross on Independence Rock. In his memoirs, Fremont explained he was simply following “the custom of early travelers and explorers in our country,” and this expression of religiosity is a vital link between westward expansion and how such explorers and travelers viewed nature itself. Like the Catholic priests of the Southwest, these explorers also saw the land as something to be “conquered,” but their crosses had less to do with other-worldly hopes for the salvation of natives and more to do with the opening of routes for the fur trade, commerce, and the capture of nature by European immigrants.

Michael McKenzie

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F

Faerie Faith in Scotland

Beneath formalized religious structures of many societies rests a bedrock or vestige of nature religion. In Scotland and other Celtic countries, faerielore fulfils this quasi-totemic function. The literary representation of the faeries as winged “little people” is largely a Victorian British development. Kipling’s “Puck of Pook’s Hill” maintains he was the last faerie (or fairy) in England, so a measure of reinvention may have been justified. Nineteenth-century artists like Joseph Noel Paton (National Gallery of Scotland) found inspiration in the “fairy faith” for rich erotic sublimation that might otherwise, with more worldly muses, have shocked Victorian sensibilities.

Traditionally faeries could vary in size from the miniscule to the superhuman. R.H. Cromek, in an ethnographic account, describes those of southwest Scotland as,

of small stature, but finely proportioned; of a fair complexion, with long yellow hair hanging over their shoulders and gathered above their heads with combs of gold. They wear a mantle of green cloth, inlaid with wild flowers; green pantaloons, buttoned with bobs of silk; and silver shoon . . . They ride on steeds whose hoofs “would not dash the dew from the cup of a harebell” (Cromek in McNeill: 111).

Irish legends, also influential in Gaelic Scotland, portrayed the faeries as aboriginals who were driven into hollow hills – knowes, raths or forts – when iron-age humankind conquered with tree-felling axes. As such, faerie faith conveys a submerged Arcadian or idyllic green consciousness. Various Scottish tales account for the faeries as those angels who were too good to follow Lucifer all the way to hell, but not good enough to remain in heaven. In *The Secret Commonwealth of Elves, Fauns and Fairies* (ca. 1690), the Rev. Robert Kirk documented Gaelic beliefs and provided a biblical underpinning. The faeries, Kirk believed, are a species of creation that, like humankind, also await salvation.

Care must be taken not to offend these *daoine sìthe* – the “people of peace.” They can cause mishaps and even replace healthy human children with sickly, troublesome, faerie “changelings,” thereby perhaps conveniently allowing blame for genetic misfortune or parental neglect to be displaced. This has diminished the esteem in which the “gentle folk” might otherwise be held. But W.B. Yeats in *The Celtic Twilight*, first published in 1893, makes

impassioned “remonstrance with Scotsmen for having soured the disposition of their ghosts and faeries” (Yeats 1990: 92–5). Scots, he says here, have been “too theological, too gloomy.” In contrast, he continues, the Irish “exchange civilities with the world beyond,” and are accordingly more richly blessed.

In recent years some such “Twilightist” sentiments, boosted by New Age and green mystical seeking, have been attacked as inventive romanticism by such “Celtsceptic” scholars as Professor Donald E. Meek, who holds a chair of Celtic studies at Edinburgh University. Meek’s concern is with cultural appropriation, invasion and distortion, and while anger about this would be shared by many Gaelic thinkers, views of what is genuinely traditional, or authentically evolving, vary, and some thinkers understandably feel divided within themselves on such shifting numinous ground within the cultural psyche. The Faerie Hill is, suggests Gaelic scholar John MacInnes, “a metaphor of the imagination” (personal communication, 1997); a liminal and imaginary realm, where musicians or poets would fall asleep, accepting they would awake either mad, or inspired. As such the faeries may represent the interface of natural and human creativity: nature personified, true nature’s child born to be wild and perhaps being reborn in the nascent green consciousness of our times.

“Yes, about the fairies and all that . . . They say they are here for a century and away for another century. This is their century away.” So said Nan MacKinnon, tradition-bearer of the Hebridean Isle of Vatersay, interviewed for the Scottish studies journal, *Tocher* (vol. 6–38, 1983: 9). She said it in 1981!

Alastair McIntosh

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P The Rotting Tree Faerie

What is it that keeps faerie traditions alive? One answer, suggests Alastair McIntosh, is numinous experience. The stories keep reasserting themselves, as he suggests with this account adapted from his article, "Rainforests and High Finance," in *World Rainforest Report* 26 (October 1993), 18–20.

It was our last day deep in the Australian forest. And there, like out of a child's picture book, in an arched door-like entrance to this hollow rotting tree, was quite the most exquisitely beautiful mushroom any of us had ever seen.

It had a slightly bulbous, pristine white stem, and a perfectly circular, mottled grey cap with a ring of white spots as crisp and fresh as God in the morning light.

We gazed in wonder. And I said for a laugh – for the kind of laugh that you need when wrestling with the pain of nature undergoing destruction – "What kind of a faerie lives here?"

Everyone smiled. I mean, it's kind of ridiculous, to be enquiring after . . . faeries!

The other protestors from John Seed's Rainforest Information Centre gradually move on. But I stay, alone. And again, the question, burning now: "What kind of a faerie lives here?"

In the back of the tree lay some termite-eaten wood. It was annoyingly distracting me, for I could vaguely make out in it the face of a grim old man staring, motionless, down at the soil, like a New Guinea spirit mask. This was not what I was looking for.

Again, my question. But this time, the old man spoke. Yes, he actually spoke! Clearly, subjectively objective in my mind's ear.

In a big, empowered, booming voice, he spoke. He said: "I am the faerie who lives here."

"No, no," I replied, bemused. "You're just a sour old face I'm imagining in rotting wood. I'm looking for flower faeries. You're not that!"

"Oh," he responded, quizzically. "But I thought you

were the one who's always going on to your students about radical feminist theology?"

"What's that got to do with it?"

"Just that you're always telling them about calling one-another into being; that a person becomes a person in community inasmuch as they're heard, listened to, and *allowed* to be visible."

Well! I tell you . . . he had me by my own ideals! To deny his reality would have been to deny one of the insights that I most value.

"Fair enough," I said to him. "But if I accept that, I'm going to start seeing faeries all over the place!"

He laughed and laughed. He said that faeries *are* all over the place! God has many masks and I was presently face to face with one of them.

"Tell me then," I enquired. "What kind of a faerie are you?"

He swelled with pride and delight at being asked. "I," he said, "am the Rotting Tree Faerie!"

"But," I protested, "I always thought faeries looked joyful. You look like an undertaker. So what kind of things give *you* joy in life?"

This was the question he'd been waiting for and his voice shook the forest. "Rotting trees give me joy in life! This mushroom," he said, "is at my door precisely because I AM the Rotting Tree Faerie."

And as he said it, he let me feel the great processes of death and decay going on in this old tree, indeed, in the whole forest. He let me feel the mushroom's mycelia reaching from the roots into every part of that dying tree, and beyond. I could even feel the molecular processes of rot taking place, composting what had reached the fullness of its time and had died to create new soil and therefore new life.

The mask and the mushroom were, indeed, his Janus face. One side expressed decay and death. The other, in its beauty, was his veritable flower faerie self.

Alastair McIntosh

See also: Re-Earthing; Seed, John.

See also: Animism (various); Celtic Christianity; Celtic Spirituality; Earth First! and the Earth Liberation Front; Ireland; Scotland; Seed, John.

The Fall

The Fall story of Genesis 1–11 is not only a theological text. It is also an aetiological narrative (a story about origins) concerning the rise of civilization in the late Neolithic period. Since the mid-nineteenth century the modernist–fundamentalist culture war in North Atlantic Christianity has generated two highly polarized

approaches to the biblical creation story: one that insists upon its putative historico-scientific content, and the other that views it as legend/folktale with no historical value. To move beyond this historicist straightjacket we might instead consider this story in terms of myth-as-memory. Might it be similar in character to origins-narratives of indigenous peoples, which postmodern anthropology is finally beginning to appreciate as legitimate "testimony" about prehistoric life?

Until recently there were few anthropological alternatives to post-Enlightenment evolutionary positivism's perspective on origins. There is no grander narrative in modern culture than the myth of "Progress," and this

ideology is grounded in the story of humanity's emergence from the swamp of ignorant *Homo erectus* to the triumph of increasingly rational, technologically adept and socially complex cultures of *Homo sapiens sapiens*. Recent revisionist paleoanthropological reconstructions of human "pre-history," however, are challenging assumptions about the intrinsic nobility (or inevitability) of the so-called "Ascent of Man."

In particular, the "Neolithic revolution" of ca. 10,000 B.C.E. that led to what the dominant historiography calls the "dawn of civilization" is being reassessed in light of a very different paradigm. It is being argued that human lifeways throughout the Pleistocene – which were universally characterized by a social, environmental and spiritual symbiosis – represented a viable and sustainable cultural model, albeit one that the rise and relentless spread of civilization dramatically and progressively disrupted and destroyed.

Below are three anthropological hypotheses regarding this traumatic transformation during the late Neolithic period:

One interpretive stream pioneered by paleoarcheologist Marija Gimbutas and popularized by Riane Eisler concentrates on gender. It sees widespread goddess-worshipping, egalitarian Neolithic cultures from Sumer to Minoan Crete to Old Europe that were peaceful, horticultural, and symbolically "advanced." It is argued that these cultures were steadily wiped out by "Kurgan" invasions from the Asian steppes beginning ca. the fifth millennium B.C.E., which imposed iron technology, patriarchal institutions and the politics of war. Cynthia Eller has critiqued this view from a different feminist perspective.

A more widely accepted hypothesis focuses on the eclipse of hunter-gatherer lifeways by the domestication of plants and animals beginning ca. 9000 B.C.E., which led inexorably to the rise of the first cities in Asia Minor and Mesopotamia from 5000 B.C.E. Jared Diamond explores environmental explanations for why domestication arose in the Middle East first, whereas Jacques Cauvin attributes it to symbolic/ideological transformations. Paul Shepard focuses on the reciprocal nature of domestication: the more humans breed out wildness, the more we become "dull and mean" like our cattle. Evan Eisenberg examines how Mesopotamian urban agriculturalists substituted the artificial mountain of the ziggurat for the traditional *axis mundi* of the mountain wilderness. Daniel Quinn posits an archetypal struggle between "Taker" and "Leaver" cultures, and like Shepard, laments the triumph of the former.

A third hypothesis moves behind agriculture to culture itself, placing the decline of Pleistocene symbiosis further back into the Middle Paleolithic with the rise of symbolic thought. Direct somatic and sensory perception of the world began to atrophy – according to David Abram due to written language, and to John Zerzan because of the

power of representation, in which symbols first mediated reality and then replaced it.

These studies differ significantly in methodology, detail and explanation, but all share one crucial perspective with the Genesis account of origins (which they each reference with varying degrees of depth). This is the conviction that there was some sort of epochal "rupture" that signaled the beginning of the end of the widely dispersed, clan-based hunter-gatherer culture that had likely prevailed since "the beginning" of human life on Earth. The implications of this rupture have been devastating not only for the natural world, but also for human social life and spiritual competence.

In the "primeval history" of Gen. 1–11, Israel's sages – redacting older sources and probably writing in the aftermath of the failed monarchy – also attempt to explain this "rupture." Eden can be interpreted as a mythic memory of the old symbiotic lifeways: humans, creatures and God dwell intimately and richly together (Gen. 2). In radical contrast to the modern view, but not to other indigenous creation myths, this primal world is described as unqualifiedly "delightful" (Hebrew *toṽ*, Gen. 1:31). This ancient equilibrium was/is shattered, however, by the primal human impulse to "reengineer" the world in order to control and "improve" it (Gen. 3).

What follows is a litany of woes: humans are relegated to painful agricultural toil (3:19); the first city is attributed to the murderous farmer Cain (4:17); violence spreads widely and rapidly (6:5ff.). God and nature fight back in the great flood which (temporarily) scuttles civilization (6:9ff.). Could the Flood myth – found in varying forms throughout the great cultures of the Ancient Near East – represent a collective memory of the catastrophic breach of the Bosphorous straights and creation of the Black Sea in the mid-sixth millennium B.C.E., as William Ryan and Walter Pitman have argued?

But civilization prevails again, and a "genealogy" attributes the spread of predatory imperial city-states to Nimrod, the "powerful warrior-hunter" (10:8ff.). The nadir of the "Fall" is thus narrated in the tale of the Tower of Babel (Gen. 11:1–9). It symbolizes the archetypal project of urbanism, in which human social, political and economic power is concentrated rather than dispersed. The warning fable is a thinly veiled parody of Mesopotamian ziggurats, as Eisenberg points out, in which the making of bricks (11:3) alludes to Israel's experience of slavery in Pharaoh's Egypt (Ex. 1). Such "civilizational" projects are thus resolutely "deconstructed" by the divine council in favor of the older vision of a dispersed, tribal humanity living in diverse bioregions (Gen. 11:5–9). The biblical counternarrative of redemption from the Fall then commences with Abraham's call to abandon Mesopotamian cities for the new archetypal journey of liberation: following God's call back to the wilderness (12:1ff.), a pattern that recurs in the

subsequent stories of Jacob, Moses, Elijah, Isaiah and even Jesus.

The “Fall” in Gen. 1–11, then, is not so much a cosmic moment of moral failure as a progressive “history” of decline into civilization – exactly contrary to the myth of Progress. Its polemical perspective is plausible when correlated with various aspects of the Neolithic “rupture” hypotheses noted above. The biblical primeval history thus should be considered not only as “mythic memory,” but also as perhaps the first literature of resistance to the grand project of civilization – rightly warning against its social pathologies and ecocidal consequences.

Ched Myers

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- See also: Animism – Humanity's Original Religious World-view; Anarcho-Primitivism and the Bible; Creation Myths of the Ancient World; Creation Story in the Hebrew Bible; Creation's Fate in the New Testament; Eden's Ecology; Shepard, Paul.

The Family (Children of God)

This international, communal missionary movement emerged in California in the late 1960s, as the family of evangelist David Brandt Berg ministered to the needs of hippies and young people who were on spiritual quests. In consequence, it is a cultural amalgam of the traditional Holiness movement and the radical youth counterculture of the sixties. For example, the Family emphasizes both spiritual communion with Jesus and erotic experimentation. It is oriented toward millenarian biblical prophecy, but it is also interested in astrology.

A journalist called the group *The Children of God*, and under this name it became famous. Hippies, religious seekers, and disaffected wanderers joined by the hundreds, as Family teams crisscrossed the continent. Calling himself *Moses David*, Berg led the dispersed group via colloquial scriptures called *Mo Letters*. A few horrified parents hired deprogrammers to rescue their sons and daughters forcibly, and a national anti-cult movement arose to combat the group. Moses David and most followers went to Europe and then spread out across the globe.

While headquartered in the Canary Islands in 1974, Moses David developed a new form of evangelizing, called *flirty fishing* or *FFing*, in which women of the Family offered their sexual love to an estimated 200,000 emotionally needy men, as a sample of God's love. After a decade, the group abandoned this practice, for a variety of reasons which included health hazards and the vehement opposition of critics in the surrounding societies.

In 1978, police raided a commune in Mexico, and over the following years a series of government raids attacked communes in Argentina, France, Australia, and Spain. Altogether, authorities seized six hundred of the group's children under the suspicion they were victims of sexual abuse. However, in each case the charges were eventually dropped and they were returned to their parents, after being traumatized by forced physical exams and often weeks of separation from their families.

Today, the group practices a form of open marriage. Married members feel a responsibility to meet the erotic needs of single adult members, and they view sexual intercourse as a sacrament of God's love. With the permission of the other spouse a husband or wife will have dates with a member of the opposite sex that involve sexual sharing as well as heart-to-heart conversation and other qualities of enduring friendship. Opposed to artificial birth control, the group has a high fertility rate and considers children to be gifts from God. It raises them communally and educates them within the commune.

The death of Moses David in 1994 brought an end to what members believed was his constant channeling of messages from Jesus and lesser spirits. Therefore they undertook a vigorous campaign to develop the sensitivity of all members, and the overwhelming majority now

believe they personally receive messages from the spirit world. In their sexual sharing and spiritual channeling, they seek to integrate the natural and supernatural realms.

William Sims Bainbridge

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See also: New Religious Movements.

Fantasy Literature

Modern fantasy describes the predominantly literary/written fiction that grew out of the popular reception of J.R.R. Tolkien's *The Lord of the Rings* in Britain and the U.S.A. in the 1960s, and has since become a genre in its own right, with fantasy themes and content found in role-playing and computer games, film and television media. The basic narrative and stylistic form of literary fantasy is that of romance: generally heroic, quest-centered stories drawing on Western folk- and fairy-tale traditions, Norse and Celtic myth, Arthurian legend, and medieval romances. Its roots lie in the Romantic revival of interest in the "Gothic" Middle Ages from the second half of the eighteenth century to the Victorian medievalism of William Morris. However, as it is understood here, fantasy as a distinct literary genre is a phenomenon specific to late twentieth-century Western society. Archetypal fantasy texts often look to a mythical European medieval past, constructed as a time when people lived harmoniously with their environment. This is the inheritance of J.R.R. Tolkien's medievalist vision; but it also continues, and functions within, a Romantic philosophical and ideological framework where the "medieval" was constructed around a set of oppositions pitting nature and "the primitive" against urban civilization, the supernatural against scientific rationalism.

This Romantic construction of the medieval as iconic "Other" is one of the lasting myths of modernity, and has retained its deep symbolic and cultural value as a medium for social critique. This anti-modern impetus is exploited vigorously in modern fantasy. Sheri S. Tepper's (1991) novel, *Beauty*, uses the Sleeping Beauty fairytale as a framework to present the Middle Ages as an idyllic Eden retaining a sense of the sacred and magic which vanishes

with the advent of "electric lights" and "science" – industrialization and modernization. The discourses of both environmentalism and religion are invoked in a Romantic aesthetic conflating "beauty," the medieval, and nature, implicitly critiquing the rational materialism and skepticism of modern capitalist society. "The Creator makes whales who sing in the deep, and men kill them to put their oil in lipsticks" (1991: 438). Progress is assumed to be dependent upon the exploitation of nature, and is regarded as ultimately dehumanizing and destructive.

Concern over the ecological crisis is becoming a much more insistent and common theme in fantasy literature, particularly explicit in Sheri S. Tepper's works such as *Beauty* and *The Family Tree* (1997), also in Stephen R. Donaldson's *Chronicles of Thomas Covenant* (1977–83), Ursula K. Le Guin's *Always Coming Home* (1985) and Alan Aldridge's *The Gnole* (1991). However, most fantasy expresses these concerns indirectly through the use of myth and symbol. The creation of coherent alternative worlds such as Tolkien's Middle-Earth or Ian Irvine's Three Worlds in *The View from the Mirror* (1999–2002), is one of the hallmarks of archetypal fantasy which foregrounds to an unusual degree the importance of environment. Even when it is used predominantly as a background for human action, nature or the land in fantasy is always implicitly understood as being alive and meaningful in some way. The land or world thus becomes like a character, intimately connected to the action of the story, and more importantly, exerting a presence or consciousness demanding respect. The influence of James Lovelock's Gaia hypothesis can be felt in Sheri S. Tepper's *True Game* series (1985–1986), where the magical planet Lom is not only sentient and conscious, but actively incorporates humanity into its unique ecosystem.

Nature in fantasy is imbued with symbolic content, reflecting the emotional or moral charge of the story; a common theme is the Land which may die or thrive according to nature of its people or ruler, as in Patricia McKillip's *Riddle-Master* trilogy (1976–1979) which draws upon Robert Graves' *The White Goddess* (1948) through the notion of sacral kingship intimately tied to the land. Nature itself becomes inextricable from the ethical dilemmas and characterization presented in the story. Another common motif is the anthropomorphizing of the physical environment through magical beings closely connected with or personifying aspects of nature, such as Tolkien's Ents, sentient trees, elves, nature spirits and deities (the Green Man, the Goddess). It is notable that fantasy draws on the same corpus of myths and sources used by popular Western esotericism, and that both have their roots in Romanticism.

Fantasy should also be considered a text-centered *community* of readers, writers, critics, audiences and media producers, which has arisen as a social phenomenon

primarily in highly industrialized, urban environments among a young, socially mobile audience, paralleling the growth and mainstreaming of the New Age movement since the 1960s. Not only do the texts draw upon the same Romantic values and discourses as alternative spirituality and environmentalist movements, but there is also a considerable overlap in community: Margot Adler notes that many Pagans and Witches not only read, but also write fantasy and science fiction (e.g., Marion Zimmer Bradley, Diana Paxson, and Juliet Marillier). Fantasy can thus be understood as participating in or intersecting with the broader social movement of the “New Age” described by Wouter Hanegraaff as an identifiable (though diffuse) cultural group constituting a sub-stratum of alternative values critical of the dominant worldview in contemporary Western societies through an ideological opposition to the two main institutions of knowledge and morality: scientific rationalism and Judeo-Christian (monotheistic) religion. Concurrently, environmentalism has sought to alter humanity’s perception of nature as an exploitable resource by raising reverent awareness of human interconnectedness with the environment. Often the behaviors and goals of New Age and environmentalist movements may be indistinguishable, though their motivations may differ.

This shared Romantic ideology and attitude toward nature forms a nexus between fantasy, alternative religiosity and environmentalism. The separations between mind/body and culture/nature are seen as related aspects of the same problem: that of a fundamental duality in Western thinking brought about by the materialism and mechanization of philosophical rationalism (institutionalized in modern science) and the dualism of traditional Christianity. Hence the emphasis on holism and the idea of an organic, interconnected universe is simultaneously a solution to and a critique of these underlying dualities. Ursula Le Guin’s *Earthsea* books (1968–2001) depict a dynamic cosmos where the interconnectedness of all things is maintained through a magical equilibrium or balance. The movement is toward reestablishment of a harmonious state, where not only the individual hero/psyche is made whole, but the imbalances between men and women, humanity and nature are also overcome through the shift toward a more egalitarian and ecologically balanced society. The post-apocalyptic Australian landscape of Sean Williams’s *Books of the Change* (2001–2002) paradoxically emphasizes these interconnections by exploring the cataclysmic changes wrought on the environment through a massive rupture within the human life and psyche.

Reconnecting with nature and changing humanity’s attitude toward the natural world is seen by both environmentalists and alternative spirituality movements as the solution to relieving the existential alienation of modern Western urbanites, which is also regarded as the root of ecological destruction – the mind–body dichotomy

is echoed in the separation between human culture and nature. Fantasy problematizes this separation. J.R.R. Tolkien (“On Fairy Stories”) states that fantasy expresses the desire to communicate with other living things. Humans with “the Wit” in Robin Hobb’s *The Farseer Trilogy* (1995–1997), for example, have magical telepathic bonds with wild animals, and the dragons of *The Liveship Traders* (1998–2000) are an endangered species which not only communicate with but cause physical mutations in humans: human and nonhuman blend and merge. The emphasis is on continuity with rather than separation from nature: there are no sharp distinctions; the boundaries are blurred. However, the shapeshifters and werewolves of fantasy, such as the *Metamorphs* of Robert Silverberg’s *Majipoor* books (1980–) and Patricia McKillip’s *Earth-Masters* (in *Riddle-Master*), point to the ambiguities in humanity’s relationship to wild, chaotic, dangerous nature. As Verlyn Flieger notes, there is an acknowledgement that nonhuman life has its own agenda and survival at stake that is not necessarily compatible with human society. This uneasy coexistence reflects tensions and contradictions found within the Green Movement and in wider society, and points to the fundamental cultural paradox inherent in the cultural construction of the natural.

By tapping into the emotional and imaginative substratum at the foundation of religious experience, fantasy can express alternate ways of perceiving reality. It is eminently able to express the holistic visions at the heart of New Age and environmentalist critiques centered around altering humanity’s relationship to the Other: its estranged self, and nonhuman nature. In so doing, fantasy has become one of the imaginative discourses of “alternative culture,” its motifs, symbols and ideological substructure influencing and itself feeding into what Meredith Veldman describes as a sub-current of Romantic anti-modern ideological protest. Fantasy literature can therefore be seen as part of a commercial and creative substructure that plays a part in the dissemination and acceptance of heterodox beliefs and ideas into wider society. However, fantasy is in the end a literary manifestation, not a religious one. This is an important distinction: the focus is on ethical responsibility, the individual, generalized “spirituality” not localized to any particular creed or religion. Fantasy presents internally coherent moral dramas without reference to a formal moral code or to any kind of religious institution. Its characters are faced with existential moral choices of the same quality as those faced by modern Western individuals. It works through constant adaptation to contemporary cultural contexts in order to be acceptable to modern audiences and mentalities – in short, it involves the mainstreaming of countercultural impulses.

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- See also: Celestine Prophecy; Church of All Worlds; Disney Worlds at War; Earth First! and the Earth Liberation Front; Le Guin, Ursula; Middle Earth; New Age.

The Farm

In 1971, a motley caravan of countercultural idealists arrived at a borrowed farm in southern Tennessee to start a commune based on the spiritual teachings of Stephen Gaskin, who had gathered about him hundreds of young seekers in a rambling series of lectures and discussions called Monday Night Class in San Francisco. Settling into their new home, the idealistic hippies began to build a commune that would eventually reach a population of some 1500. Central to their aspirations was the conviction that they could make the world a better place to live by living low-impact, cooperative lives and sharing their surplus with others. In the Farm's first dozen years its residents ran an extensive agricultural operation, worked to develop innovative kinds of natural foods (many of them based on soybeans), and operated a natural birthing

clinic whose services were offered free to the public. Central to it all was a nature-oriented religious spirit drawing on the teachings of the world's great religions and spiritual masters and articulated by Gaskin, whose Sunday morning services anchored the entire enterprise.

Economic problems led to a shift, in the early 1980s, from a large community with a completely communal economy to a smaller, more decentralized one. However, the environmental and natural commitments of Farm members have remained central. They have developed solar energy and alternative fuels for vehicles. Through Plenty, their charitable foundation, they support grassroots, low-impact construction and agricultural projects in developing countries. Their Ecovillage Training Center offers instruction in alternative building construction, permaculture, and other such things. They have preserved hundreds of acres of native forest. After three decades they continue to be proudly devoted to natural living.

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- See also: Back to the Land Movements; Beat Generation Writers; Bioregionalism; Hippies; Radical Environmentalism.

SP Fascism

Fascism is a political ideology driven by a vision of the nation's total rebirth from decadence (its "palingenesis"; see Griffin 1995). In the interwar period it typically assumed a charismatic ritual form of politics that for some scholars is reminiscent of Early Modern millenarian movements, and for others represents an outstanding example of modern "political religion." Moreover, in some of its manifestations fascism has apparently exhibited a deep concern with nature and even with ecological issues. Both "religion" and "nature," the principal themes of this encyclopedia, are highly contested terms embracing a vast range of phenomena. This article sets out to convey something of fascism's complex relationship to both terms by concentrating on the degree to which it took the form of a "religion of nature." A generalized pronouncement on even this relationship is hazardous, however, since, compared to liberalism and Marxism, fascism is a peculiarly protean force, capable of assuming a wide range of sometimes contradictory forms even within the same

movement. This is because the national revolution envisaged by fascists embraces a wide range of permutations in what constitutes the nation's indestructible core, in the types and virulence of the racism which it incorporates, and in the temporal and geographical scale of the coming revolution. In the same way its relationship to established or new religions can assume many contradictory guises, as can the degree to which it deliberately seeks to incite a sense of mystic participation or self-transcendence in its followers. Equally, the place which a transformed relationship to nature occupies within the fascist scheme for national regeneration, as well as the role played in it by pagan, "immanentist," or cultic concepts of nature, can vary enormously depending on which specimen of the genus is considered.

Yet even when a particular example of fascism or moment in the "fascist experience" seems to display a profound religiosity bound up with an all-pervasive cult of nature, closer examination suggests that both are specious when compared to those authentic religions in which a significant role is played by a spontaneous sense of awe (or what is known in German as *Ehrfurcht*, a synthesis of "veneration" and "fear") at the unfathomable forces of creation and destruction which are unceasingly at work in shaping the cosmos (Griffin 1998). A true "religion of nature" cultivates a spiritual, metaphysical, and aesthetic awareness of the unimaginable scale, both microscopic and macroscopic, on which nature's laws have acted in the epic miracle play whose plot has been unfolding since the beginning of life and the universe itself, and perhaps beyond. It is a scale that dwarfs the strivings of the whole of humanity, let alone individual peoples or races, in the total scheme of things, and relegates national history to little more than a footnote in the Book of Life. This perspective shrinks to insignificance the importance of "the new order" which fascists aspire to bring about in the life of their people or race, and reveals the genius of charismatic leaders to be little more than ephemeral displays of mortal hubris. The "thousand year empires" about which their daydreams revolve, and even the realm of "immortality" to which they consign their national heroes, are but a twinkling of the cosmic eye in comparison. A chilling, but unusually lucid glimpse into the abyss which yawns between the religious, genuinely metaphysical, concept of a higher reality and the fascist one is summed up in the following pronouncement reportedly made by Adolf Hitler during one of his interminable "table talks":

To the Christian doctrine of the infinite significance of the individual human soul . . . I oppose with icy clarity the saving doctrine of the nothingness and insignificance of the individual human being, and of his continued existence in the visible immortality of the nation (in Rhodes 1980: 78).

Conceptual Problems and Premises

The problem inherent in all *ex cathedra* pronouncements of the sort made above is that their clarity and authority are achieved at the cost of drastically simplifying definitional issues of mind-teasing complexity and subtlety. An article on fascism in the context of this encyclopedia involves juggling conceptually with three terms all of which are so deeply contested that they resemble fluffballs rather than discrete objects. In other words their taxonomic boundaries are not only fuzzy to the point of evanescence but so mobile that, according to which expert is consulted, clear tracts of solid no-man's-land between "fascism," "religion" and "nature" can suddenly be engulfed, while equally unpredictably new stretches of common terrain may emerge where they all overlap.

Fortunately, a partial consensus is currently gaining ground about the definitional role played in fascism by the myth of the nation's rebirth from decadence within historical time and through human agency, the modern variant of an archetypal human preoccupation with accessing a "higher" time and "spiritual" rebirth. This allows it to be dissociated "ideal-typically" from Christianity as a creed postulating the existence of a supra-historical and supra-temporal Being. From this perspective the extensive collusion between the Churches and both Fascist Italy and the Third Reich which came about in the interwar period, and the many fascist movements (e.g., the Falange, the Romanian Iron Guard, the South African AWB) which have sought to exploit Christianity's mythic power for their own ends, point not to fascism's deep kinship with religion, but rather to the perpetual propensity of human beings and their political leaders to pervert religion by appropriating it and bending it to strictly temporal and temporary goals. Fascism thus transforms metaphysics into a form of metapolitics, whose horrendous human implications can only be fully grasped when translated into the realm of politics and social engineering.

It is when it comes to the wider question of fascism's relationship, not to the relatively concrete topic of "established religion," but to the far more nebulous notion of "a religious apprehension of nature," that the issue becomes inextricably tangled. For heuristic purposes it might be possible to locate the core of this phenomenon within what has generally been referred to under the heading of "pantheism" or "nature mysticism," but what one major authority on comparative religion and preternatural experiences, R.C. Zaehner, more precisely identified as "pan-en-henism" (Zaehner 1961). By this he referred to the non-rational, emotionally overwhelming, language-defying sense of "all-in-oneness" encountered in variegated forms in the writings of countless mystics and poets the world over. It is an experience that opens up the intuitive mind ("visionary faculty," "third eye," "pineal gland," "four-fold vision," "soul," etc.) to the pullulating interconnectedness of all organic and inorganic reality, to the

intrinsic, transcendental beauty of a hypostatized "Life." It brings human beings in tune with the sacred, numinous quality of organic nature as the manifestation of a single, continually unfolding dynamic act of creation, both material and spiritual, whose origins, mechanisms, and sublime purposes can never be fully divined by the human mind.

Testimonies to such an experience can be found in the context of dualistic religions (e.g., the poetry of St. Francis of Assisi and William Blake), "monistic" or "philosophical" religions (e.g., Daoism, Zen Buddhism), shamanistic religions (e.g., the cosmology of the Navaho or Amazonian Indians), Romanticism (e.g., the poetry of Coleridge or the paintings of Caspar David Friedrich), and the types of ecology informed by "New Age" spirituality (e.g., the books of Fritjof Capra or the courses on "Buddhist ecology" taught at the Schumacher College in Devon, UK). Its hallmark is a feeling of being transfixed by the inscrutable mysteries of the cosmos in a moment of what the German poet Goethe called "Ergriffenheit," a state of being seized by awe, by the realization of Being itself. It is an ecstatic yet terrifying moment of revelation, of *anagnorisis*, of breaking through the "cloud of unknowing" to be face to face with life and see its immutable laws written on one's own flesh. It is one which in its purest form acts as an antidote to human vanity, makes the wanton destruction of life in any of its incarnations unthinkable. It is thus the arch-enemy of all forms of anthropocentric, ethnocentric or "race supremacist" mindset, stripping the senses to the point where they become receptive to a bottomless oneness and boundless compassion with all living and mortal creatures. Ecofascism is inevitably a travesty and betrayal of genuinely "green" politics.

It is the (inevitably contentious) thesis of this article that once the yardstick for a "genuine" religion of nature is established in these terms then it follows that fascism is incompatible with anything remotely resembling it. When fascism and any other form of organized ultranationalism or politicized racial hatred which is not firmly rooted in an orthodox religious tradition – whether such sentiments are not themselves perversions of religion even when rooted in a religious tradition is a matter for theologians to judge – employ the discourse of a "religion or nature" they do so *metaphorically*. In other words they create an insidious verbal register which exploits the mythic power of both constituents purely as a source of mystification and legitimation, and thereby guts them of their original or "true" significance. A venerable precedent for this procedure within the liberal tradition is the way the American Declaration of Independence of 1776, despite being purportedly based on "Reason," invokes "the Laws of Nature and Nature's God," "the Creator," and "the Protection of Divine Providence" (note again the use of hypostatizing capitals) in order to endow the idea of "self-evident truths" and "inalienable rights" with an aura

of Higher Authority and Higher Destiny, and thus the American Revolution itself with an incontrovertible legitimacy. In doing so its authors revealed themselves as true children of the Enlightenment, which made extensive use of the concept of "Nature" and the "Supreme Being" to endorse its absolutist claims for the power of rationalism. The systematic elision of "God" with "Country" to create a synthetic mobilizing myth disseminated by the propaganda machines of all the states involved in the First World War provides another instructive example both of how readily genuine religion can be contaminated and how an *ersatz* religion (in this case hyper-nationalism) can be fabricated in the modern age – though the *perversion* of religion by secular vested interests is arguably something as old as religion itself. The "higher" purpose which this ideological confabulation served between 1914 and 1918 was anything but divine, but rather the strictly down-to-Earth one of using religion as ideological bellows to sustain the white-hot patriotism vital for turning ordinary men into human weapons of mass slaughter and mutual destruction.

When encountered in the powerful gravitational field of fascist fanaticism, allusions to "the sacred" and to "nature" will generally prove on close inspection to be little more than thinly disguised simulations of a "genuinely" religious appreciation of nature and the laws of life. Wherever history throws up cases of a modern, partially secularized nation that cries out for "redemption" or "renewal" through the revitalization of the healthy forces of nature, then theocentric/metaphysical and ecocentric/biological axioms have been ideologically modified in the pursuit of narrow anthropocentric and ethnocentric ends. Just like some branches of nineteenth-century science (Darwinism, anthropology, genetics) were corrupted into scientism (Social Darwinism, Aryanism, racial hygiene), so the *mysterium tremendum* of nature mutates within the fascist mentality into a vacuous kitsch filled with sinister intent. A telling example of this is to be found in a pamphlet on the mission of the SS written by its leader, Reichsführer Heinrich Himmler, who went on to oversee the setting up and running of the Third Reich's tentacular system of extermination camps. In it he stresses the supreme importance to the cohesion of the SS of the belief in "the value and holiness of the soil" and "in a God who rules over us, who has created us and our Fatherland, our people and our Earth, and who sent us our leader" (Griffin 1995: 147–8).

Samples of Fascism's Specious Affinity with a Religion of Nature

By now it should be clear that by definition (or rather by the definitions proposed here) fascism precludes a genuinely religious sense of nature. However, it has also been implied that, like an ideological scavenger or vampire, fascism is irresistibly drawn to any vital cultural or

ideological forces which it can feed on or seduce in order to enhance its revolutionary force as a mobilizing power. On a par with history and the biological sciences, nature and religion readily provide deep reservoirs of such forces.

Thus fascism repeatedly generates images which evoke a specious kinship with a “panenhenistic” communion with nature: the landscapes of woods and lakes so beloved of “Aryan” painters, Blood and Soil visionaries, and the Hitler Youth; the Führer greeting Dirndl-clad peasant-girls or musing on his plans of world conquest against the backdrop of sun-kissed Bavarian mountain crests; the idyllic portraits of rural life cultivated by the *strapaese* current of fascism and the local harvest festivals or “*sagre*” celebrating the olive or the anchovy promoted by the regime; the South African Ossewabrandwag’s reenactment of the Great Trek using ox-drawn wagons driven across the veldt in the quest to restore the Boer to his rightful place in God’s own country; the nocturnal initiation ceremonies held deep in the Transylvanian forest by so called “nests” of the Legionaries of the Archangel Michael to forge bonds of Romanian blood brotherhood; the landscapes and wildlife undefiled by the modern metropolis so lovingly described in the novels both of Henry Williamson, author of *Tarka the Otter* and propagandist for the British Union of Fascists, and Knut Hamsun, Nobel prize winner for literature and supporter of Quisling’s Nasjonalsamling. As for post-war fascism, it is symptomatic of its repeated attempts to cover tracks which lead straight back to the railway sidings of Auschwitz that contemporary Third Positionist (“Strasserite”) groups of national revolutionaries have made links with radical ecology groups such as the “Green Anarchists.” Similarly, the French (and now European) New Right embraces Green politics as part of its bid to bring about a “pagan liberation” of the modern world by reestablishing a pre-Christian cosmology and so restore a healthy “Indo-European” bond with nature.

Nor is there any shortage of texts documenting the place that an *ersatz* religion of nature has so often played in fascist ideology. Thus one of the many Nazi choral songs celebrating communal devotion to the Third Reich set to solemn, hymn-like music:

Earth creates the new, Earth takes away the old. Holy German Earth, may we alone be saved. It is she who bore us, we belong to her. Eternal loyalty is emblazoned on her banner. We walk on believing, turned towards the sun.

But it is contemporary US fascism in its more overtly pagan neo-Nazi incarnations such as Odinism and in its various hybrids with the racist heterodoxies of Christian Identity which is particularly rich in examples of bastardized fusions of fascism with the imagery of religion and nature.

Thus the tract “Aryan Destiny: Back to the Land” written in the 1970s by Jost, a Vietnam veteran and neo-Nazi, ends with the vision of a new Aryan homeland in the mountains of North Carolina, the Volksberg. There, Whites inspired by “a true idealism and a sound spiritual philosophy” would finally “begin a new life close to nature, and away from the degeneracy of the urban cesspools” (Kaplan 2000: 491). A structurally similar *Weltanschauung* (worldview) underlies David Lane’s “88 Precepts” (in neo-Nazi contexts the number 88 signifies the letters HH or Heil Hitler). These encapsulated the rationale and “vision” of the notorious US Aryan terrorist group, The Order, which was active in the early 1980s and contained such Mosaic axioms as (3) “God is the personification of Nature proved perfect by the evidence of Natural Law . . .”; (15) “In accordance with Nature’s Laws, nothing is more right than the preservation of one’s own race”; (33) “Inter-specie [sic] compassion is contrary to the Laws of Nature” (Kaplan 2000: 494–6).

To cite another contemporary example from the contemporary British racist right, David Myatt, leader of the Reichsfolk, and one of the influences on David Copeland, the London “Nailbomber,” claims that the movement is fighting

in the name of Adolf Hitler himself and for the holiest cause of all . . . that of the Cosmic being itself, manifest to us in Nature, the evolution of nature that is race and the evolution of race that is individual excellence, civilization and enlightenment (in Kaplan 2000: 514).

Elements of a mongrelized “religion of nature” also inform the “Cosmotheism” of the late William Pierce, author of the (since the Oklahoma bombing of 1995) infamous *Turner Diaries*, as well as Ben Klassen’s *Nature’s Eternal Religion* (1973). The “Sixteen Commandments” of his Church of the Creator include the injunction: “You shall keep your race pure. Pollution of the White Race is a heinous crime against Nature and your own race;” and “It is our duty and privilege to further Nature’s plan by striving towards the advancement and improvement of our future generations” (in Kaplan 2000: 474).

The Dance of Shiva

This article has adopted a consciously conservative, “purist” position on fascism’s religious credentials. As a result it takes issue with the considered judgment of several academics on this topic. It suggests, for example, that Robert Pois’ interpretation of National Socialism as a “religion of nature,” while impressively scholarly and containing many valid observations, obscures the sinister political and eugenic purposes which informed apparent acts of communion with nature staged by the Third Reich: namely to forge a racially conceived and wholly

imaginary national community or *Volksgemeinschaft* while mystifying the ritual destruction of humanist ethics and humanitarian reason. The function of Nazi “religion” was to bless and sanctify the categorization of humanity along a sliding scale stretching from the pure, “immortal” Aryan to subhuman levels of existence fit only for extermination. However, the line taken by this article broadly endorses Michael Burleigh’s account of Nazism as a “political religion” (Burleigh 2000a) because of the stress he puts on it being a modern political movement which operated as an *ersatz* theology, commenting, for example, that the ritual “Commemoration of the Movement’s fallen ‘saturated the proceedings with quasi-religious emotion,’ and must have prompted ‘nausea in any person of genuine religious faith’ ” (Burleigh 2000b: 264). At the same time, he also suggests that it would have been more fruitful to explore the links between the Nazi vision of the “new order” and the palingenetic myths of other fascist movements rather than suggest direct parallels with the millenarian fantasies of sixteenth-century Anabaptists.

The approach adopted here also rejects as wrong-headed Anna Bramwell’s attempt to portray as a forerunner of contemporary “Green” politics Walter Darré, Hitler’s Reich Farmers’ Leader and Food Minister, who reconciled his commitment to organic farming and the revitalization of the peasantry with his readiness to oversee the Aryanization of Polish farming (Bramwell 1985). It also regards as misguided Daniel Gasman’s thesis (Gasman 1971) that the genesis of Nazism is to be located in Ernst Haeckel’s “Monism” (he later extends this thesis to the whole of fascism). Monism was Haeckel’s name for the overarching “philosophy of life” which resulted from his highly syncretic fusion of Darwinism, Social Darwinism, biologism, vitalism, *völkisch* Aryanism, and anti-Semitism which became influential at the turn of the nineteenth century. The resulting pseudo-scientific (scientistic) “worldview,” whatever direct impact it had on some contemporaries, was just one of many totalizing cosmologies of decadence and rebirth which helped shape the cultural climate of the *fin-de-siècle* in which fascism’s palingenetic fantasies first crystallized as a rudimentary political vision. Moreover, though Haeckel apparently coined the neologism “ecology,” his racist brand of nationalism caused him to be unfaithful to any genuinely ecological, and hence “panenhenistic,” moments of epiphany which he might have had in the course of his meditations about the dynamic processes shaping the world.

In this respect Haeckel stayed true to the spirit of his mentor Nietzsche, who, though not a nationalist, had somehow managed to extract from a series of powerful revelations induced by direct contact with unspoiled nature the myth of the *Übermensch* or “superior man” who would redeem Western civilization from its moral decadence and loss of vision in a spirit far removed from any form of ecological humanism, articulating his vision in

texts that readily leant themselves to being appropriated by Nazi propagandists. Thereby he betrayed his fleeting experiences of the interconnectedness and intrinsic beauty which he recorded in his private correspondence and which inspired the section in *Thus Spake Zarathustra* called At Noontide:

Take care! Hot noontide sleeps upon the fields. Do not sing! Quiet! Quiet! The world is perfect . . . It is the most inconspicuous, softest, lightest thing, the rustling of a lizard in the leaves, a breath, a twinkling of an eye . . . it is the little that makes for the greatest degree of happiness. What has happened to me? Has time flown away? Listen! Did I fall – listen! – into the well of eternity? . . . Did not the world just become perfect? (Nietzsche 1969: 288)

Such epiphanic moments can act as portals leading to the realization – that has a deep resonance both with ancient Hindu cosmology and with modern astrophysics – that the whole of nature, in fact the universe itself, is one vast controlled explosion of amoral cosmic energy performing on every scale of reality the infinitely intricate and aesthetically structured “dance of Shiva” (Capra 1983). It is a vision of the world that reveals a deep structural affinity or symbiosis between the experience of the sacred, mystic religion, and nature. It is one that cannot be grasped by a mindset that finds beauty instead in the choreographed march of uniformed troops or the stage-managed acclamations of the mob celebrating the renewal of an all-too-human history in which even more demonized enemies of the new order will inevitably be persecuted and “sacrificed.”

Roger Griffin

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- See also: Anarchism; ATWA; Darré, Walther; Devi, Savitri; Haeckel, Ernst; Hegel, G.W. Friedrich; Nietzsche, Friedrich; Radical Environmentalism.

SP Fauna Cabala

Fauna. *n.* animal life.

Cabala. *n.* an esoteric, secret matter or mysterious art.

Science can be a looking-glass into the sacred, a window to a world outside the confines of human perception. It can be a tool to see beauty that would otherwise remain hidden, to uncover rather than explain mystery. For some scientists, the study of nature is a means to spirituality, is delving into the secrets of the sacred, is empowering, sustaining, transformative, infused with a sense of awe. It is a discovery of what is precious and most important in life. To dabble with systems larger than self and witness the interconnectedness of life is an honor, and such research is necessarily respectful, non-invasive, and a reflection of the equality of all living beings.

Animal perceptions, ways of being, decisions in the face of ecological pressures and evolutionary constraints are where I find magic. As a behavioral and molecular ecologist I want to see the world through a beetle's eyes, I want to know what home means to a wombat. My science trundles along in the footsteps of my childhood, striving to understand questions completely unrelated to humans. I am stunned by the bee's waggle dance, by snail love darts, by senses foreign to the human experience. Often

the biggest secrets, the most important concepts, are most clearly seen in the minutiae. And often they are seen in reproductive biology and mating systems, the evolutionary currency of life. It is on these that I tend to focus in my column *Fauna Cabala*, an endeavor to convey wonder glimpsed through science.

Aphids

High overhead on cottonwood leaves, pregnant aphids are kickboxing. Springtime on the Colorado Plateau induces aphid females of the genus *Pemphigus* to emerge from eggs in the bark of cottonwood trees. The insects, who are initially wingless, march up the trunks by the thousands. When an aphid arrives at the top, she wanders about to select the perfect leaf, and when found, prods and sucks along the midrib at the leaf's base until a gall (a hollow sack of leaf tissue) forms.

Within this protective gall the female births 50 to 100 daughters parthenogenetically (that is, her egg cells do not undergo meiosis, and thus, without mating, she can produce daughters identical to herself) and feeds on phloem sap with them until they burst out at maturity. A female can increase her reproductive success by selecting a large leaf, because leaf size predicts sap content, and by settling near a leaf's base, the site of nutrient inflow. This creates a stampede for large leaves, and vicious territoriality. If a female comes along while another is forming her gall, they engage in a lethal bout of kicking, which can last for two days.

Among aphids, males are an afterthought. Even before a female is born she has daughters developing within her. Throughout the spring and summer, generations of females, some winged and others not, are cranked out every ten days. It is not until fall, when the drop in temperature prompts meiosis to occur, that females birth sons. The female's sex chromosomes separate imperfectly, such that some embryos just have one, producing sons. The males then mate with females, who lay eggs in the bark of cottonwood trees. The eggs destined to become males perish, while those that will hatch into females overwinter into spring. Thus, asexual reproduction enables a multitude of females to explode onto the scene, and sexual reproduction results in new gene combinations, some of which may be better adapted to environmental conditions the following year.

Dung Beetles

Dung beetles (superfamily Scarabaeoidea), who rival the entire class of birds in species number, have for 250 million years exploited the nutritionally rich resource that drops from intestinal tracks. Before dung beetles flourished with the radiation of mammals, their ancestors may well have trooped after terrestrial dinosaurs. Modern beetles locate excrement by odor, and for those who eat monkey poo, by that peculiar thud on the forest floor.

Thereafter, beetles eat, bury, steal, and otherwise frolic among the fecal matter according to their specialty. They are of three behavioral types: dwellers, rollers, and tunnelers. Dwellers set up their household in dung, feasting and ovipositing in the fresh globs. Rollers mold fecal balls and roll them away; tunnelers sequester caches of excrement beneath the pat. Both rollers and tunnelers make nests by burying poop for baby food, and can provide elaborate parental care. Other beetles, the kleptoparasites, thief from these nesters to maintain their coprophagous (feces-eating) lifestyle.

Driven by fierce competition for excrement, some beetles don't wait for feces to fall. Anus-dwelling dung beetles of monkeys, wallabies and sloths eat dingleberries around the anus, occasionally following the poop earthward to lay eggs in the pat. Some anus-dwellers clutch the perianal hairs of wallabies, stretching to catch that which cannonballs them to the ground. In India, several beetle species forage directly in the human intestine. Another beetle with its own fecal factory is a South American who rides large snails and sups on their slimy dung. This is unusual because most dung beetles prefer the nutritionally superior scat of mammals. In fact, mammalian population declines and extinctions have the potential to kick the crap out of dung beetle diversity.

When not plunging into poo pats for dinner, some beetles are meticulously sculpting dung balls. Males of *Kheper nigroaeneus*, a large African dung beetle, mold brood balls from carefully selected feces and flaunt them as a sexual display. Once a female is attracted, she climbs aboard the ball and the male rolls both away. At a suitable spot, the male buries himself, the brood ball and his partner, after which they mate and he leaves, closing the hole behind him. The female proceeds to remold the ball, inserting a bit of her own feces and plastering it over the ball's exterior to form a layer that decreases desiccation. She then lays a single egg within it, her sole offspring that year.

Upon hatching, the larva munches on its mother's excrement, thereby inoculating itself with the microbial strains necessary to digest dung. It then begins to mold a pupation chamber within the brood ball with its own feces. Mother and offspring spend the next three months eating and excreting, the larva from within and the mother from without. They are able to communicate through a small, unplastered region on the brood ball. A pheromone released by the larva diffuses out of this window and elicits broodcaring behavior from the mother. The solid diet of brood ball, and its own and its mother's feces, brings the young beetle into adulthood. Come the first spring rains, the new adult emerges from its subterranean haven. Thus, with an extraordinary amount of effort yielding only a single offspring, this beetle species has one of the highest levels of parental care among insects.

Gartersnakes

The red-sided gartersnake (*Thamnophis sirtalis parietalis*) is right-handed. Upon emergence from their winter dens they get down to business in a frenzied mating ball that consists of a female and ten to a hundred males. Death by smothering is a very real and common end. Within this mating mass a male must tackle four questions: how can he outcompete his rivals, how can he copulate with a cylindrical companion, which penis shall he use, and how can he keep his mate from mating again? Some males outcompete their rivals by mimicking the scent of the opposite sex. Such a male produces the female pheromone, causing other males in the mating ball to court him instead and allowing him meanwhile to get close to the true female. Once a male does so, however, he must determine which is the head end and which the tail end before he can mate, a difficult thing to do since males are much smaller than females and females are enmeshed in the male mob. He overcomes this by pressing his chin against the female's scales. If the snakes are oriented head to head, his tongue will be able to flick underneath her scales, where her pheromone is highly concentrated, and his chin will scrape onto the next overlapping scale. If not, he will simply slide smoothly over her overlapping scales.

Once oriented correctly, the male must decide which penis to use. Most animals tend to favor the use of one hand or paw or hoof over the equivalent one on the other side of the body, and, though limbless, these snakes are no exception. They just favor one penis over the other. Together called hemipenes, each hemipenis is linked to its own testis and kidney. The right unit is bigger, and the one they prefer, particularly when warmer temperatures enable them to maneuver into complex mating positions. However, if they're lucky enough to mate with a succession of females they will alternate between the two because otherwise they deplete their kidney secretions. These secretions are important because they form a hard copulatory plug that prevents females from remating. Other males find the smell of a plugged female unsexy, and leave her be as she slithers on her way.

These frequently mating males have the largest plug and the shortest copulation among snakes. Instead of trying to prevent females from remating during the fertile period by guarding them or copulating for an extensive amount of time they give them corks, which stay in place for about two days. This red-sided, right-handed, scent-parroting, mate-stoppling serpent can thus rapidly re-enter a mating mob.

Anemonefish

Some coral reef fish pack a dress in their testes. Anemonefish of the genus *Amphiprion*, who inhabit the tropical and subtropical Indopacific, live out their lives protected by the swaying tentacles of sea anemones. It is thought that the anemones avoid harpooning them to death

because the fish have somehow smeared themselves with their hosts' mucus so that they are recognized as just another appendage. Though this world is sheltered from the outside, inside it is a den of aggression. A large female and smaller male form a monogamous unit, the female being older and dominant. Also present are up to eight unrelated sub-adults and juveniles who are constantly attacked by the breeding pair. They are in such a high-stress state from these attacks that their sexual organs remain tiny. The adult male is aggressive to other males because he does not want them to sneak a spawn. The female is aggressive to her mate and the other males in order to prevent them from becoming females. All males have this ability to change sex thanks to immature eggs hiding in their testes. If the female dies, her mate becomes female and the largest of the males becomes the new female's mate. It only takes a month for the male to lay an egg.

This pattern of sex change is unusual among fish. It likely evolved because the patchy and unpredictable distribution of the host anemone made it necessary to be monogamous and easier to change sex than to risk predation while searching for an anemone occupied by an unpaired member of the opposite sex. Most sex-changing fish follow the pattern of the polygynous bluehead wrasse, in which there is intense competition for access to females. Males get more matings, as many as 100 per day, as they get larger and more able to defend a territory. Because males have the potential of far greater reproductive success than females, the largest females turn into males when there are few large males and many small females around. The switch is rapid. Upon the death of a dominating male, a large female immediately begins courting smaller females, and in just over a week she sports superb sperm. Thus, though these two species differ in male-to-femaleness and female-to-maleness, their brand of sex change reflects their social system, not ambisexual chaos.

Garden Snails

In a finale of fervent foreplay, brown garden snails (*Helix aspersa*) impale each other with love-darts. Being hermaphrodites, these animals sport both male and female tackle and swap sperm in both directions during eight hours of slippery sex. Most sperm are immediately digested by a specialized sperm-destroying gland, although a few sneak past to a storage organ, where they dwell for up to four years. The point of the sharp, calcareous, centimeter-long snail nails is to short-circuit the gland. A swooning snail will aim for the genitals, located to the right of the head, and push the dart out of its body and into its partner. Darts are coated with a slimy cocktail that causes contractions in the female reproductive tract, closing the entrance to the devouring gland and allowing sperm to pass freely into storage. If a snail has a poor aim or is caught empty-handed, which is quite possible since

darts take ten days to produce, it compensates by delivering extra sperm to its prickly partner. This species exemplifies a rarity: an intersexual arms race in which individuals are both genders. The male portion has evolved to impart increasingly more sperm while the female portion has evolved to digest it.

Fairy Wrens

Superb fairy wrens (*Malurus cyaneus*) are true blue in color only. These tiny residents of eastern Australia are socially monogamous, meaning that breeding pairs cohabit and raise young, yet enjoy more romances outside this union than any other species. A male will maintain a year-round territory in which he lives either with just his mate or with subordinate males as well who assist with chick-rearing. At the commencement of the five-month breeding season he sheds his drab brown winter feathers and dons brilliant, luxurious, multi-hued blue plumage and flits about to other territories. With a yellow petal in his bill, and crown, cheek and back feather flared, he displays with fervor to all females except for his mate. A female is usually quite unimpressed but occasionally solicits copulations. She finds it particularly endearing when a beau's blue 'do is enduring. Because it is extremely costly energy-wise to sport blue feathers (especially in winter), only the most fit males can maintain blueness for a long period of time. The most successful males are those who begin their blue displays at least two months prior to the beginning of the breeding season; only the studliest of the studs can molt directly from old breeding plumage into new come the end of the breeding season in February. A female can thus, by noting how long a male is blue, assess vigor, which translates into genetic quality when making a mating decision. The result of this means that 72 percent of the chicks from her seven or so annual clutches are fathered by males other than her mate. This has, in turn, led to intense sperm competition among males. They lug around huge sperm storage containers called cloacal protuberances which, together with testes, comprise up to 10 percent of their bodyweight. When a male is lucky enough to receive a cloacal kiss, he can release a massive ejaculate, possibly swamping out the sperm of his rivals. These small, libidinal birds thus have the dual honor of being the most polyamorous of socially monogamous vertebrates and having the greatest sperm reserves, relative to weight, of any bird or mammal.

Honeybees

Honeybees (*Apis mellifera*) give precise directions while they sing and dance for a trembling crowd in the dark. After finding a particularly inspiring food source, a nectar-laden bee flies back to the hive where, on the vertical surface of the comb, she dances. Usually this is in the shape of a figure eight, and is called the waggle dance. The angle that the figure eight departs from the vertical

conveys which direction the food is from the hive. It is the same angle as between the sun and the food, from the hive. For instance, if she dances straight upward, the food is directly toward the sun, straight downward, it is directly away from the sun, and 45 degrees to the right means it is 45 degrees to the right of the sun. The bee communicates distance in addition to direction by speed: the faster she dances, the closer the food source.

As she waggles, a gaggle of her nest-mates observe, but because it is dark in the hive they do this via sound. Her song enables bees to first find her among the masses, and then to interpret the angle of her dance. They can do this because their hearing organs, in antennae, can be moved to and fro to decipher her comings and goings in relation to their position and gravity. Meanwhile, her audience members employ a signal that does not compete with hers: they vibrate the comb with their thoraxes. When there is a whole lot of shaking going on she stops to pass out titbits from the food source. Those who are suitably impressed make a beeline for the food. If these nectar collectors remain impressed they will join in the dance, so that over time many bees in the hive will be singing the same song and dancing the same dance, and the food source will be heavily used.

Potential pitfalls to this system are not problems for these bees: because they are sensitive to the plane of polarized light they can determine sun position even on overcast days, and if inclement weather or nightfall delays return to a food source, dances later compensate for the change in sun position. The refined communicative prowess of honeybees, their ability to convert gravitational information in the dark hive into visual information in the world, is unrivaled among living beings.

Mongoose/Hornbill

The dwarf mongoose (*Helogale undulate rufula*) forms a foraging community with yellow-billed (*Tockus flavirostris*) and Von der Decken's (*Tockus deckeni*) hornbills in the Taru desert of Kenya. This thornscrub habitat has a large termite population, the mounds of which are used as mongoose refuges and foraging group staging areas. The carnivorous dwarf mongoose eats insects (beetles, termites, grasshoppers) and occasionally small vertebrates. When foraging, the mongooses fan out a meter or less apart and generally walk in a straight line, thus covering as much ground as possible. The hornbills (whose diet, except for fruits and herbs, overlaps completely with their companions) follow on foot, eating the jumping and flying insects that the mongooses disturb.

The foraging day begins at a termite mound, where mongooses and hornbills rendezvous. Typically, the hornbills fly to a mound where mongooses are sleeping and wait for them to wake, although if the mongooses emerge with no birds present, the mammals will delay foraging until the birds arrive. A mongoose lookout emerges first,

followed by the rest of the group (3–32 animals). After twenty minutes or so of stretching, grooming, sunbathing and playing, the group sets off, with the hornbills in tow. If, however, the hornbills wait extraordinarily long (over an hour) for the mongooses to emerge, they fly to the mound, peek down a ventilation shaft and wake the sleepy mongooses with loud, squawking “wok”s.

The hornbills benefit from this mutualistic relationship by increased foraging efficiency, particularly of prey that would be difficult to find if not flushed out by mongooses. In return, the mongooses benefit because the hornbills are able to detect and warn of predatory raptors earlier than the mongooses are able to. The more birds in a group the fewer mongooses need to take up the dangerous job of lookout. Furthermore, hornbills and mongooses make several concessions to each other. Hornbills warn mongooses about predators even if the particular raptor does not prey on hornbills. Hornbills also refrain from consuming mongoose young, who are the same size as the rats in their diet, even though they have plenty of opportunities to do so. When competing for food, mongooses do not attack the hornbills as they do other species. Instead, they growl and hip-slam, responses normally reserved for fellow mongooses.

In other areas of Africa, the dwarf mongoose and yellow-billed and Von der Decken's hornbills live without each other's aid. Their relationship in the Taru desert is the tightest known mutualism between social vertebrates that usually live independently.

The laborious, sometimes high-tech, and often tedious methodology of scientific investigation can yield more than conventional insight. For me, using behavioral and genetic data to witness ecology and evolution in action inspires awe, engenders passion, and enables recognition of the sacred. My hope is that the above wanderings among the intricacies and refined beauty of other systems impart a sense of the magic and mystery inherent to worlds not our own.

Faith M. Walker

See also: Animals; Conservation Biology; Dogs (various); Elephants; Hyenas – Spotted; Nile Perch; Primate Spirituality; Serpents and Dragons.

Feminist Spirituality Movement

The name “feminist spirituality movement” is something of an “umbrella” term used for many Pagan movements that are specifically feminist in orientation. One of its best-known variants is feminist Wicca, a branch of goddess worshipping paganism that is explicitly feminist, unlike some Pagan groups. The feminist spirituality

movement is part of second-wave feminism and began in the latter third of the twentieth century. It is an Earth-oriented, pro-women spirituality that explicitly rejects male dominance in religion, solely male images of the divine, and the limited value accorded to nature in much conventional Western religion. Furthermore, many of the movement's leading spokespersons argue that male dominance in religion, exclusively male images of the divine, and indifference to the sacredness of nature are three variations on the same theme – parts of a single religious vision.

Like new religious movements throughout history, the feminist spirituality movement has generated its share of controversies. Some of the negative comments made about it are simply part of the general denunciation of pagan religions common among some more fundamentalist members of more established religions. Others, who are feminists themselves, are also unsympathetic to the feminist spirituality movement. Often their criticisms are simply part of the anti-religious sentiments that are part of much of the general feminist movement. Religions have been so bad for women, such critics claim, that spending time creating theology and ritual, a high priority for members of the feminist spirituality movement, simply takes time and energy away from more important political and economic projects.

Depending on the interests and needs of its participants, feminist spirituality can include a number of concerns. Some groups consist primarily of enthusiastic participants in ritual who believe in a matriarchal past and in “the Goddess,” generically conceptualized and named. Such practitioners care little for the scholarly and theological controversies in which others are deeply involved.

But whether it is plausible to posit a “matriarchal prehistory” is a matter that learned archeologists and historians must debate, as the work of Cynthia Eller has shown. And exactly how “the Goddess” is connected with the myriad goddesses known to historians of religion, or how naming the divine in feminine terms changes our concepts of the divine are difficult theological issues. Carol Christ, among other feminist theologians, has devoted much of her life to asking such questions.

Though most historians of religions would regard feminist Wicca and the feminist spirituality movement as a new religious movement, its own adherents often claim an ancient “matriarchal” past for it. They claim that before the rise of patriarchy, women participated fully in religion and often were religious leaders, that goddesses were worshipped by all members of society, and that people, deeply immersed in natural rhythms and in awe of nature, lived in peace and harmony with each other. This, they would say is the “old time religion” that existed before Christianity and other monotheistic religions, the “old religion” (another name Wiccans use for themselves)

which they seek to recover and restore. In their sacred history, the true “fall” occurred when male dominance came into being, when male deities completely replaced female deities, and when nature was no longer regarded as sacred and divine. Therefore, the feminist spirituality movement gives equal emphasis to women's leadership in religion, the importance of goddesses, and the religious significance of nature.

The theology of the feminist spirituality movement is a theology of immanence. That is to say, in common with many other religions, members of this movement claim that the divine is to be found within the world of nature, including human bodies and spirits, rather than in a transcendent realm separate from the world. The natural world in which we live is alive with spirits and every aspect of nature is divine and sacred. Also in common with many other religions, the feminist spirituality movement claims that it is natural and normal to imagine deity as female. They would also claim that when theologies of immanence are replaced by theologies of transcendence, when deity retreats from nature and the Earth to a transcendent and unknowable heaven and when women's bodies no longer are seen as fitting images of the divine, then human society inevitably degenerates into war, alienation and social oppression. Thus, according to feminist spirituality, questions of the religious status of nature are not merely theoretical; human well-being rides, in part, on recognition of the sacredness of nature. Human well-being also rides on appropriate recognition of the sacredness of femininity, whether divine or human. Many in the feminist spirituality movement would claim that the current difficult world situation is due to centuries and millennia of neglect of the Goddess embodied in the natural world and the oppression of her human counterparts.

The ritual practices of the feminist spirituality movement mirror its immanent theology which, while not ignoring male deities, focuses more on female deities and the natural world than do the religions more familiar to North Americans and Europeans. Ritual is more important to many in the feminist spirituality movement than are theology and other theoretical pursuits. They affirm that ritual “works,” that practicing rituals correctly and with the proper attitude does have an effect on the natural world around us. Practitioners of feminist spirituality have a very sophisticated understanding of how and why ritual works.

Proper attention to nature is an important component of the movement's understanding of ritual. The preferred arena for ritual activity is out of doors in nature, even if the only “nature” available is a city park, though a living room will do if need be. Many ritual circles celebrate the human body through ritual nudity. Every ritual opens with casting the sacred circle that honors the four directions and the four basic elements. The ritual cycle of the feminist spirituality movement is grounded in the seasonal

cycle of nature in the northern hemisphere, which is said to mimic the life of the Goddess and her consort. The major holidays are the four major points in the sun's journey through our Earth atmosphere – the solstices and the equinoxes. The minor holidays are the intermediate points between these holidays. These holidays mirror holidays familiar to many people in the contemporary world – Christmas, Easter, Passover, Halloween, Ground Hog's Day, and Thanksgiving. Wiccans would say that these familiar observances derive from pre-monotheistic celebrations characteristic of nature and goddess-centered religion. The sun at its lowest point for the northern hemisphere signals birth, the spring equinox renewal, the summer solstice abundance, and the autumn equinox death leading to renewal, the birth celebrated in winter solstice rituals. However, this basic pattern of birth, death, and rebirth is interpreted in many different ways, depending on the understandings developed by a local group of practitioners or a specific leader or teacher within the feminist spirituality movement. The human life cycle is also celebrated and ritualized. The movement is especially famous for the way in which it honors older women for their maturity and wisdom in a "crowning" ritual often performed for a woman to mark her sixtieth birthday.

Both the theology and the ritual practices of the feminist spirituality movement are grounded in a different evaluation of nature and human life than is found in many religions. Its practitioners often accuse other religions of being unduly pessimistic and negative about life. A common analogy is that nature is more like a nurturing, loving mother than like a judging, punishing father. Nature and life are basically trustworthy, not a mistake or a perilous journey on the way to better times in another world. Negative events can be experiences through which valuable lessons are learned, or they can be dispelled ritually. Even death is viewed as simply part of the overall rhythm of life, not a punishment for human errors. Thus, it is not surprising that this religious movement is attractive to many people, especially women, who find more dominant European and American religions to be unsupportive, even oppressive.

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Fengshui

Fengshui is the common name for various techniques originating in China that bring good fortune to people when the environments in which they reside are properly oriented. Akin to the divinatory arts by which humans seek the assistance of gods or spirits, practitioners of fengshui seek an unseen life-force called *qi*. In Chinese cosmology, the human anatomy is a microcosm of the Earth, and the blood veins of one correspond to the rivers of the other. When the ground is broken for a new house, or when a grave is excavated, such action taps the *qi* meridians of the Earth – called dragon veins – just like an acupuncture needle. Regardless of the type of fengshui, all site-orientation methods seek to locate *qi* in the geophysical plane. When *qi* is located, in the burial tomb it energizes the bones of the ancestor, who thereby bestows good fortune on the descendants.

Two different procedures for locating *qi* were developed by the Han dynasty (206 B.C.E.–220 C.E.). Form School theories are based on the idea that water collects and stores *qi*, while wind captures and scatters it. Fengshui literally means "wind-water," but the term is shorthand for the principle of "(hindering) wind (and hoarding) water." The landscape features in a given locale that influence the flow of wind and water around a site are the primary arbiters of fortune in this theoretical system. Compass School methods, on the other hand, are based on the theory of the five elements. This correlative system analyzes *qi* as a force that progresses through five elemental processes. In the *yang* or productive phase, Earth harbors metal, metal condenses water, water nourishes wood, wood feeds fire, and fire burns to Earth. In the *yin* or destructive phase, Earth dams water, water quenches fire, fire melts metal, metal cuts wood, and wood saps Earth. These elements are correlated with the eight-directional

trigrams of the *Yijing* or *Book of Changes*, while a person's year of birth also corresponds to a particular trigram. It is thus possible to avoid destructive *qi* by orienting dwellings or arranging rooms in productive directions *vis-à-vis* an individual's natal *qi*. For example, a woman born in the year 1982 correlates to the element of metal and the trigram, *qian* (northwest). A productive direction would be southwest, the direction of the element Earth, which harbors metal. A destructive direction would be south, the direction of fire, which melts metal. So the woman in question might place her bedroom or living room in the southwest portion of her house where she spends the majority of her time, and the bathroom or closets in the south.

After the Chinese communist revolution of 1949, fengshui was branded as superstition in the People's Republic of China. The practice of fengshui was subsequently prohibited, which forced it underground for some fifty years. Although not officially rehabilitated, fengshui is now openly practiced in China and, while still vilified by most intellectuals, it is the subject of some scholarly study. During the half century of prohibition, the practice flourished in Taiwan, Hong Kong, and Singapore. Many of the purported masters in the West were born and trained in these Chinese communities.

Fengshui became accessible to the English-speaking world in the nineteenth century when the British missionary, Ernest Eitel, published his landmark study, *Fêng-Shui: Principles of the Natural Science of the Chinese* (1873). But the public at large did not discover this ancient system until the last decades of the twentieth century. One of the earliest proponents in the United States was Thomas Yun Lin who founded a temple for American Black Sect Tantric Buddhism in 1986. Lin's brand of fengshui largely dispensed with traditional practices and relied instead on intuition and mystical knowledge, thereby transforming an ancient science into a modern religion. Every major city in the Western world now has its own community of fengshui consultants, many of them trained by Lin or his disciples.

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See also: Chinese Traditional Concepts of Nature; Confucianism; Daoism; Geomancy.

Fertility

Human *fertility* – going *wild* from a *domestic* or "cultivated" condition – is a transitional theme as deeply rooted as the nature/culture divide. In the late twentieth century, with the raising of *ecological consciousness*, and the emergence of reenchantment-seeking youth cultures in North America, Europe and Australia, *fertility* became a radical environmentalist career. As is particularly apparent in settler populations, radicalized youth minorities – heir to the idealism of 1960s counterculturalists, the confrontationalism of punk and the pantheistic sensibility of paganism – have grown conscious of their separation from nature. The eco-radical desire to reconnect, to be absolved from consumerist "needs," to transgress the nature/culture boundary, represents a deliberate response to the imperatives and consequences of late modernity. Accessing a range of ecosophies (deep ecology, ecofeminism, bio-regionalism, social ecology), they expresses outrage over the growing threat to, or "loss" of, nature, sacralized as Mother, with whom intimate connection is acknowledged, and to whom dutiful commitment is owed. While often reflecting a romantic primitivism, contemporary *fertility* evidences an empathetic post-colonialist sensibility, extending to a raised awareness of the devastating impact of corporate-driven globalization on indigenes – leading eco-radicals to identify with and defend beleaguered native ecology *and* peoples.

By the late 1980s, "feral" was employed as a self-descriptor by activists within the radical green movement. At the end of that decade of grassroots forest blockades, for US Earth First!ers (who used the rubric in the periodical *Live Wild or Die*) and their Australian counterparts, it designated an anarcho-primitivist Earth guardianship. Throughout the 1990s, the metaphor came to experience popular application in Australia, as thousands of activists protesting forest and mining industries, combating the loss of species diversity and championing Aboriginal land rights, were designated, or self-identified as, "feral." For these eco-activist youth minorities, "going feral" amounted to the development of a deep *identification* with nature under threat. Inhabiting forests for prolonged periods, where affinities with native biota were formed, enabled a strong attachment to place and, furthermore, an uncompromising commitment to its protection. The process was best conveyed by Earth First! co-founder Dave Foreman: by "reinhabiting a place, by dwelling in it, we become that place. We are *of* it. Our most fundamental duty is self-defense. We are the wilderness defending itself" (Foreman in Taylor 1994: 204).

Fertility is thus akin to a *rite of passage*, a process of becoming "closer to nature" from a "cultivated" or

domestic condition, a kind of eco-radical “conversion.” Mounting “tree-sits” in the canopy of the threatened forests of Australia’s East Gippsland in the late 1990s, the experience of Bandicoot is exemplary. Raised in Melbourne, Bandicoot worked nine-to-five as a timber and hardware salesman. His recollections are that of inherent detachment:

My life took me away from the earth. It put me into a four bedroom house, it fed me. You know, meat and three vegetables every night. Showed me a TV. Taught me how to live and how to protect myself . . . to put a roof over my head, and a doona [quilt] around me. And I wasn’t exposed to the outside. And when we did it was in a car, you know and in a cabin (Interview with the author, April 1998).

Yet, with a “desire to understand more about the earth,” in his mid-twenties Bandicoot shed his suit, grew dreadlocks and gravitated toward the temperate rainforests of East Gippsland. “Out there,” he reveals somewhat skittishly, he found “something magical,” a “specialness.” And, with a realization that we are “of the earth,” he became ensconced in the forest’s defense. Bandicoot’s nascent eco-activism saw him travelling between forest and city on a regular basis to gather support. This movement, from detachment to an awareness that “you’ve gotta live in a nice harmonic balance” with nature, coupled with the constant migration between forest and city, makes for an identity that is liminal and remarkably uncertain.

Like many other conscientious youth in the pursuit of such *terra-ist* liminality, Bandicoot found a sense of belonging in an anarchic collective formed to combat the loss of natural and cultural heritage. Emerging from blockades mounted in East Gippsland’s Goolongook Forest in 1993–1994, and recognizing the prior occupancy of the Bidawal, Geco (Goongerah Environment Centre) represents the last line of defense of remnant high-conservation-value forest in the state of Victoria. Like many other Earth First! affinity groups in Australia, Europe, and America, Geco strives to be a non-hierarchical *eco-tribe* whose members rally to the defense of local “old-growth,” water catchments and threatened species, all of which constitute sacred terrain. One Geco activist, Belalie, conveys a common perception:

[There is] a really hostile local community [in East Gippsland] . . . I mean they’re living on massacre sites. It’s just an area of such dark history. It’s an area where colonization continues. They continue to destroy the sacred things. They continue to wipe out the native species. It’s the same attitude which [early settlers] approached this country with, and it’s just ongoing (Interview with the author, December 1996).

Mobilizing and networking to combat mining, forest and road-building industries, eco-activist collectives like Geco draw on a range of ritual-like tactics. These include consumer boycotts, theatrical media stunts, and acts of civil disobedience such as blockading – where individuals choose to become flesh and blood “bargaining chips.” Usually maintaining the principles of nonviolent direct action (NVDA), common obstructions include “lock ons” (attachment to earth-moving machinery using chains, bike locks and home-made devices), “tree-sits” (occupied platforms built high up in trees marked for felling and usually in the path of access roads) and “tripods” (occupied tall structures straddling machinery and/or blocking access roads). Participation in these and other rites of endurance and dedication (like laying “hair tubes” designed to gauge the prevalence of threatened species) is commonly experienced as something of an induction rite – initiating eco-neophytes into a community of defenders. While the destruction and loss of landscape to which deep attachments have been formed occasions a devastating sense of despair and grief amongst feral eco-defenders, the perpetration of what they view as desecration effectively unites those who have borne witness to it.

The rites and practices outlined here are distinguishable from the nature/culture boundary transgressions promoted by earlier wilderness philosophers. Activists do not seek immediate encounters with remote landscapes for the singular purpose of becoming “recreated,” achieving “harmony” or *authenticity*, in the mould of a Thoreau or as a “wilderness experience.” Nor is it the case that feral activists necessarily seek the total rejection of “domestication” – the technologies, labor and leisure practices of “civilization” – for a permanent “feral embrace of wilderness,” as is advocated by anarcho-primitivist John Zerzan, whose writings are sometimes cited by members of the Earth Liberation Front. Dwelling in threatened landscapes in a labor to protect the Earth, *eco-tribes* are not only organized social structures, but they adopt, for example, new digital telecommunication technologies used to form and mobilize networks and disseminate information. Furthermore, as new historical and ecological sensibilities have inspired the perception of “humanized” landscapes – that is landscapes recognized to have been occupied, altered and enchanted by First Peoples for millennia – a non-humanized “wilderness” (conceptualized as *terra nullius*, or a place untrammelled by man) has become a less than desirable theme.

Ferality embodies the desire for “heritage” guardianship in an era of mounting ecological crisis. The process involves *detachment* from the parent *culture*, and a *becoming* closer to, or identification with, beleaguered “country” (*nature*). Such is a committed practice of (re)connecting with sacralized nature – a passport toward chthonic citizenship. Undertaken by thousands of self-marginal youth over the course of twenty years, this is a contemporary rite

of passage toward reconciliation with indigenous ecology and peoples.

Graham St John

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Fertility and Abortion

It should not be surprising that religions contribute to the desire for large families. The ancient religions were spawned in a world where the problem was depopulation. It is estimated that prehistoric persons, factoring in infant death, lived on average about eighteen years, and in ancient Rome and Greece the average was in the low twenties. The Emperor Augustus penalized bachelors and rewarded families for their fertility. Widowers and divorcees (of both sexes) were expected to remarry within one month. Only those over fifty were allowed to remain unmarried. It was a society where, as historian Peter Brown says, death fell savagely on the young. Only four out of every hundred men – and fewer women – lived beyond their fiftieth birthday. As a species, we formed our fertility habits in worlds that were, in Saint John Chrysostom's words, "grazed thin by death."

Such judgments are deep-rooted. If, as Teilhard de Chardin said, nothing is intelligible outside its history,

the fertility thrust, especially in stressful conditions, is the defining story of our species. Interestingly, the ancient religions born in these conditions also contain the cure for excess fertility, for they all came to see that fertility, which is a supreme blessing, can also in certain circumstances become a curse. Still, for most of history the concern of religions was for more not for fewer children.

Religion Defined

Religion has to be taken seriously when any social problem is addressed. Two-thirds of the world's population affiliate with some religion and the other third could not but be affected by the imaginative power of these symbol systems. Religion is difficult to define, so we may not use the term and expect a universally accepted understanding of its meaning. Often, in the social sciences, the term is used descriptively and includes everything that humans label religion, however innocent or guilty, bizarre, magical, or superstitious it may be. The advantage of this is that it allows a consideration of all of the shadow forms of expressed religiosity as well as mainstream manifestations. Many scholars of religion work out of a normative definition: *religion is a positive, life-enhancing response to the sacred*. By this definition, movements like the peace movement or the green movement can be considered religions since they are responses to the values in life that are so precious as to be called sacred.

The sacred may be interpreted theistically, as in Judaism, Christianity, and Islam, or non-theistically as in Buddhism and the Chinese religions. No religion is a pure classic; all are burdened with negative debris from their journeys through time. Good religious studies do not fudge the downside – the sexism and the patriarchy, the authoritarianism, and, at times, the unnuanced pronatalism found in religions. The critical task is to ferret out the good amid the corruption.

The world's religions are all philosophies of life. As Morton Smith says, in the ancient world there was "no general term for *religion*." Thus, as Smith notes, Judaism to the ancient world was a philosophy. It presented itself as a source of wisdom, as seen in Deuteronomy: "You will display your wisdom and understanding to other peoples. When they hear about these statutes, they will say, 'what a wise and understanding people this great nation is!'" (Deut. 4:6). Similarly, other religions, such as Hinduism, Buddhism, Daoism, and Islam were quests for enlightenment and betterment. They contain ore from which rich theories of justice and human rights can be extracted. Often these treasures have not been well applied to issues like sexuality, sexism, family planning, or ecological care, but they all contain wisdom regarding the human right and obligation to bring moral planning to our biological power to reproduce. This would include the right to contraception and to abortion when necessary.

Fertility as Blessing or Blight

It took ten thousand generations to produce the first two and a half billion people simultaneously living on Earth; it took only one generation to double that number. We also have right now the highest number of fertile persons in the history of the Earth, a number equal to the total number of people on Earth in 1960. That there are too many people in too little space with not enough to meet their needs is not a brilliant insight. Three and a half thousand years ago, Babylonian tablets, known as the Atrahasis epic, found in what is now Iraq, gave a history of humankind. The story it told was already old when it got carved on stone. It said that the gods made humans to do work unworthy of the divinities, but huge problems developed when the humans over-reproduced. So the Gods sent plagues to diminish the population and made it a religious obligation for the remaining humans to limit their fertility. Joel Cohen says that this may be the earliest account of human overpopulation and the earliest interpretation of catastrophes as a response to overpopulation. Over two thousand years ago, Aristotle sensibly insisted that the number of people should not exceed the resources needed to provide them with moderate prosperity. Thomas Aquinas, the thirteenth-century Catholic saint, agreed with Aristotle that the number of children generated should not exceed the provisions of the community, and he even went so far as to say that this should be insured by law as needed. If more than a certain number of citizens were generated, said Thomas, the result would be poverty, which would breed thievery, sedition, and chaos.

All this was centuries before Thomas Malthus in the eighteenth century proposed that human population is caught in a vicious cycle of population exceeding food supply, leading to famine and disease which would bring population back to a manageable level. Then the process would begin again. Many scholars feel that Malthus underestimated the capacity of the planet to produce food and that he was insufficiently informed on the complex dynamics of fertility increase and decline. There is enough, as Gandhi said, for our need, but not for our greed. The 2.9 million people in Chicago consume more than the more than 100 million people in Bangladesh. If, with an eye on consumption, you compare Germany with a poor African country, Germany consumes roughly the equivalent of one billion people. Around 75 percent of the world's pollution is caused by the "well salaried and well caloried." Many earlier commentators on population did not see how the need for children could be changed by technology and by the move to cities. (You don't need as many children in the city as you did on the farm. As recently as 1800, only 2.5 percent of humans lived in cities. By the 1980s that figure had risen to more than 50 percent.)

Still, numbers do count. Too many overconsuming people on a finite planet create massive problems. We also

face the problem that as the poor move toward what we call "the middle class," their patterns of consumption tend toward mimicking the consumptive patterns of the affluent.

How Many is Too Much?

Professor Joel E. Cohen in his monumental book, *How Many People Can the Earth Support?*, concluded that this is a questionable question; a question that imports an army of other questions. But it is a question that started teasing the human mind in the seventeenth century when the first estimates were made of the population that the Earth's "Land If fully Peopled Would Sustain." The estimate back then that the Earth could support at most 13 billion is not far off from contemporary estimates. Most estimates today range from four to sixteen billion. If we were content to live at the level of Auschwitz or the Artic Innuits or the Kalahari bushmen, you would get certain numbers. If you face the reality that most people today have rising not lowering expectations, you get other numbers.

Most nations live beyond their means. Take the Netherlands, for example. It is estimated that the Dutch require the equivalent of 14 times as much productive land as is contained within their own borders. To consume the way they consume takes the equivalent of 14 Hollands. Where does it get the other 13 Hollands? It imports from the rest of the world. In a significant misstatement, we refer to the gluttonous nations of the world as "developed" and the poor nations as "developing," implying they can consume like us and some day will. But if we can return to reality, where is Zimbabwe going to find 13 Zimbabwe's if it would try to match us in overconsumption.

Professor Cohen concludes sensibly that the Earth has reached, or will reach within half a century, the maximum number the Earth can support in modes of life that we would prefer. Family planning is necessary now lest population momentum carry us into chaos, and it will be necessary when population stabilizes to keep families and overall population at sustainable levels. As biologist Harold Dorn notes with elemental logic: no species can multiply without limit and there are two biological checks to stop that – a high mortality and a low fertility. Only the human species can choose the latter. When it does not do so, the other check kicks in, which has already happened in parts of the world.

Family Planning and Religion

Anruth Jain, a demographer at The Population Council, notes that most of the world religions originated at a time when the global population was 50 to 450 million people in comparison to the six billion at the beginning of the second millennium. The problem for these religions is to adjust to the new demographic realities and to the new needs for family planning.

Family planning means contraception. Since there is no perfect contraceptive, abortion as a back-up is associated with family planning. Contraception is sometimes rejected on religious grounds, especially in theistic religions where it is seen as a lack of faith in God's Providence. This can be seen, for example, in some forms of Christianity, Islam, and African native religions. Christianity was seriously affected by an anti-contraceptive bias within Stoic philosophy, which championed an emotion-free rationality as the human ideal. Sex, being emotional, had to be justified by some reason and reproduction came to be that reason.

Abortion is more of a tortured issue in religions, as elsewhere. Those religions that believe in reincarnation such as Buddhism and Hinduism would seem to have an insuperable problem with abortion since "the being about to be born" preexisted and brings with it its own distinctive karmic history. Also in Buddhism one of the rules of the Eightfold Path is: "I will not willingly take the life of a living thing." This is found also in religions such as Jainism in which some practitioners will not even swat a fly out of respect for life. How then could such religions justify abortion? Some in these religions do not. Others find ways to do so. William R. LaFleur, in his book *Liquid Life: Abortion and Buddhism in Japan*, shows how many Buddhists see abortion as deferring birth to another time where the being can be born in better circumstances. Other Buddhists say there is some negative *karma* from an abortion but that it can be neutralized by positive *karma* from other good deeds. Still other Buddhists say that abortion is morally abhorrent and they will not seek to justify it. This illustrates a pattern found in all the world religions. A conservative view banning abortion can usually be found coexisting alongside a more liberal view permitting abortion for serious reasons. This is comparable to the pluralism in world religions on issues like war, where some profess an absolute pacifism and others find in the same religion grounds for a just defensive war. Given the complexity and richness of religious moral traditions and the differing perceptions of people in changing conditions, such pluralism is inevitable and worthy of respect.

Not all religions are equally open to change. Hinduism, as some interpret it, has historically shown itself quite malleable in facing new situations. The revelations of the Vedas were not capped as final and binding for all time. The eternal demands of righteousness, *dharma*, can be seen as a river that is constantly renewed with new sources, changing course as needed while giving the appearance of changelessness. Adaptation is thus at home in the theories born of Hinduism. Even the Hindu and Jain concept of *ahimsa*, doing no harm, is sometimes interpreted to justify abortion because giving birth to a baby without the means to care for it can be more harmful, more of a violation of *ahimsa*, than an abortion. Abortion in such cases would be justified. The Hindu openness to

family planning (including abortion) translates into policy as seen in the 1971 Medical Termination of Pregnancy Act, permitting abortion in India for a variety of reasons. Hindu authorities have been supportive of this and have not opposed extending this right of choice to girls under the age of eighteen. As in other religions, there is no unanimity on the right to an abortion and there are specific prohibitions in the ancient *dharma sastras* on abortion, even of an illegitimate child. This illustrates again the pluralism in religious ethics on reproductive ethics.

Judaism's creation myth includes the divine mandate to be fruitful and multiply. However, as Jewish theologian Sharon Levy points out, the fact that there is a command given indicates that reproduction is not genetically controlled in humans. The divine mandate addresses people as reasonable moral agents with moral obligations who must respond reasonably. Thus the command can be understood to dictate reasonable, human self-control in all moral matters such as reproduction. As Professor Laurie Zoloth says, we humans are not the ones who swarm over the Earth like insects. She says that it is particularity, and not abundance, that is stressed in Judaism.

Many rabbis historically justified the use of contraceptives. They said that the *mokh*, a soft cotton pad worn internally against the cervix, may be worn during coitus or it might be used after intercourse as an absorbent. Various justifications for contraception are given, including the need for young girls to protect themselves from pregnancy since it might harm them physically.

The Oxford Companion to the Bible notes that abortion as such is not mentioned in the Bible. However it is clear that the fetus did not have the moral status of a born person. In fact, the lives of children under the age of one month were not accorded moral value, according to Leviticus 27:3–7. The Torah, in Exodus 21, speaks of two men fighting and one causing an accidental abortion. It is not treated as a capital crime as it would be if he had caused the death of the woman. Instead monetary damages are imposed as would be in a property loss. Many Jews hold that a fetus is not a fully-fledged person until the birthing process itself begins. Thus various reasons could justify its termination.

In Islam both restrictive and permissive views are found on contraception and on abortion. There was support for contraception from the beginning in Islam. There are many documents from early Islam that indicate that contraception was practiced at the time of the Prophet, that some of his companions exercised it to prevent pregnancy, and the Prophet said nothing to imply that it was unlawful. Islam stresses that it is the quality of offspring, not the quantity, that is the prime moral concern. Islamic authorities stress that human life should thrive and not merely survive and that having fewer children makes possible the thriving that all children deserve. Only the

most compelling reasons could justify sterilization in Islam since it forestalls having a child when circumstances permit it at a later time.

Many Islamic authorities also justify abortion for serious reasons. Some Hanafite and Shafiite jurists have allowed abortion within the first 120 days of pregnancy for good reasons, while the Shi'ite Azidiva approve of such early abortions even if there is no serious reason for it. Some jurists in the Malikite and Dhahireya schools would prohibit all abortions. All Islamic jurists consider abortions after four months as justifiable only to save the woman's life.

Islam illustrates again the divisions within world religions on family planning. Both the conservative and the liberal views have strong authorities supporting them. Thus civil societies that accept religious freedom should allow for both positions (i.e., permitting abortions to those who approve of them on religious grounds and protecting those who disapprove from having to have an abortion or participate in one if they are medical personnel).

The most influential Chinese religions are Daoism and Confucianism. Buddhism is also present in Chinese life. Daoism and Confucianism have been shaping Chinese culture since the Chou Dynasty (1066–256 B.C.E.). Both traditions saw peace and harmony as the ultimate goal of life. This implies the absence of conflict between nature and human beings, between heaven and Earth, and between the individual and society. This led both traditions into the issue of fertility management. The Chinese saw family planning as essential to the preservation of peace and harmony in society. This position coexisted alongside the belief that one of the worst of calamities was not to have any posterity. As in other cultural and religious traditions we can see that fertility was perceived from experience to be both potential blessing or potential blight.

The temporary and sometimes harsh "one child" policy, without which it is estimated there would be some 250 million more Chinese, was broadly accepted by the Chinese. The drop in fertility rate from six children per woman in 1970 to near replacement level in 1990 was uniquely rapid and some scholars attribute half of this to government policies. Its harsher sanctions and abuses that sometimes accompanied this policy have merited harsh criticism. Still Westerners are surprised at the general cooperation with this policy, a cooperation with deep roots in the cultural commitment to the common good. Thus the Chinese were ready to reproduce in greater numbers when that was thought by national leaders to be good for China. In a similar vein of civic virtue, the Chinese were also generally ready to restrict births by contraception and abortion when that was asked for and seen as needed.

China has been involved in family planning for thousands of years, perhaps longer than any nation in recorded history. Many rules appeared in early China regarding

marriage and reproduction, including stipulations on the right age for marriage and the spacing of children. This was seen as a matter of government concern since the government was the prime caretaker of the national family. Chinese culture has had positive attitudes toward sexuality, not seeing sex as dirty or obscene, and thus it was not something that had to be justified by reproduction. Daoism stressed its health-promoting qualities more than its reproductive potential. The influential Confucian writer Han Fei (297–233 B.C.E.) argued that the state would be happier and more prosperous if it maintained a modest population.

In Christianity, Protestantism has long been open to both contraception and abortion, and most of the mainstream Protestant churches have made statements to that effect. Increasingly, fundamentalist Protestants have opposed abortion.

Roman Catholicism is often misrepresented as opposed to both contraception and abortion. Actually, the tradition contains strong views on both sides of the question. Although Pope Paul VI in his 1968 Encyclical *Humanae Vitae* declared all artificial contraception immoral, a number of Catholic bishops' conferences offered quiet but noteworthy demurrals. They were supported by the vast majority of Catholic theologians and people, and the ban on contraception is adhered to by only a minority of Catholic people. Regarding abortion there is a long tradition espoused even by one canonized saint, Saint Antoninus, permitting abortion for serious reasons. The Catholic scholars Daniel A. Dombrowski and Robert Deltete in their book *A Brief, Liberal Catholic Defense of Abortion* demonstrate the permissive view on contraception and abortion that coexisted alongside the non-permissive view with equal credentials. They also show the long Catholic tradition of not according personal moral status to the fetus until some three months into the pregnancy or even as late as quickening. For Sts. Augustine and Thomas Aquinas, principal shapers of the Catholic moral tradition, the early fetus had the moral status of a plant or vegetable, not that of a person. It could not, if miscarried or aborted, be baptized or given Christian burial.

Religions are all characterized by their appreciation of life and the need to revere and enhance it. They all also came to recognize that family planning is essential to life. Laws that honor only the conservative religious view are therefore violative of the religious integrity of the world's major religions. The views for and against choice for abortion and family planning can find warrant in the complex tapestries of world religions.

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- See also: Abortion; Breeding and Contraception; Fertility and Secularization; Population and Consumption - Contemporary Religious Responses; Population, Consumption, and Christian Ethics.

Fertility and Secularization

Religion, which regulates family life and sexuality, would seem to be a powerful social force affecting the propensity of believers to have children. Fully nine times, Genesis reports God's wish that his creatures "be fruitful and multiply." However, different religions have different beliefs, and all of them may be fading away in modern secular society. Thus it is difficult to predict the role that religion will play in the future growth or decline of human populations.

This is especially true for new forms of spirituality that celebrate the sacredness of the Earth. If they are rooted in secular environmentalism, then they may promulgate low fertility as a way of preserving the Earth from human pollution. However, if they spring from an awareness that humanity is part of nature, they may sanctify increased fertility.

Secularization

A scholarly debate had raged for years over whether secularization is likely to bring about the demise of

religion. Perhaps the most ingenious argument holds that secularization is a real but self-limiting process. Mainstream denominations are under great pressure from secular institutions of modern society to become more worldly. For example, highly educated clergy are trained in the same values of doubt and pluralism that are promoted by the leading secular universities. Therefore, the dominant religions weaken in faith, fail to provide spiritual guidance, and lose membership.

But the collapse of one religion merely leaves room for another to expand. Dissatisfied laity and disaffected clergy in secularizing denominations launch sectarian movements that break away from the original organization. These sects revive faith in the supernatural and are able to resist the secularizing forces for a long time. If they do become more worldly, fresh sects will erupt from them as well, continuing a cycle in which the wheel of religion turns, but moves neither forward nor back.

Occasionally, as in the Roman Empire two millennia ago, an entire religious tradition secularizes, and the birth of sects is insufficient to sustain the average level of faith. But this merely opens up opportunities for wholly new religions to arise. Thus, extreme secularization stimulates religious innovation and an increased birth-rate of new religious movements that are significantly different from the surrounding religious tradition. The most successful of these movements become the standard religious traditions of future centuries.

Today, many spiritual movements, both within traditional religions and outside them, are reviving a sense of wonder, awe, and devotion toward nature. To the extent that their beliefs and practices are new, it will be difficult to predict how they will affect the fertility of their adherents. However, if they draw converts back to the conventional denominations, then it will be instructive to see how well-established religions have shaped the birth-rate.

Contrasting Theories

Demographer Nathan Keyfitz has noted that the fertility rate is dropping rapidly in most advanced industrial nations, far below the level required to sustain the population. He attributes the fertility collapse to the increased freedom women enjoy in secular society, and the economic opportunities that entice many of them away from the traditional child-bearing role. In contrast, Islamic societies have retained much higher fertility rates, and may be able to resist secularization. The reason Islamic societies have high fertility, Keyfitz says, is because the religion facilitates male dominance over females. High-fertility societies tend to overwhelm those with low fertility demographically, so male-dominant religions may ultimately conquer the world.

A distinctly different explanation of how religion might promote fertility was offered by sociologist Rodney

Stark in his analysis of the rise of Christianity. In its earliest centuries, Stark maintained, Christianity was especially favorable to women, and most Christians were female. Many of them married non-Christian men, converted them to Christianity, and raised their children in the new faith. Christianity favored nurturance and encouraged its believers to take care of sick and helpless members, thereby improving their health and reducing mortality, including among infants, pregnant women, and mothers. In addition, the relatively restrictive sexual morality Christianity inherited from Judaism discouraged a number of erotic behaviors that do not result in pregnancy, thereby channeling sexuality into fertility.

Thus, Keyfitz says religion can support fertility by suppressing women, whereas Stark claims it can do so by empowering women. One can imagine a third argument, that religion might actually reduce fertility by promulgating puritanical values and conferring spiritual honor upon people who remain celibate or who do not procreate. Thus, it is necessary to look at some empirical evidence to see whether traditional religion is in fact associated with high levels of fertility.

Empirical Evidence

The General Social Survey, administered periodically to a random sample of Americans, is ideal for examining the connection between religion and fertility in advanced industrial nations, because it includes many questions about family structure and faith. The table shows a very simple analysis, using two measures of fertility and two of religion.

Table 1: Religion and Fertility in the US General Social Survey

	<i>Ideal Number of Children is 3 or More</i>	<i>Age 45 and Over: Actual Number of Children is 3 or More</i>
Religious Preference:		
Protestant	43.2%	47.2%
Catholic	50.8%	48.8%
Jewish	47.0%	28.8%
None	32.7%	39.4%
Attend Religious Services:		
More than Once a Week	57.6%	52.8%
Never	34.7%	41.3%

The first column of figures is based on the question, "What do you think is the ideal number of children for a family to have?" Out of 25,385 people who answered this question, the largest number, 52.1 percent, said "two." A fertility rate of two children per woman is just slightly less

than the 2.1 children generally required to sustain the population from generation to generation (more than two because some die in childhood and slightly more boys than girls are born). Another 3.5 percent said "one" child was ideal or "zero" children. Other answers (three or more) would contribute to population growth. The second column of figures looks at how many children the respondent has actually had, considering just people 45 years of age or older, who have probably completed their families.

The top portion of the table reveals that Protestants, Catholics, and Jews tend to want more children than do non-religious people (who say their religion is "none"). The second column of figures confirms that Protestants and Catholics tend to have more children than the non-religious. But Jews tend to have even fewer children than the non-religious, and apparently fewer than they consider ideal. In the United States, this probably reflects a high degree of secularization among those who identify themselves as ethnically Jewish. The bottom of the table shows that people who attend religious services more often than once a week tend to favor bigger families than those who never attend.

Another way of evaluating how religion shapes fertility is to compare across nations. In the late 1990s, a team led by political scientist Ronald Inglehart administered the World Values Survey to citizens of 23 nations, asking how often respondents attended religious services. In 12 of these nations, less than a third of the population attends religious services at least every month: Russia, Sweden, Finland, Japan, Norway, Belarus, Bulgaria, Latvia, Germany, Switzerland, Australia, South Korea. Data from the United Nations show that on average in these 12 low-attendance nations, a woman will have only 1.4 children, far lower than the average 2.1 required to sustain the population.

In six other nations, more than half the population attends religious services at least monthly: Brazil, India, United States, Mexico, South Africa, Nigeria. The average woman in these nations will have 3.2 children, more than twice as high a rate. Thus, secularized nations, many of which are in Europe, seem destined to shrink in population, while more religious nations continue to grow. The statistical correlation between religion and fertility for all 23 nations is very high (0.83 out of a possible 1.00).

United Nations estimates predict that 19 nations of the world will each lose more than a million in population by the year 2050: Russia (loss of 41 million people), Ukraine (20 million), Japan (18), Italy (15), Germany (11), Spain (9), Poland (5), Romania (4), Bulgaria (3), Hungary (2), Georgia (2), Belarus (2), Czech Republic (2), Austria (2), Greece (2), Switzerland (2), Yugoslavia (2), Sweden (1), and Portugal (1 million). The United States has resisted the trend toward secularism experienced by Europe and Japan, and its population has not begun to shrink.

Meanwhile, many other societies continue to grow. The UN report notes that half the world annual population growth occurs in just six nations: India (21 percent of the annual growth), China (12 percent), Pakistan (5), Nigeria (4), Bangladesh (4), and Indonesia (3). All of these except China have the reputation of being religious. Because it has the largest population, China adds a substantial number of people each year, despite having a birth rate far lower than those of the other five countries.

Conclusion

About two-thirds of the way into the twentieth century, a consensus arose among educated people that it was vital to limit population growth. At the dawn of the twenty-first century, there is good reason to reexamine the assumptions of this orthodoxy. In many rich nations, fertility has already dropped far below the replacement level, and as a group (including the relatively fertile United States) the prosperous nations have essentially achieved zero population growth and are poised on the edge of demographic collapse. However, the poorer nations, which may also be described as developing countries or traditional societies, are experiencing population explosion.

Extreme disparities in fertility across societies would seem to be a prescription for war and other forms of conflict. Fertility is affected by secularization as well as by religious revival and innovation. Perhaps revival in the rich nations and secularization in the poor ones will achieve a peaceful balance. Perhaps innovation will create powerful new religions with unique orientations toward fertility.

Ideally, we need a new sensitivity to the human role in nature that will adjust the fertility rate so that population neither explodes nor collapses. Existing social-scientific data, such as from major surveys and government censuses, are not detailed enough to let us measure the birth rates of people who are involved in the various wings of the movement to reunite religion and nature. This is a question of the utmost importance, and new research to answer it would be extremely valuable. The future of humanity and the Earth's living systems are literally in the balance.

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Findhorn Foundation/Community (Scotland)

Founded by Eileen and Peter Caddy and Dorothy Maclean in 1962, the Findhorn Foundation is an international spiritual community of approximately 150. Located in northeast Scotland, the Foundation is near the fishing village of Findhorn and Kinloss Royal Air Force Base. Cluny Hill College, the Foundation's second "campus," is in the town of Forres.

The New Findhorn Association (NFA), of which the Foundation is one group member, comprises what is loosely called the wider community. Membership in the NFA includes like-minded groups and individuals within a fifty-mile radius. Some NFA groups support green initiatives (the Eco-Village Project, "Trees for Life," etc.).

Esponsing no formal creed, the Findhorn Foundation today recognizes the essential truths of all religions and spiritual teachings. Fourteen thousand people visit the Findhorn Community per year. Predominating interests at Findhorn since its founding have included: traditional and non-traditional forms of meditation, positive thinking, healing, metaphysics, mediumistic contact, and psychological "growth" activities. Dubbed "the grandmother of the New Age" by the media, the Foundation distances itself from that distinction today. At odds with certain occult ritualizing aspects of the New Age Movement – "Atlantean crystals," for example – the Foundation prefers "sensible" techniques of spiritual transformation.

A term increasingly used by British religious studies scholars to describe the eclectic, experimental milieu of groups like Findhorn is "alternative spirituality." Religious studies researchers Steven Sutcliffe and Marion Bowman believe experientially friendly folklore methodologies may prove more successful than traditionalist ones in the area of alternative spirituality. Challenging the notion of

Dorothy Maclean (1920–)

Raised and educated in southern Ontario (Canada), Dorothy Maclean was recruited into the British Secret Intelligence Service after completing University. After working in New York, Panama, and several locations in South America she was posted to London in 1943. During this time she encountered the Sufi movement and throughout the 1940s and early 1950s studied various spiritual traditions – orthodox and otherwise. During a time of personal crisis, she experienced what she refers to as “an inner experience of knowing God.” Shortly thereafter, a repetitive prompting to “stop, listen, write” led to regular periods of meditation and writing.

Her book *To Hear the Angels Sing* describes her experiences of listening to, and then writing out, what she believes were direct communications from God. She also recounted the events that led to the creation of the Findhorn Foundation Community in northern Scotland. There Maclean experienced what she refers to as “an inner connection with the creative intelligence behind nature,” an intelligence she later named the “Devic/Angelic presence.” The practice of “listening and writing” continued, the contents providing practical instructions concerning the gardens and offering perspectives on the relationships between human and non-human realms. This connection was a significant factor in creating the extraordinarily lush and productive gardens, which generated much of the early interest in the community. Two tenants lie at the heart of what Ms. Maclean writes and teaches. Those tenets are 1) personal and direct contact with God is possible for everyone/anyone and 2) nature has an innate intelligence and a willingness to work directly with humanity to address the ecological issues facing the planet.

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scholarly “objectivity,” they argue that skepticism directed at belief stories of contemporary spiritual groups does not constitute a value-free stance, but instead may conceal strategies for securing privilege or prestige.

The miraculous story of large vegetables flourishing in poor soil made the Findhorn Community internationally famous in the 1960s. Intuitive messages received during meditation by founder Dorothy Maclean in 1963 suggested that the surprise success of the Caddy vegetable garden was due to the “co-creative activity” of devas (Theosophical Sanskrit for “shining ones”) and the Landscape Angel – each answerable to God or “the Beloved.” Invited to participate in an experiment of “co-cooperation with Nature,” Findhorn’s three founders agreed to follow practical and spiritual instructions given in the messages. At issue was the growing degradation of the planet. Results exceeded expectation. Drawn to Scotland by rumors of a fabulous garden thriving next to a garbage dump, British Soil Association consultant Professor Lindsay Robb reported: “. . . the bloom of the plants in this garden at midwinter on land which is almost barren powdery sand cannot be explained by the moderate dressings of compost . . . There are other factors, and they are vital ones” (in Hawken 1975: 170).

British adult education pioneer Sir George Trevelyan concluded similarly. In a 1968 letter to Peter Caddy, he stated that “Factor X,” the deva/elemental conscious contact, was “the most tremendous step forward, indeed the step which mankind must take” (Caddy 1996: 281).

Some Foundation and community members still engage in the original “work of Findhorn.” Through meditation, they “feel into” contact with nonhuman species believed to “overlight” and inform the spiritual direction of the Foundation. Disinterested in intellectual evaluations of direct experience, most Foundation members do not label their inner experiences as examples of nature mysticism or animism. They prefer to call it “tuning in.”

The greening of Findhorn has been a gradual process. Some members of the community perceive Foundation ecological projects as a complementary expression or “natural outgrowth” of the founders’ early spiritual commitment to God and nature. Some of these eco-initiatives include conferences, workshops on permaculture design, deep ecology (on one occasion taught by Australian deep ecology advocate John Seed), and a month-long eco-village training program offered in partnership with GEN-Europe and the Global Eco-village Network.

Begun in 1981 at Findhorn by John Talbott, the Eco-Village Project is a constantly evolving model and a synthesis of current thinking on sustainable human habitats. United by a common goal, an eco-village is based on shared ecological, social and/or spiritual values. Working with the principle of not taking more than one gives back, Talbott believes eco-villages are potentially

sustainable. The Findhorn Foundation is a founder member of the Global Eco-Village Network (GEN). In 1998, the Foundation's Eco-Village Project received the "Best Practice" designation from the United Nations Center for Human Settlements (Habitat).

Although many in the community prefer to accentuate and model "the positive" in all things (sometimes suffering from "the tyranny" of its overemphasis), some acknowledge the planet's current ecological degradation and work to relieve it. Inspired by Dorothy Maclean's early experiences with "the intelligence of nature," former Foundation member Alan Watson Featherstone believes ecological restoration is a natural process. In 1985 he founded the Scottish conservation charity "Trees for Life." Since then the charity has planted over 420,000 native trees in the Highlands of Scotland. In 2001 Featherstone received the United Kingdom's Schumacher Award in recognition for his work "conserving and restoring degraded ecosystems."

The community's impact on international green organizations continues to grow – Perelandra, a nature research center founded on Findhorn principles in the United States is a notable example. Registered as a Charitable Trust in 1972, the Findhorn Foundation was granted association with the Department of Public Information of the United Nations in December 1997 and received associate-member non-governmental organization (NGO) status in 1999. Since then it has become increasingly involved with various UN environmental initiatives. Recognizing its "green contribution" to Scotland, the Scottish Tourist Board awarded the Findhorn Foundation its highest honor – the Gold Award – in 2001.

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- See also: Deep Ecology; Earth Mysteries; Esalen Institute; New Age; Schumacher, Ernest Friedrich; Scotland; Seed, John.

Fire

The Primal Worship of Fire

According to Peter Byrne, the essence of primal religion is nature mysticism. Natural places, beings and objects representing the four elements (Earth, air, water, and fire) have been the object of religious devotion by primal peoples since time immemorial, but the earliest of all the elements to become imbued with mystical power and religious meaning was fire. Indeed, fire worship may be the original religion, for the life-sustaining hearth fire provided early peoples with the physical space for developing language and culture; accordingly, fire served as the psychic source for developing rituals, ceremonies, and religions.

Homo sapiens became human beings with their knowledge, control and use of fire. Along with stones and bones, fire was an essential tool that enabled early peoples to migrate into previously uninhabitable regions, alter their environments, and form sustainable hunting and gathering societies. Fire played a critical role in the development of early agriculture outside of flood plains through its ability quickly to clear and fertilize land. Fire also played a role in hunting and led to the domestication of large animals through its ability to herd game and stimulate forage for grazers. Given the many beneficial uses, effects, and products of fire that were vital to human social life, it was entirely natural for fire to become a central element of early religious ceremonies celebrating life-forces. The more ancient the religion, the more prevalent the religious role of fire seems to have been.

The life-giving qualities of fire to transform matter into energy must have been god-like to early peoples, but unlike the other basic elements which exist in the natural environment ready for use, fire must first be discovered and then maintained to be of human usefulness. Creation myths abound in many cultures describing the primordial quest for fire: first, there were "dark ages" when people were without fire, but then, fire was delivered to people, usually through a Promethean act of stealing it from other beings, spirits or gods. As Stephen Pyne observes, the Judeo-Christian myth of genesis has humankind gaining the knowledge of good and evil through tasting the forbidden fruit, but in the myths of many nature-based cultures that knowledge was gained by stealing the forbidden flame. Thus, fire has this peculiar quality of being a natural element that is part of our cultural heritage, but it is not considered part of our natural heritage. Instead, even long after people discovered how intentionally to kindle flame, the ultimate source of fire's creative and destructive powers has often been attributed to some sense of the divine.

Ceremonial Fires

Beyond the primordial worship of fire, the use of fire for various sacred rituals and ceremonies is ubiquitous to the point of becoming almost a universal religious practice. These diverse ceremonies and their associated religious institutions can be organized under the categories of the sacred altar fire, perpetual fire, new fire, and sacrificial fire. Sacred altar fires were core elements of some of the earliest monotheistic religions. For example, the ancient Egyptian worship of the sun god, Ra, kindled a sacred fire every day to reenact the rising of the sun, and the fire on the altar represented the omnipotent eye of Ra. Daily ritual lighting of sacred altar fires also played a central role in Zoroastrianism, in which fire was considered to be a visible sign of god's presence, and a symbol of Truth and Right Order in the cosmos. Among peasants in northern Siberia, all huts included a hearth in one corner for domestic purposes, and in the opposite corner a sacred altar in which the fire provided protection from evil spirits. Over the millennia, fire has played a predominant if not central role in sacred altars for a multitude of religions.

The perpetual fire was another religious institution with ancient roots. The difficulty of kindling fire for early peoples led to the institutionalization of the perpetual fire, and various rites, ceremonies, and temples were constructed around it. The occupation of fire-keeper was one of the earliest specializations in human society, and evolved into an official state function most commonly practiced by priests. The best-known example is the altar of Vesta, the Roman goddess of the hearth, where a perpetual fire was tended by the famous Vestal Virgins whose purity of the flesh symbolized the purity of the flames. The uniquely designed shrine of Vesta was the oldest Roman temple, and its perpetual fire supplied the sacred flames for lighting other temples' altars. The Olympic Games fire ceremony is a modern-day secular expression of the perpetual fire, vestigial in its essence.

The perpetual fire was sometimes extinguished in order to kindle the new fire, a ritual intended to keep the energy of fire fresh and pure, and to renew the human spirit. For example, every year at Beltane (May 1) the Druids extinguished all fires in their villages, and then lit two new sacred bonfires. Numerous spells were canted, and then their cattle were driven between the two fires in order to purify and protect them from disease. Priests would then take coals and kindle hearth fires in a ritual symbolizing new life. New fires kindled for sustaining new life were especially vital religious ceremonies for northern coastal California Indians, such as the Karuk, Yurok, and Hupa peoples. In the spring and autumn, when the salmon were running and the acorns were ripening, new fires would be lit as part of a rite that the Karuk called the "world renewal ceremony." The new fire symbolized the regenerative powers of natural fire, and, mirroring the ecological func-

tion of renewing the soil, it served a religious purpose in renewing the soul.

The sacrificial fire has deep roots in a number of religions, too, with fire being the prime force used to consume and deliver offerings to the divine. The behavior of the flames or smoke is often believed to be a sign of the divine's reaction to the burned offerings presented by believers. Gruesome examples of sacrificial fires include ancient Israelites burning their children as sacrifices to the god, Moloch. Human fire sacrifices were also practiced in ancient times by the Druids, Peruvians, and in more recent times by Euro-American Christians as part of the witch craze. The most well-known contemporary religious practice is the Hindu funeral pyre in which the body is cremated as the final sacrifice. The consumption of flesh liberates the spirit and carries it to the divine.

Vestiges of the ancient ceremonial use of fire live on in religious rituals today, such as the Jewish practice of kindling the Sabbath candles and the Chanukah Menorah, and the Buddhist practice of lighting incense. However, the votive candle and incense stick provide a very different human experience than the altar fire. Whereas a candle offers a safe, stable flame, a bonfire continuously changes in a spontaneous, unpredictable, animated dance of forms. It commands attention, and must be carefully attended with proper devotion or else it will die out. Thus, altar fires created sacred ceremonial space with a sense of great drama and potential danger, further embellished by priestly rituals. Either as a ceremonial tool or the object of worship itself, ancient fire-tenders always treated sacred altar fires with great respect and reverence.

Fire as Divine Manifestation

From Zoroastrianism to Judaism and Christianity, fire has often been deemed as a divine manifestation, symbolizing the direct presence if not virtual face of the deity. For example, the Zoroastrian deity, Ahura Mazda, resides in endless light and created fire; the sacred altar fires of the Yasna are regarded as the manifestation on Earth of this divine celestial light. Zoroastrian priests refer to their altar fires as "Avestan" or the son of God. Throughout the Hebrew Bible and New Testament, too, God and Jesus are often depicted with fiery imagery. Perhaps the most famous example is when God appeared before Moses "in the flame of fire in the midst of a bush" atop Mount Sinai, provoking both awe of God and fear in Moses. In the Psalms, "the voice of the Lord flashes forth flames of fire." Jesus is portrayed with a face "like the sun shining in full splendor" with eyes "like a flame of fire" (Apocalypse 2 and 3). The close presence of the divine can be both a gratifying and terrifying thing to experience. Fire whose heat and light both attracts and repels was a natural symbol to use to graphically depict the presence and experience of the deity.

The Fire of Heaven and Hell

In Judaism and Christianity fire is alternately associated with both heaven and hell. For example, Elijah is taken up to heaven in a chariot of fire. Daniel sees God in heaven sitting upon a throne of fiery flames, with streams of fire coming forth. In the Apocalypse, the blessed are seen in heaven as a sea of glass shot through with fire. On the other hand, Mathew associates fire with hell or “hell-fire.” Sinners condemned to hell are cast into eternal flames of many sorts: they are immersed in rivers of fire, boiled in cauldrons of fire, hung by flaming chains, pummeled with fiery stones, and officials who abused their power are forced to sit upon fiery thrones. The vision of hell as an abyss of fire has ancient origins in Gehinnom, a valley near Jerusalem in which Israelites burned their children as sacrifices to the god, Moloch, and garbage was burned by a perpetual fire. The specter of hell-fire was vividly reinforced by burning heretics at the stake during the Christian inquisition. These public executions by fire, often employing other gruesome techniques of torture sanctified by the Church, helped condition a dread fear of hell among the common people. As a precursor to hell, the souls of sinners are believed to burn from the torment of knowing they are living apart from God.

Fire as Purgatory and Apocalypse

In the Western tradition, fire is also employed as an instrument of God’s angry judgment and punishing wrath, and has come to depict visions of purgatory and the apocalypse. For example, Isaiah (66:15–16) announces to the people that,

For behold, the Lord will come with fire, and with his chariots like a whirlwind, to render his anger with fury, and his rebuke with flames of fire. For by fire and by his sword will the Lord plead with all flesh.

The legendary example of Sodom and Gomorrah, destroyed for the sinfulness of their peoples when God rained down brimstone and fire, had origins in the age-old use of fire as a weapon of war and revenge, in which the cities of the vanquished were routinely razed by fire. Fiery punishments also play a role in visions of the Apocalypse where the world ends in a vast conflagration.

The association of fire with purgatory is also prevalent, although purgatory is alternately viewed as a form of both punishment and purification. On the one hand, purgatory is seen as a meeting with the glorified Christ whose eyes are fire, penetrating, searching, and judging the soul for all sin. Woe be to the wicked and sinful who are scorched by the Lord’s fiery gaze, for purgatory as punishment condemns them to eternal damnation in the fires of hell. An alternate view of purgatory sees it as purification and spiritual maturation, a burning away of all egotistical

attachments and a cleansing of all past sins as a means of preparing the spirit to be fit to dwell in the eternal light of God’s presence. Given the power of flame to consume matter and convert it into energy, it serves as an apt metaphor to describe the process of purgatory.

Fire and Religion

Among contemporary Earth-based spiritual practitioners, such as Wiccans, Goddess-worshippers, neo-pagans, and spiritual Greens, sacred altar fires and bonfires play a central role in many religious rituals and ceremonies, particularly in outdoor gatherings. Starhawk, for example, has popularized “The Fire Song” as part of a repertoire of neo-pagan rituals for use during nonviolent civil disobedience actions protesting nuclear power and environmental destruction. As well, in the midst of a renaissance of new scientific research and discoveries emerging in the field of fire ecology, the U.S. environmental movement has developed a new-found respect for the role of wildland fire in restoring and sustaining forest and grassland ecosystems. Using assumptions that harken back to physico-theology and the belief that there is a divine design to the Earth, ecologists now consider fire to be a vital, dynamic disturbance process maintaining the diversity and sustainability of healthy forest ecosystems. Thus, against the view of industrial forestry that wildfire is an external agent of tree death and destruction, ecoforestry recognizes wildland fire as an intrinsic element of forest life and regeneration. This is exemplified by the slogan, “Ancient Forests are Born in Fire!”, which is increasingly voiced by eco-activists who articulate both spiritual and scientific discourses in their adulation of wildland fires right alongside their labeling of post-fire “salvage” logging as desecrating acts.

No discussion of religion and nature would be complete without an analysis of the important role of fire. As one of the oldest natural objects of ritual and worship, fire has played a fundamental if not foundational role in religions across the globe. The religious views of primal peoples and prehistoric cultures evolved around sacred altar fires. Embers from ancient rituals devoted to the perpetual fire, new fire, and sacrificial fire still glow in religious ceremonies today. Fiery metaphors and ceremonial practices help give vivid expression and somatic experience to religious beliefs. The creative and destructive powers of fire have inspired Western religious visions of both heaven and hell, and myths about the beginning and ending of the world. Although at each and every instant the flames of any given fire are a unique expression of spontaneous combustion, at the same time the flames offer a universal, transcendent form that has made fire an enduring if not eternal source of religious inspiration and meaning throughout the ages.

Timothy Ingalsbee

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- See also: Buddhism (various); Christianity (various); Druids and Druidry; Judaism; Paganism – Contemporary; Wicca; Zoroastrianism.

Fishers

Water is a potent symbol that may trigger nearly universal associations to life and death. All people need sweet water to quench their thirst. Plants need water to grow, but too much water and violent floods threaten to disturb many lifeways, even to extinction.

Fishermen frequent the seas, rivers and lakes to catch fish and marine mammals and to gather various other food objects. Anthropologists view the nature of fishing activities to be similar to hunting and gathering on land. With just a few exceptions, for instance among the seanomads or Bajau People in Malaysia, Indonesia and the Philippines, fishing is generally regarded as a typically male occupation. There are often culturally elaborated

restrictions to prohibit women from moving freely on board or to enter fishing vessels, even to touch fishing equipment. Women are thus regarded as matter out of place in many fishing contexts. Their presence is at times regarded as polluting and potentially spoiling to the efficiency of fishing boats and gear. Generally women may be seen to threaten the fishermen's luck. This is still the case, although the assumptions connected to the negative impact of mature women on many fishing activities are somewhat reduced in North Atlantic fishing communities. Thus some few women are allowed as crew, even skippers, for instance on small Norwegian fishing vessels (*shark*).

Whereas many mysteries of fertility and growth are more or less controlled by the science and technology of modern agriculture, this is not to the same extent the case with fish stock management. Whether agriculture or fishing is in focus, the need for luck in order to succeed is not yet under rational control, and may never be. It is repeatedly documented that luck and luck management has been and still is of central concern for hunters and fishermen across cultures. In spite of modern navigation and fish locating instruments, the success of fishermen, now as before, is regarded by the fishermen themselves and others to depend on their luck.

Supernatural beliefs and reason in the pursuit of fish

Generally speaking, there is a significant difference in the strategies that it is possible to apply in pursuit of land animals that leave tracks and other signs of activity, which hunters can observe, and the fish that leave few observable traces in the water they inhabit. The seas, rivers and lakes are more or less unknown worlds to humans. These worlds are fascinating, unreachable and mysterious. The fish sometimes abound, at other times they disappear or move to unknown depths or locations. To locate the prey, fishermen are helped by their experience, but at times even know-how is not enough to eradicate uncertainties about fish behavior and their whereabouts. It is a general tendency that fishermen, regardless of where they live, tend to compensate for lack of fish prediction with magical spells and rituals. Further, firm beliefs in supernatural intervention causing luck or misfortune, adherence to taboos, and offerings to cultural images of the rulers of the seas and waters are widespread among fishermen and in their communities. Such beliefs are generally operative regardless of the particular religious faith of the fishers.

The maritime activities of the Trobriand Islanders in Melanesia served as empirical inspiration when Bronislaw Malinowski developed his seminal analysis about the social function of ritual and magic. Malinowski observed that when the Trobrianders fished in their home lagoon, where fish were abundant and easily gathered without risk to the fishermen, use of magic was nearly absent.

However, when the islanders fished off the northern shore their success to obtain certain species was, according to them, entirely dependent upon strict observance of numerous taboos and selected rituals. Off the northern shore, the outcome of any fishing expedition was far from obvious and elements of chance and risk were prominent in the fishing activities. This observation contributed to Malinowski's classic statement in which he declared that the rituals surrounding fishing and sailing have the primary function of relieving anxiety and uncertainty. This interpretation has dominated anthropological studies of ritual in maritime settings. For instance, the documented persistence of a considerable amount of magic and ritual activities, also in technologically sophisticated fisheries, has been related to how fishing remains a risky and uncertain economic activity.

Small-scale fishers in Sulawesi, Indonesia firmly believe that all success in life, including fishing activities, is based on combinations of skill, luck, industriousness and cunning. However, no one prospers solely by their own efforts. Everybody needs help or assistance from other people and/or from spirits. Thus when some fishermen make exceptionally good catches or do well for an extended period of time, this is interpreted as a sign of supernatural support. When fish disappear, catches are bad, or accidents during fishing take place, this is usually understood as reproaches or punishments from spirits for neglecting to distribute the right offerings, breaking taboos, or trespassing a spirit-protected location.

That prayers and Christian symbols, such as holy water, crucifixes, and Bibles, are thought to influence the catch and safety among contemporary European, North American and other Protestant and Catholic fishers is well documented. Many Norwegian fishermen say they place their faith in the hands of God whose will is believed to determine the fishermen's safety, catch, and spiritual well-being. Pious fishermen accompanied by close family members always go to church before they set out for an extended expedition. On their return the church is visited again to praise the Lord.

Ethnologists and anthropologists have been more concerned with tracing ancient and pre-Christian influences on the thoughts governing modern fishermen than investigating the impact of contemporary religious beliefs. The connections between faith and fishing in any of the world religions should be a topic for future research.

Resource management, conservation, and fishing

It is often argued that fishermen, hunters and gatherers, and other people who live off the land or sea are resource conscious. This is taken to mean that these people know they must take active measures to secure their own livelihoods and those of the next generation. Some religions are taken to advocate ideologies of community sharing and sustained resource management. For

example, it may be argued that the Protestant spirit, confirmed by the church, aims at a rational management of nature. Thus an unlimited exploitation of the sea and its resources is deemed as morally unjustifiable greed. There is an inherent plea for the preservation of the natural environment to the benefit of current and future generations. However, it is well known that it is far from the case that behavior coheres with expressed ideologies.

It has also been pointed out that religious ideas and beliefs sometimes have unrecognized consequences. These consequences may serve sustainable resource harvest, for instance by protecting spawning areas for certain fish. James McGoodwin observed, for example, that this can happen when fishing certain seascapes and locations is enjoined by taboos, because they belong to spirits. This was the case at Bonerate in Indonesia, where the islanders refused to fish or collect mollusks along an extensive part of the fringe reef because the location was inhabited by aggressive spirits, some in the shape of white sharks. Near Timpaus Island, also in Indonesia, there were coral reefs located at depths of approximately fifty meters that never were fished. In the old days many fishermen had been lost in these waters and during rough weather sailors made detours to avoid the locations. These reefs, it was believed, were inhabited by a malicious sea devil (*hantu laut*) by the name of Molokoimbu. Another consequence for fishing from religion on Timpaus Island was observed when foreign fishermen arrived and made good catches at the locations where Molokoimbu previously ruled. Muslim leaders told Timpaus fishermen that they should not pay attention to ancient spirit beliefs. Then the bravest fishermen began to harvest the reefs and important fry and fish refuges were lost.

Fishermen, like most other people, tend to adjust their view on the environment and the robustness of nature in accordance to their own activities in nature. According to Mary Douglas, people live by prototypical myths about nature that contribute to legitimize their use of and value orientation toward nature. One such myth would be that the sea is robust, but only within limits. Many fishermen around the world share this view. In essence the attitude may serve to free protagonists from responsibility for stock depletions. Their own activities are not threatening the environment, but those of others do, it is often believed. Thus small-scale coastal fishermen blame the large trawlers for reduced stocks of fish. However, some owners of trawlers blame the coastal fishers for damage because they fish at the spawning grounds of many species.

At the micro level, Indonesian fishermen who fish for domestic and local markets justify their own use of explosives. They say it is impossible for them to deplete fish resources. But they are worried about the behavior of other fishermen, especially foreign ones, who are operating from larger vessels when they utilize poison and

bombs. The same local Indonesian fishermen (and many more) apply a different myth when it comes to shark fishing with long lines: the myth of the sea as unpredictable. The fishermen agree that large sharks have become rare where they used to abound. This is not because of overharvesting, but because the sharks have moved somewhere else, the fishermen say.

At the macro level, a myth about the sea as excessively robust seems to apply. Only such a myth can justify local and multinational companies massively polluting rivers, lakes and oceans with chemicals or radioactive materials.

Harald Beyer Broch

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- See also: Fly Fishing; Mongolian Buddhism and Taimen Conservation; Nile Perch; Traditional Ecological Knowledge; Water Spirits and Indigenous Ecological Management; Whales and Whaling.

Fisk, Pliny (1944–)

Pliny Fisk III's work in appropriate technology, systems design and sustainability has earned him international recognition and the title "Guru of Green." After graduating from the University of Pennsylvania with Master's degrees

in Architecture (1970) and Landscape Architecture (1971), and teaching in the School of Architecture at the University of Texas, Fisk's interest in environmental issues prompted him to co-found the Center for Maximum Potential Building Systems, in Austin, Texas in 1975. His practical engagement with diverse environmental issues had won him earlier the respect of R. Buckminster Fuller, who wrote to him that "your various research and development projects [are] lucid, intelligent, economic and in every way gratifying" (Fuller letter to Fisk, 1973).

Pliny Fisk's international work, which has brought him to forty states and six foreign nations, is based in the Center, a nonprofit organization engaged in research, education and demonstration projects for sustainable planning and design. Co-directed by Fisk's wife, Gail Vittori, the Center's work focuses on four areas: 1) *green architecture*; 2) ecologically balanced *land use planning*; 3) sustainable development *policy initiatives* for local, state, and federal agencies; and 4) tools and methodologies for *green development*. Fisk's projects have earned him such honors as the National Center for Appropriate Technology "Distinguished Appropriate Technology Award" for significant work in environmental protection, and the United Nations 1992 Earth Summit "Local Government Honours Programme Award," shared with the city of Austin, for developing a Green Builder Program and a "GREENRATING GUIDE" for energy, materials, water, wastewater, and solid waste for new residential and commercial construction in the Austin area.

Pliny Fisk's work links religion and nature. Around the globe, religious concerns about care for God's creation have become concretized in specific projects and programs as faith communities and environmental organizations – including the Center for Maximum Potential Building Systems – have collaborated to effect an integrated relationship between people and their regional ecosystems. Fisk sees a natural tie between religion and ecology:

Religion, in its ecumenical way of trying to bring people together on significant issues, could be the most powerful tool that we have to win the conceptual space/time race, the competition over which set of ideas will guide human life and activity in the future before nature's systems begin to fail because we lack an understanding of her needs and thus our own.

The connection that religion has with most humans on Earth is a significant tool for the future. If an environmental ethic could be folded into religious understandings, religion could become *the* significant tool in the conceptual space/time race, since it can gather and incorporate most of the other

tools used to try to restore ecological balance. If religion does not help the planet and its web of life to recover from current environmental crises, then it is possible that in the future humans would not be included among God's surviving creatures.

In the biblical story of the Garden of Eden, "God's garden" is a place with an abundance of resources which are appreciated and used by humans. It would be wonderful if that garden, representing people in past eras living in harmony with nature, could be conceptually restored and concretely realized. People at times are forced to exist on the worst land, in the worst conditions, with the worst water. But sometimes these places of total degradation in the present were once fertile garden areas in the past. People might conceptualize a relationship between past and future gardens, and consider how human behavior might be transformed such that the gardens would exist again and continue into the future (Fisk interviews with Hart, 9 March 2002 and 11 March 2002).

The Center for Maximum Potential Building Systems has numerous programs, and urban and rural projects incorporating them, that are models for responsible linkages of religion and nature and could be incorporated into or adapted to varying natural and social contexts. These include Life Cycle Environmental Design and Balancing of Energy, Water, Waste and Material Systems (Nursing & Biomedical Sciences Center, the University of Texas, Houston); establishing minimum requirements for environmental-economic conditions as the basis for the greening of public facilities using BaselineGreen, a software program CMPBS developed with Environmental Protection Agency (EPA) funding that has data on more than 12 million businesses and their products, and uses Geographic Information Systems (GIS) software to link data and digital maps to analyze the impacts of products from source to sink, region by region, throughout the U.S. (City of Seattle Government Center); revision of state Architecture and Engineering guidelines to include recycled content and "green" building material specifications, sustainable architectural practices, energy efficiency, construction site and office recycling systems, and procedures to ensure indoor air quality (State of Texas); and development of an Ecological Footprint game that enables local communities to analyze the extent of their resource use impacts on their local land base.

John Hart

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See also: Architecture; Fuller, Buckminster.

P Floresta

Floresta is an interdenominational Christian agency, based in California, working with local partners in developing countries to reverse deforestation and poverty by transforming the lives of the rural poor. Tom Woodard, an American businessman, founded Floresta in 1984 after working for a Christian relief agency in the Dominican Republic. Woodard, with his Dominican partners, recognized that deforestation was both a root cause of rural poverty and one of its consequences, creating a vicious cycle.

Motivated by hunger and short-term economic necessity, slash-and-burn farmers were cutting trees to clear agricultural land, or to sell as fuel wood. This resulted in catastrophic soil erosion and long-term disaster for these same farmers, who depended on the land for their livelihood. Farmers frequently knew their behavior was destructive, but without access to credit or other alternatives, they were helpless to change.

One of Floresta's first projects was Los Arbolitos, a large-scale, for-profit tree nursery, with a production capacity of five million seedlings annually, which continues to provide high-quality tree seedlings and jobs for rural Dominicans.

In 1987, Floresta began its Agroforestry Revolving Loan Fund (ARLF) to provide loans, training, and marketing services for poor farmers who wished to start tree-related agroforestry businesses, utilizing fast-growing trees. In 1996 Floresta opened programs with local partners in the state of Oaxaca in Mexico and in Haiti, offering

assistance in community forestry as well as credit for agriculture and small businesses which would help to diversify the rural economy.

Since 1997, Floresta has developed a more holistic approach to its work, recognizing that there are many factors that contribute to deforestation and poverty. In combating deforestation, Floresta uses four principal tools:

1) Community Development – Floresta works to empower the local communities, encouraging them to take responsibility for their own problems and build confidence in their own ability to change their situation. This provides long-term sustainability.

2) Sustainable Agriculture and Forestry – Floresta assists communities in sustainable agriculture, sustainable forest management and reforestation, helping farmers to move away from slash-and-burn agriculture.

3) Microcredit – Floresta provides economic alternatives to destructive forest practices. Loans may be used to implement new agricultural techniques or to diversify fuelwood-based economies.

4) Discipleship – To interested participants, Floresta offers Christian discipleship programs, sharing Christ's love and developing a biblically-based ethic of stewardship for God's creation.

As Floresta has grown, an essentially pragmatic concern for the health of forest ecosystems has developed into a better understanding of the role of stewardship and the importance of restored relationships between humankind and creation in God's ultimate plan.

Floresta has also found that the rural poor have a tremendous amount to offer in solving their own problems. When provided with economic opportunity and agricultural alternatives, subsistence farmers can prosper, live sustainably and contribute to the regeneration of their environment. As of 2003, farmers working with Floresta had planted approximately two million trees, received nearly 2000 small business loans and established ongoing community-based reforestation projects in over seventy villages in Haiti, Mexico and the Dominican Republic.

Scott C. Sabin

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See also: Biblical Foundations for Christian Stewardship; Stewardship.

Fly Fishing

In the autobiographical story, turned 1992 Academy Award-winning motion picture, *A River Runs Through It*, Norman Maclean's family centered their lives around two sacred practices: religion and fly fishing:

In our family, there was no clear line between fly fishing and religion. We lived at the junction of great trout rivers in western Montana, and our father was a Presbyterian minister and a fly fisherman who tied his own flies and taught others. He told us about Christ's disciples being fisherman, and we were left to assume, as my brother and I did, that all first-class fishermen on the Sea of Galilee were fly fisherman and that John, the favorite, was a dry-fly fisherman (Maclean 1967: 1).

For many fly fishers, fly fishing itself is a religious practice. Just as any religious person approaches his/her respective tradition, the devout fly fisher approaches fly fishing with the same discipline and respect. It is not unusual to hear people speaking of fly fishing in ways that invoke the religious dimensions of life, as they commonly deploy terms like religious or spiritual, the sacred or divine, ritual, pilgrimage, meditation, priests, community, or notions like the sanctuary of religious space, to describe the experience.

As I reflect more deeply on the fish's history as a mythic symbol and religious icon, I begin to wonder if having fish shapes around me is a way to stay in touch with the ideas of Jesus without having to go near people who do business in his name (Duncan 2001: 14).

Reflecting on the relationship of his fishing passion to his Christian heritage, Oregon-born author and fly fisher David James Duncan turns to the words of Howell Raines in *Fly Fishing Through a Midlife Crisis*. These words recall the mysterious and divine symbolism surrounding the fish itself, referencing Jesus' miraculous act of turning two loaves of bread and two fishes into enough food to feed a large crowd in Matthew 14:17, Luke 9:13, and John 6:9, which made the fish into a divine symbol of God's provisions for humanity in the natural world. While many fly fishers are not Christian, fly fishing spirituality resonates with the sacredness of the fish in the Christian tradition.

In the quest for experience with the divine, religious persons often embark on a journey or pilgrimage. For the fly fisher this is the journey to a new fishing spot, or an old favorite. The American fly fishing writer Nick Lyons, for example, has written in a way that views the pilgrimage to rivers, streams, and their sources as a quest for life's deeper meanings.

A lot of people have been tracking rivers to their sources lately; it's surely a desire to find some further meaning in all this sloshing around in streams. People seem to be saying, "There must be more to it than catching of fish – and perhaps those meanings are to be found in the headwaters" (Lyons 1992: 139).

These words suggest that the pursuit of fish is not the only reason for fishing – that journey or pilgrimage itself can be as powerful an experience as the catching of fish. Indeed, for some fishers, fly fishing facilitates spiritual perception; it is a way to apprehend one's connections with something greater than one's self. As David James Duncan put it,

When the trout are happening, I can kneel on merciless stones *happily*, for hours and hours; I can stare into blinding glare, withstand heat or cold, be chased by bears, cow moose with calves, or redder necks than my own, and still rush gratefully back for more. I don't understand the *why* of all this. I don't try to understand. I just pull on my waders and merge via a spirituality so thrashing, splashing, cursing, casting, and Earth-engaged it doesn't feel spiritual at all: it just feeds the spirit (Duncan 2002: 303).

There is something about being out on a stream in the mountains or in the plains that draws some people to pursue experiences in such places with great passion, and I think it has something to do with the desire to directly experience and engage the Earth. The solitude and sounds of a stream, the careful turning over of rocks so as to see what bugs the fish are eating, and many other aspects of fly fishing, easily, indeed naturally, seem to foster a sense of connection with and belonging to nature.

Such feelings are not uncommon in nature-oriented religion. They are emphasized, for example, in movements such as deep ecology, as well as in a wide variety of nature-related activities not always recognized as "religious." Religion scholar Bron Taylor, for example, argues that Earth- and nature-based spiritualities generally involve experiences and perceptions of connection and belonging to a living, sacred Earth. Quoting Alan Drengson, he asserts that people and groups often turn to nature "for wisdom, for strength, for maturation, for spiritual comradeship, and for lessons in devotion and humility," creating thereby a spirituality or religious practice based upon "being-in-nature" (in Taylor 2001: 181).

Fly fishing is an example of such spirituality, a form of Earth engagement that takes place through a meditative, ritual practice. The sounds of the stream and the rhythmic casting facilitate the meditative experience of the fly

fisher. As Norman Maclean put it, fly fishing "is an art that is performed on a four-count rhythm between ten and two o'clock" (Maclean 1967: 2–3). Maclean's point is, in part, that like any other form of meditation, fly casting requires discipline and practice. "Fly fishing teaches patience and attentiveness in the most literal way imaginable: without both, you get skunked" (Duncan 2002: 302).

Like other forms of religious and spiritual practice, there is an important material aspect to fly fishing – the "gear" matters. Flies, reels, waders, vests, and ideally, an old, worn oil-cloth raincoat affect the fly fisher sensually – they become more than tools of the art. The sensuality of the experience, in a way, its earthiness, is found in the aroma wafting upward upon the opening of the storage tube to a bamboo cane rod, or in the packing and unpacking of the coat and clothes, as one's memory recalls moments on the stream in past trips. These smells function similarly to the use of incense in ritual and meditation: they focus the mind on the sacred.

Fly fishers often advise one another, especially novices, to seek out spiritual guides to lead them properly, even reverently, into the practice. Indeed, the best fly fishing guides are ritual specialists who are eagerly sought when learning the art of pilgrimaging to unknown waters. Fly fishers generally believe such guides hold secret knowledge of specific streams and their inhabitants. But beyond this, they are figures with whom they can identify, sharing sacred experiences, and reflecting on life. And this is not only of interest to the one who has sought out the guide. Once on the San Juan River in New Mexico, a guide told me how nice it is to guide someone who already knows the river and how to fish, for "this leaves room for contemplating and discussing life, philosophy, and religion."

Such activity with guides and other practitioners fosters community in a way similar to most religions. Attending the fly fishing store and patronizing guide- and other fishing-focused businesses provides concrete material support for the religious community, resembling the providing financial support congregants give to a local church or shrine. Local communities arise surrounding the practice, from hanging out at the local fly shop or bar to sharing information or stories of the day. The local fly-tying group is comparable to a Bible study, meeting regularly to sit around, tie flies, and discuss fishing and life's deeper mysteries.

American author Tom McGuane writes, "If you fish, there is an implied responsibility to care for the environment" (Lyons 1998: 120). Like all religions, there are ethical implications and dimensions to fly fishing, and specific groups have been invented as ethical expressions of them. Trout Unlimited, for example, is one of the most effective conservation and education groups in North America. Their mission is to conserve, protect, and restore North America's trout and salmon fisheries and their

watersheds. As stated in their literature, Trout Unlimited accomplishes this mission on local, state and national levels with an extensive and dedicated volunteer network. Trout Unlimited's national office, based just outside of Washington, D.C., and its regional offices employ professionals who testify before Congress, publish a quarterly magazine, intervene in federal legal proceedings, and work with the organization's 125,000 volunteers in 500 chapters nationwide to keep them active and involved in conservation issues. Groups like Trout Unlimited seek to educate the wider public on conservation and environmental issues at least in part so that generations to come can continue to have the spiritual experiences and perceptions that accompany the practice of fly fishing.

It may be that I can see the religious dimensions of the practice of fly fishing because it has long been my own practice. Like Maclean, I was taught at a very young age the importance of patience, discipline, and respect that are necessary to be a successful fly fisher. My father had me stand in the long driveway beside our house to practice my cast before we could make the journey to a stream in New Mexico or Colorado. He would tell me to be patient and feel the cast, allowing the rod to be an extension of my arm and self. On journeys to various waters he would tell me stories from his many years fly fishing, teaching me lessons on how to read the structure of a stretch of water and all its surroundings, how to approach rivers, and most importantly to fish with quiet calm, subtlety, and respect.

I was also taught, and have learned more deeply with each year of fishing, that it is not the catching of fish that is the chief objective of the practice. My cousin once remarked, for example, that he realized that he had reached a special place in his fly fishing practice when he could walk away from rising fish without feeling a desire or pressure to catch them. This seems to resemble the ideal of non-attachment associated with religions originating in Asia. What was important to him at that moment was simply to sit, watch, and lose himself in the sounds of the river, in watching the fish in their own belonging to it, sipping flies off of the surface of the water.

Fly fishing brings to many such Earth-engaged spirituality. I have often felt similarly, as the sounds of the stream and the rhythm of casting blend me into a reality so much greater than my own self. On one occasion on the Frying Pan River in Basalt, Colorado, I became so enraptured with the pursuit of a certain trout that I hardly noticed two elk who had moved into the stream not more than a few yards away. There was a moment in which we seemed to acknowledge each other's presence, neither of us spooking or running away. That day it was not the fish caught which made the day special, but the sudden realization, sharing a space on that stream with those magnificent elk, that I was a part in something more. In agreement with

McGuane, who stated "fly fishing is a road to nature based spirituality," these are among the spiritual meanings I and many others have found in the pursuit of the wonderful and mysterious trout. And like many others, these moments of engagement with nature lead me to conservation work, seeking to defend and improve the natural living habitat of all of the Earth's creatures (Lyons 1998: 12).

Samuel D. Snyder

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Foreman, Dave – See *Earth First!* and the Earth Liberation Front; Ferality; Radical Environmentalism.

Forum on Religion and Ecology – See Religious Studies and Environmental Concern.

Fox, Matthew (1940–)

Matthew Fox is known for being the founder of the University of Creation Spirituality in Oakland, California and for authoring 24 books, including *The Coming of the Cosmic Christ*, *Original Blessing*, *Passion for Creation: The Earth-Honoring Spirituality of Meister Eckhart* and his most recent, *One River, Many Wells*. He is the founder and editor-in-chief of the magazine *Original Blessing* and hosts Techno Cosmic Masses: events intended to reinvent

worship, which are structured like a Mass including techno music and multimedia. What he is perhaps most well known and notorious for, however, is having been expelled from the Dominican order. The reasons for this expulsion are the same reasons he is important when considering religion and nature.

Fox had been an ordained priest since 1967, but in 1991, as a result of extensive research by the Catholic Church, he was ordered to leave his California school or face dismissal from the Dominican order. The Vatican objected specifically to Fox's refusal to deny his belief in pantheism, his denial of original sin, for referring to God as "mother" and for promoting a feminist theology. There were additional scandals, one of which was caused by Starhawk's presence as a staff member at the University of Creation Spirituality. Fox has now found a home within the Episcopal Church.

Fox focuses on reinventing worship, art, human sexuality and most importantly embracing wilderness, both internal and external. He emphasizes the need for humanity to change its relationship to the Earth, or else risk losing it completely to pollution and environmental destruction. One of his most potent and fascinating ideas related to this idea is presented in *The Coming of the Cosmic Christ*. He suggests that we rethink and reacquaint ourselves with the concept of the Cosmic Christ and the crucifixion story of Jesus Christ in a way that is relevant to the global environmental crisis. What he suggests is a paradigm shift, which he defines as a new Paschal Ministry for the third millennium.

This paradigm shift can be described in one way as a shift from the quest for the historical Jesus to a quest for the Cosmic Christ. The historical Jesus is the individual whom we encounter in the Bible. Fox explains that Jesus was, among other things, a mystic. He specifically cites Jesus' *Abba* experience, or his nondualistic experience of God. This nondualism is exhibited in John 10:30, when Jesus states, "The Father and I are one." This is not a mysticism of the Fall-Redemption tradition, which favors mysticism of the sacraments. It is creation-centered mysticism, which is an act of reentering the mystery of the universe and human existence in it. Power is not elsewhere, outside ourselves, but is within us, just as it was within Jesus Christ the man.

In defining the Cosmic Christ, Fox makes the basic assumption that the Cosmic Christ is cosmic, preexistent wisdom. Among the many books of the Old Testament and New Testament that he says contain passages referring to the Cosmic Christ are Job, Baruch, and Proverbs, Philippians, Romans, Colossians and Ephesians. The Cosmic Christ is not an individual, anthropomorphic character, but rather an eternal, penetrating and changing energy that has the potential greatly to affect our world and our human lives. Most importantly, Fox states that the emergence of the Cosmic Christ will usher in a paradigm

shift: a shift from the Enlightenment mentality, which denies mysticism and lacks a cosmology, to the new paradigm, which represents a return to mysticism, a reinvention of work, sacred sexuality and an immanent rather than transcendent creator.

Fox makes what the Catholic Church sees as a radical leap when he suggests that we see and understand Mother Earth as Jesus Christ crucified, as well as the "mother principle" being crucified. By mother principle, he means that nurturing and mystical part of ourselves that is intimately connected to the Earth. By proposing this, he writes that he is invoking the ancient Jewish, and Christian tradition of the Paschal Ministry, meaning, the resurrection and ascension of Christ, the salvation foreshadowed in the Old Testament and the sacraments. Fox suggests that in a Cosmic Christ context, the Paschal Ministry takes on new power, deeper meaning and moral passion. This occurs because the Paschal Ministry will be understood as Mother Earth conceived as Jesus Christ, crucified, resurrected and ascended. "It is the life, death and resurrection of Mother Earth" (Fox 1988: 149).

Fox's vision is about collective not personal salvation. It occurs on an earthly, if not universal level. Fox believes that the Cosmic Christ will usher in a new era of self-expression and "the reinvention of the human." What follows is an inevitable compassion for all creatures and the Earth itself.

Andrea A. Kresge

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See also: Berry, Thomas; Cathedral of St. John the Divine; Christianity (2) – Jesus; Christianity (7e) – Creation Spirituality; Gaian Mass.

Francis of Assisi (ca. 1181–1226)

Francis of Assisi through the centuries has been one of the Catholicism's most popular and inspirational saints. His embrace of a life of poverty, simplicity, and charity has inspired many both inside and outside the Roman Catholic Church. But he is perhaps best known for his exuberant stress on our kinship with animals and all of creation. Francis' life was chronicled by his followers in *The Little Flowers* and in biographies by Thomas of Celano and later by Bonaventure. These hagiographical accounts are

replete with stories of Francis preaching to “my little sisters the birds,” to fish, and to wild flowers of their need to praise God. In another famous story, Francis addresses a fierce wolf at Gubbio as “friar wolf” and miraculously persuades him to cease killing and to live in peace with his human and animal neighbors. Though these accounts mix myth and legend with biography, they remain the primary vehicle through which each generation has envisioned Francis and associated him with a vital sense of kinship with creation. Preaching was central to Francis’ mission, and the image of Francis preaching even to nature underscores a sense of identification with all of creation. Likewise the stories of Francis’ ability to speak to animals and to tame wild ones fit a common medieval hagiographical motif that sees the holiness of saints as allowing a brief recovery of the peaceableness and harmony between the species once enjoyed in Eden but lost in humanity’s fall (see Sorrell 1988: 52–4).

Francis was born in Assisi, Italy, to a wealthy cloth merchant and his wife. Francis received some liberal arts schooling and as a young man fought in Assisi’s war with Perugia. He was captured in battle and imprisoned for almost a year. He suffered a long illness and, on recovery, joined a military expedition to Apulia in the south. We are told that after a vision in a dream, he returned to Assisi and embarked soon thereafter on following the example of Jesus. After a dramatic break with his father, Francis committed himself to poverty, begging, and preaching. He gave away his (and many of his father’s) possessions, withdrew from his family and friends, served lepers and the poor, and repaired a church. A growing band of companions joined Francis and the pope gave his official blessing to the new order. This small band of friars grew over the centuries into today’s array of Franciscan orders.

In recent decades, growing environmental concern has prompted many to look to Francis’ powerful sense of kinship with nature for inspiration. Pope John Paul II in 1979 proclaimed Francis to be the patron saint of ecology. Some have called Francis a pantheist, but that misses how deeply traditional his religious views were. His vision was primarily theocentric, not ecocentric. His core focus centered on Christ, giving praise to God, and love and service to humanity. He expressed his affection for, and closeness to, animals and the rest of nature with rare exuberance, but he never wavered from the medieval church’s teachings on the hierarchy of creation with humanity as its crown.

A number of influences may have helped Francis to stress the goodness of creation. His era saw a growing interest in the observation and artistic depiction of nature. He was deeply impressed by the ideal of chivalry and he loved a number of popular French troubadour songs and poems that praised both knightly virtue and the beauty of nature. He came to refer to his friars as “God’s

troubadours.” He may well have heard stories of the lives of Irish saints which commonly depicted even animals as recognizing a saint’s gentleness and authority. Francis’ decision to become a wandering preacher and frequent hermit meant that he had close and sustained contact with nature and animals. He and his companions often lived in caves, hovels, and forest huts, and these stays likely deepened his identification with nature and its species.

Early and medieval Christianity had long emphasized the goodness of creation, but an equal emphasis on human superiority tended to undercut any emphasis on humanity’s kinship with the rest of creation. Francis and a few other Christian nature mystics were distinctive in celebrating God’s presence throughout the natural world and humanity’s kinship with the animals and the rest of nature. Francis employed chivalric and familial terms of address to animals and natural elements to emphasize the intimacy of the communal bonds between humanity and the rest of creation. For example, in *The Canticle of Brother Sun*, (also known as *The Canticle of the Creatures*), Francis spoke of “Sir Brother Sun,” “Sister Moon,” “Brother Fire,” and “Sister Mother Earth” (in Armstrong 1982: 38–9). Some interpret the *Canticle* as a call to humans to praise God for the goodness, beauty, and usefulness of creation, while others read it as an exhortation to all of nature to praise God for God’s blessing upon it. In either reading we are left with a strong sense of our need to respect the entire community of creation (Sorrell 1988: 128).

The intimacy of our connections to the rest of creation is emphasized in a number of Francis’ other writings. Francis’ prayer, *The Praises to be Said at All the Hours*, is primarily a collection of diverse biblical praises, many from the Psalms. It exhorts both humans and all of nature to praise God. Another important prayer, *The Exhortation to the Praise of God*, was at least partly written by Francis and is a compilation of biblical passages attesting to our relatedness to the rest of creation. “Heaven and Earth, praise Him (cf. Ps. 68:35). All you rivers, praise Him (cf. Dan. 3:78). All you creatures, bless the Lord (cf. Ps. 102:22). All you birds of the heavens, praise the Lord (cf. Dan. 3:80; Ps. 148:10)” (in Armstrong 1982: 42–3).

What inspires is not so much Francis’ corpus of writings, which is quite sparse, but the charm of the accounts and legends of his exuberant energy celebrating the whole of creation. Francis’ writings have not had much of an impact on the development of mainstream Catholic theology or ethics, for he had no great *Summa Theologiae* to impress later generations of the learned, but his great text was his life, which has continued to inspire many across the ages. He lacked the education to invoke Aristotelian or neo-Platonic metaphysical understandings of the natural cosmos, but he did have a literalist power in his direct appropriations of the Hebrew Scriptures, especially

Psalm 148, and the Gospels concerning specific birds, animals, fish, stars and planets. Francis was a medieval friar; not an ecologist. But it is not surprising that many today who are ecologically minded find in him a kindred spirit.

William French

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Freeport (West Papua, Indonesia)

The site of the richest gold and copper mine in the world, Freeport lies where the rugged southern slopes of the West Papuan Highlands approach the coastline. The removal of entire mountains has been extremely lucrative for both the American mining company Freeport McMoRan and the Indonesian Government, yet devastating to local inhabitants and their natural environment.

The mountains of the region are the source of intricate belief systems that link the Amungme and Nduga people to the natural world. For these peoples, each peak and valley, and all the forests and rivers, are repositories of the ancestors. Indeed, the ancestors shaped the spine of the central mountain range with their bones and their heroic endeavors created the rivers and gorges. They also released the first humans from the ground and grew the first food plants. The ancestors' spirits – the traveling female creators Situgimina and Ugatame, and Manu the

creator snake, and others, such as the guardian spirit Dingiso, a tree-kangaroo – inhabit trees, rocks and pools. Though seldom seen, they are always there. The landscape created by the ancestors and all its valued elements must be maintained in order for life to continue. This is the responsibility of the people and the elders who are entrusted with the task of ensuring that the proper rituals are performed.

Even what is worn personally, by way of feathers, fur, bone and teeth, deliberately denotes connection to the ancestors and embodies experience of the land they created. No ceremony, moreover, is complete without the slaughter of pigs, their blood expressing the health of the land, their flesh imparting prosperity to all partaking of it.

The outside world came relatively late to the mountains with the arrival of Dutch Franciscan missionaries in the 1950s. Whereas they came barefoot with only a few essentials, starting educational and health facilities, American fundamentalist evangelists badly damaged local leadership structures and the possession of local knowledge during the next decade. Still worse was Indonesia's takeover of Irian Jaya (1963–1969), and American mining to remove mountains for gold, copper and other minerals at Grasberg near Timika (from 1967 onward).

The physical assault upon the mountain, the military assault upon its people and the undermining of their spiritual knowledge is a familiar story of devastation. And yet the cultural and religious lives of both the Amungme and Nduga have proven remarkably resilient and adaptive. Even those among them who work in mining towns continue to participate in initiation ceremonies, funerals, marriage exchanges, hunting, fighting, and trading expeditions, and thus take periodic refuge in village life. Independence fighters, members of the OPM (Organisasi Papua Merdeka) who resist Indonesian control over West Papua, also frequent the forests above and around the mine, and join the local people in affirming the ancestors and the land itself as powerful protectors and weapons of defense against environmental despoliation. The OPM groups seem more comfortable in combining their ancient beliefs with helpful passages from the Bible and new rituals dedicated to bringing about West Papua's independence. Efforts at resistance against the mining, however, have been put down ruthlessly, with the use of Indonesian or American helicopters (the mining company paying protection money to the Indonesian government).

Mark Davis
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See also: Penan Hunter-Gatherers (Borneo).

Freud, Sigmund (1856–1939)

Austrian physician and neurologist Sigmund Freud, as the founder of psychoanalysis, developed not only a general theory of psychology, but also both a therapy and a method of research. Freudian psychoanalysis seeks to maintain an individual's psychic equilibrium between the demands of the *id* (instinctual impulses and primitive needs), the *ego* (consciousness) and the *superego* (the conscience as largely shaped by unconscious understandings of communal moral standards). Freud argued that if the child's developmental stages are not satisfactorily completed, various pathologies emerge. These become manifest as neuroses or psychoses when and if the individual's defense mechanisms (rationalization, sublimation, projection, regression) become inadequate in the face of internal and/or external threats. If one's conscious tolerance cannot cope with the degree of excitation occurring, threatening elements remain unconscious, but are then liable to contribute to or exacerbate the potential for defense mechanism breakdown. Freud employed the term *eros* for one's life instincts toward self-preservation and reproduction. The psychic, emotional and sexual energies associated with instinctual biological drives are referred to as the *libido*. By contrast, the *thanatos* or death instinct encompasses an individual's impulses toward self-destruction and death. This last is chiefly understood as a person's innate aggressiveness and destructiveness. On the animal level, aggression occurs in relation to needs of habitat, food and/or reproductive necessities. In humans, aggression ranges from anger in private disputes to mass dysfunction and social war.

Therapeutically, Freudian psychoanalysis employs the patient's use of free association as well as his or her emotional transference to the analyst. Because of an alleged circularity between Freudian practice and theory in which confirmation of the latter is suggested by the evidence produced by the former, the methodology is not widely accepted as rigorously or logically "scientific." Freud has nevertheless become an immense contributor toward the popular Western view of human nature.

Freud is also significant in articulating his "Civilization Thesis" that has since come to underlie all Western debate relating to the "role" of the natural world *vis-à-vis* humanity. His seminal works that establish the foundations of this discussion are *The Future of an Illusion* (1927) and *Civilization and Its Discontents* (1930, 1961). While

religion for Freud becomes essentially a device employed by the immature individual who refuses to confront the nature of reality in sober fashion, Freud also presents nature as an entity that civilized humanity seeks to subdue, dominate and utilize for its own benefits. Civilization, as the replacement of individual power by community power, is founded upon renunciation of instinct. As such, it is a community *superego*.

Inasmuch as Freud's culture versus nature polarity posits that the super power of nature is a major source of human suffering, civilization is what sanctions whatever socially condoned activities and resources are employed for making the Earth useful. According to Freud, the first acts of civilization consist in the use of tools, the domestication of fire and the construction of dwellings. However, in the contemporary emergence of popular forms of spirituality, the contended conflict between nature and culture is the central issue that has come to be challenged. The current spectrum of nature religions denies Freud's two options, namely, either hiding from nature or subduing it. Nature becomes less and less simply a resource and something to be exploited as well as tamed. With growing awareness of industrial pollution and technological fallibility, the destruction of nature – or at least an ecologically balanced and sustainable Earth – is being increasingly recognized. It is this perception of the "loss of nature" and a planet capable of supporting a rich diversity of living forms including the human that constitutes the immediate focus behind the contemporary emergence of "nature religions" as distinct forms of spirituality. The development of a consciousness that embraces nature and religious culture as symbiotes rather than opponents takes its cue from reinterpreting Freud's "Civilization Thesis" that claims culture serves merely "to protect men against nature."

Michael York

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See also: Ecopsychology; Jung, Carl Gustav; Transpersonal Psychology.

Friends – Religious Society of (Quakers)

The Religious Society of Friends (Quakers) was established in the 1640s and currently has about 336,000 members in Europe, the Middle East, Africa, Asia, the West Pacific, and the Americas. As with many Western religious traditions, Quakers today express the pluralism reflective of our time with four divisions including Friends General Conference, Friends United Meeting, Conservative Friends, and Friends Evangelical International. These divisions span a range of belief from New Age through Christian conservatism. In this regard, Barbour and Frost (1988) maintain that the search for a tie that binds the Quakers is very difficult. In 1937 the Friends World Committee for Consultation was established to improve communication and understanding among Quakers of various persuasions, and it continues to function in this capacity.

The Quaker affinity with nature began with founder George Fox, who encouraged the study of “whatsoever things was civil and useful in nature.” In his 1680 Wheeler Street sermon, Fox preached that it is not God’s intention that humans use other creatures in a “lustful” manner, exhorting Quakers to “leave all creatures” as they found them. In 1693 Quaker William Penn, Governor of Penn’s Colony, later the U.S. State of Pennsylvania, encouraged Quakers to exercise “caution” in their “use of the world.”

John Woolman (1720–1772) has exercised substantial influence on the development of contemporary Quaker ecological and environmental thought, viewing the creation with awe and Earth’s resources as a gift from God. Woolman’s position appears to be rooted in the Quaker view that God created the world and remained in it (Cooper 1990: 28). During his 1760 visit to Nantucket Woolman reflected, “. . . the earth, the seas, the islands, bays, and rivers . . . were all the works of (a God) who is perfect in wisdom and goodness” (in Moulton 1989: 114). Similar to Penn, Woolman cautioned against “impoverishing” Earth’s resources because of the impacts such acts might have on future generations. During his visit to England in 1772, Woolman noted the disparity between rich and poor in England, the repressive ways in which the poor were treated and, in the same context, objected to the way stagecoach horses were often driven to their deaths or overworked until they grew blind. Woolman’s compassion was inclusive. In several places in his journals he spoke of a “universal love” for his fellow creatures (in Moulton 1989: 29). In a unique reflection on environmental conditions, Woolman wondered if the polluted air of the cities of his time might “hinder the pure operation of the Holy Spirit” (in Moulton 1989: 190).

The focus of contemporary Quakers is on the decline of nature due to human activities. As with other denominations and sects, Quakers are addressing questions about the nature of environmental crisis, the fitness of humanity to occupy Earth and the requirement to live in harmony

with other life. Much of this is being done within the context of what Quakers refer to as living in “right relations,” a term referring to an equitable sharing of resources through simple living and sustainability.

Among the themes that reveal themselves in current Quaker thinking on environmental and ecological issues, and nature in general, are the assumptions of the goodness of creation and support for the unity, interrelatedness, and community of humanity with nature. These positions are generated from the belief, on the part of those referred to as “liberal” Quakers, that the truth and meaning of a God-centered spiritual universe is available through continuing revelation occurring to individuals or to those gathered in corporate worship.

Those Quakers with a developed environmental awareness often call for a revision of outmoded concepts of God. They view the universe as an interconnected community of being in which the inward dwelling of God’s spirit provides the unity and continuity of the universe and where the spiritual and the material laws governing the universe are closely related.

Quakers closely link belief and action and, although somewhat slow to start, environmental activity in the Monthly and Yearly Meetings began increasing dramatically in the 1990s. Environmental issues treated in the Meetings include population growth and control, environmental witness, living in unity with nature, spirituality, environmental education, finances and investments, global warming, cosmology, sustainability, military impacts, consumption patterns, native peoples, lifestyles, legislation, and environmental justice, among others, in order to develop a new vision of a community of living things.

Quaker organizations have long expressed their concerns or positions about issues by proclaiming or publishing comments called “Minutes,” “Queries,” or “Advices.” Over the past several decades, Quakers have also expressed their concerns or positions on environmental issues in these ways.

In 1987 the Friends Committee on Unity with Nature (FCUN) was founded to integrate Quaker positions on simplicity, peace, and equality with the environment. FCUN is a primary supporter of La Bella Farm in Costa Rica, a sustainable agricultural project and sponsor of Quaker Eco-Witness, a project to promote government and corporate policies on biological integrity and sustainable and ecologically integrated human communities.

In 2000, the Quaker Environmental Action Network was formed as a committee of the Canadian Yearly Meeting. Other Yearly Meetings host environmental groups including, but not limited to, the Philadelphia Yearly Meeting’s Environmental Working Group and the Southern Appalachian Yearly Meeting’s Ecological Concerns Network. Until 2001, Pacific Yearly Meeting, among other environmental activities, also sponsored

the publication *Earthlight*, currently published by an independent non-profit organization acknowledging links to its Quaker heritage. Another Quaker organization, Right Sharing of World Resources, based on a model of self-help and sustainability, funds a number of projects, primarily in less-developed countries. The primary function of most of these groups is to raise environmental awareness among Quakers, couple environmental awareness to Quaker religious faith and practice, and expand Quaker environmental thinking into the general population.

Tom Baugh

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See also: Quaker Writers in Tasmania (Australia).

Friends of the Earth – See Brower, David; A Christian Friend of the Earth; Salvadoran Reflection on Religion, Rights, and Nature; Sierra Club.

Friluftsliv

Friluftsliv, a Norwegian word, is pronounced “Free-Loofs-Leaf,” and can be literally translated as “open air life,” although it is usually translated as “outdoor recreation.” However, for some of the most vocal pioneers of the deep ecology movement, it has been taken up as something much more: a near-religious call for a spiritual inhabitation of the natural world as we enjoy our time out in it – more than recreation, it is a poetic and philosophic kind of re-creation of our original natural home.

The word first appears in print in Henrik Ibsen’s epic poem *Paa Vidderne* (1859): “In the lonely seter-corner, / My abundant catch I take. / There’s a hearth, and a table, / And *friluftsliv* for my thoughts” (Ibsen 1957: 62). The great explorer and humanitarian Fritjof Nansen extolled its virtues, particularly the fact that it is best practiced alone, where the soul can personally confront the grandeur of nature without human distraction. Turning outdoor activity into socializing or sport is counter to the spirit of *friluftsliv*, which has much more in common with the deep solitude of the Romantic era, where poets and painters discovered the sublime through an individual encounter with the magnificence of nature.

In recent years the mountaineering educator Nils Faarlund has done the most to uphold the soulful and philosophical side of *friluftsliv* in his native land, at the same time as various bureaucratic and political forces were turning it into a simple sporting activity that could be easily managed. Faarlund retorted with this manifesto of what it is not:

It is not sport, in the sense of physical activity in a selfish, competitive way. *It is not tourism*, in the sense of the business and practice of rapid transit through different places. *It is not a scientific excursion*, collecting specimens of objective interest. *It is not a “trade-show” style of Himalayan mountaineering*, using nature as a sparring partner. *It is not outdoor activity* in the sense of a safety valve for a fundamentally antinatural aggressive lifestyle (1992: 164).

What, then, is it? “*An unselfish I-Thou relationship* that tries to come away from the anthropocentrism of a nature-dissonant society,” (1992: 164): Faarlund concludes. Inherently, *friluftsliv*, as Faarlund, Ibsen, and Nansen want to define it, is a fundamentally spiritual belief that simply getting out into nature, enjoying the hike, the climb, the ski, the swim, is an essentially personal religious experience that gives the greatest possible meaning to human life.

This remains a minority definition of the term within Norway, but it is this definition that has gained some support and adherents in the rest of the world, either as part of the deep ecology movement, as taught by Arne Naess, John Seed, Bill Devall, George Sessions, and others, or in some of the literature in outdoor recreation studies that recognizes that a walk in the woods can be a very deep experience indeed.

David Rothenberg

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See also: Deep Ecology; Ecosophy T; Mountaineering; Muir, John; Naess, Arne; Rock Climbing; Surfing.

Fruitlands

A. Bronson Alcott and Charles Lane, influenced by the Transcendentalist idealism then current in New England,

founded the Fruitlands community in 1843 at Harvard, Massachusetts. Fruitlands ranks as one of the very first communes to be devoted to sustainable, low-impact living. Industrialization was just beginning to enter American life when Fruitlands was launched, but the community's founders could see that alienation and exploitation of workers would characterize the way of life the factories portended and sought to create a better model for living.

Fruitlands, unusually in its time, refused all exploitation of animals. The residents did not eat meat or dairy products and did not use animals or their manure in farming. They also espoused a variety of lifestyle practices that they believed to be nonexploitive and sustainable. They declined to use not only alcoholic beverages, but also coffee and tea. They bathed in cold water. They generally woke and slept with the sun, minimizing their use of candles and lamps. They avoided the use of money, engagement in business, and involvement with politics and religion. They wore only linen clothing because cotton was produced with slave labor.

The community, which received its name from its founders' plan to grow fruit as their main food, was the object of some derision, given the eccentricity of its members (one, Samuel Bower, was a nudist; another, Joseph Palmer, was once jailed for refusing to shave his beard). It lasted less than a year and was dissolved later in 1843.

Timothy Miller

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See also: Back to the Land Movements; Brook Farm; Transcendentalism.

Fuller, Buckminster (1895–1983)

Buckminster Fuller is best known as the designer of the geodesic dome. The world's first geodesic dome was unveiled to the public at the 1965 International Trade Fair in the city of Kabul, capital of Afghanistan. It took untrained workmen no more than two days to complete the structure, which served as the American Pavilion for the fair. Its "skeleton" was composed of interlocking aluminum triangles, and its "skin" was nylon cloth stretched over the skeletal frame. The building was lightweight and easily assembled; moreover, the dome's

component parts had arrived by air, flown in on a single airplane.

Since then, the principals of the geodesic dome have been used in the construction of many buildings worldwide. The distinctive shape of Fuller's dome even inspired the naming of a newly discovered carbon molecule – buckminsterfullerite. This is a large carbon molecule (C₆₀) whose close physical resemblance to a geodesic dome provides an appropriate illustration of Buckminster Fuller's belief in the fundamental interconnectedness of the universe, on a macro and micro scale.

Richard Buckminster Fuller, Jr. was born 12 July 1895 into a respectable Massachusetts family who traced their lineage back to the Puritan settlers. The Fuller men were ministers, war heroes and state representatives. The Fuller women counted among their number Buckminster's great-aunt Margaret Fuller, a leader in the Transcendentalist movement.

Extremely far-sighted from birth, "Bucky" Fuller could see few details near to hand, though he could perceive larger shapes in the distance. In a sense, he was "blind," until the age of four, when he received his first pair of corrective lenses. In adulthood he always wore a distinctive pair of black-rimmed glasses.

Buckminster Fuller credited his early visual impairment for his unique perspective on the world, namely, a personal philosophy of attempting to grasp the whole of an idea before taking it apart to analyze the component parts. In later life he traveled the world speaking to university audiences everywhere, warning against overspecialization and urging consideration of the "ecology of man." Fuller called his work "comprehensive anticipatory design science" and told people his goal was to employ all the power of science to enable humankind to achieve its highest potential on Earth, simultaneously preserving, utilizing and renewing Earth's resources.

Fuller briefly attended Harvard, but he was unable to conform to the discipline of higher education. Formal education on the whole, he felt, was a waste of time. He looked forward to a day when children would educate themselves via television, without the repressive influence of a set curriculum.

Buckminster Fuller's inventive genius was apparent from an early age. In kindergarten he was asked to build a house of toothpicks and peas. Five-year-old Fuller constructed a stable lattice of four-sided triangles (tetrahedrons) alternating with eight-sided figures (octahedrons). Many years later the adult Fuller patented this design under the name "octet truss," and argued that the tetrahedron was the simplest three-dimensional shape possible, and the basis of all other material systems. He called his octet truss the "Coordinate System of Nature."

Among other childhood inventions was an oar for Fuller's rowboat, based on what he knew of jellyfish locomotion, which required less strength to use and

allowed him to face forward and see clearly where he was going. Throughout Buckminster Fuller's adult career, he continued to use the principles of design he observed in nature to make technology more efficient.

A publicist promoting Fuller's exhibitions coined the word "Dymaxion" using a blend of the words "dynamism" and "maximum" to mean getting the most use from all materials at hand. Fuller liked the term, and eventually copyrighted it himself. When he designed his portable house, entirely self-contained, with no wasted space, the bathroom using a fraction of the usual amount of water, he named his creation the Dymaxion house. Similarly his Dymaxion car was streamlined, fuel efficient, and extremely maneuverable.

The map of the Earth he designed, called the "Dymaxion Airocean World," minimized the distortion so common in most flat maps, and enabled ocean navigators to plot their courses more accurately. Buckminster Fuller coined the phrase "Spaceship Earth" to express his sense of the planet as a closed system moving through space.

Buckminster Fuller criticized the scientists of his day for overspecializing in narrow fields of study. He felt that studying details without first comprehending the whole picture led to widespread waste of natural materials, and contributed to a mistaken belief that resources were scarce. Fear of want, not lack of resources, was the source of war, cruelty and conflict. He further argued that there are enough resources on this planet to support all the peoples of the world in comfort, without the need for constant competition, if we would only use science and technology wisely.

Fuller recommended the study of synergetics as an alternative to the traditional disciplines of science. He used the word "synergy" to mean that all events are inter-related, such that the whole is greater than the sum of its parts. Synergy encompasses synchronicity, which is easily observable in the ordinary day-to-day world, when suddenly unconnected events in our lives come together and are revealed, suddenly and unexpectedly, to be part of a larger pattern.

Synergetics is therefore a "comprehensive design science" which first attempts to identify the larger pattern of the cosmos, then separates out specific instances of this pattern, turning them to human use. Fuller strongly felt that humans cannot afford any longer to focus only on individual portions of their immediate environment, while ignoring the effects of their actions on the larger system.

In Buckminster Fuller's worldview, God is synergy. God is simultaneously everything that was, is, and ever will be. The energy of the eternal indestructible universe is constant, and what we perceive as change is in actuality the interaction of two macro forces, one integrative (gravity or love) and the other disintegrative (radiation). The stuff of the universe is constantly coming apart and being remade into new form.

Fuller said that "belief" is the opposite of knowledge. Belief holds an untested, illegitimate claim to reality. Buckminster Fuller claimed to "believe" nothing and to "know" only what he could prove to his own satisfaction. He "proved" God's existence through his understanding of pattern. To Fuller's mind it was obvious that pattern could not exist without reason.

He saw patterns in beehives and waves, molecular structures and star systems. He said that all matter in the universe consisted only of patterns of energy that had temporarily assumed a given form. How they interact with other patterns of energy (such as how light can pass through a seemingly "solid" pane of glass, whereas your hand cannot) can vary, but the fundamental material of creation does not. Our ordinary concepts of "solidness" and "separateness" are therefore mistaken notions, perpetuated by our imperfect sensory equipment.

All things in the universe are connected in some way as part of a larger pattern. Patterns imply design and design implies the existence of a designer, and therefore the reality of God can be irrefutably proven.

If the simple existence of an ordered, patterned, universe proves God exists, then what sort of god was Fuller talking about? Evidently, a metaphysical, omnipotent, omnipresent god who heard prayers.

From 1927 to the end of his life, every night before falling asleep, Buckminster Fuller meditated. He called this meditation, "Ever Rethinking the Lord's Prayer" and he published one version of it as a poem in *Critical Path* (1981). He said that humanity can glimpse fragments of the totality of creation in those fleeting moments between waking and sleeping, between consciousness and unconsciousness. Just as in ancient times, God exists on the borders of the unknown.

Fuller felt that if he were doing what he termed the "Great Intellectual Integrity" (a concept that embraced both God and the universe) intended, then life would take care of all his needs. To all appearances, it did, for remarkable coincidences seemed to follow Buckminster Fuller throughout his life, and he took all of it as further proof of the existence of a universal intellect.

As a field of study, Fuller's synergetics holds intriguing possibilities and may be as lasting a legacy as the octet truss and the geodesic dome. Buckminster Fuller saw interrelations in fields previously assumed to be unrelated. He refused to be bound by any one single discipline, and he can be compared to the original thinkers of ancient Greece, for whom philosophy meant only the search for knowledge, whether it is mathematical, scientific or religious. He has also been called the first ecologist and the first eco-theologist – although, given his rarified notions of a cosmic "greater intellectual integrity," one might hesitate to label Buckminster Fuller a *theologist*.

Richard Buckminster Fuller, Jr. died 1 July 1983,

678 Fuller, Buckminster

having written 22 books, published more than 60 articles, held 25 patents, and been awarded 48 honorary degrees and the Medal of Freedom from the United States government.

Meghan Dunn

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See also: Architecture; Fisk, Pliny.

G

Gaia

Gaia ("Earth") is the name of a Greek goddess also called Ge, from whose name words like "geology" and "geography" are derived. The ninth-century B.C.E. Homeric Hymn calls Gaia "mother of all, eldest of all beings," while the *Theogony* of eighth-century B.C.E. Greek poet Hesiod describes the simultaneous birth of Eros ("love . . . breaks the limbs' strength") and "broad-breasted" Gaia, "immovable foundation of all things forever." Gaia immediately began to reproduce, "without any sweet act of love," her children, including the mountains and seas. Her most-beloved parthenogenetic child was Uranus, the sky, with whom she mated to produce Oceanus (ocean), Themis (justice), Mnemosyne (memory), and the other divine beings called the Titans.

Other classical writers offer creation myths in which Earth is not the primary actor. Pliny describes a primordial goddess, Eurynome, who whirled into existence a wind from which she created the serpent Opion, with whom she produced an egg from which the world hatched. Orphic literature calls the primordial mother Nyx ("night"), consort of the wind. But the myth of Gaia was favored by authors including Homer, Euripedes, and Pindar. Such frequent literary use does not prove that the Greeks gave priority to the Earth-goddess as the universal creative matrix; there is little known of Greek rituals to Gaia, who is presumed by some to be a pre-Hellenic divinity barely absorbed into the later pantheons.

Contemporary awareness of Gaia dates to 1969, when physician and inventor James Lovelock, researching with Dian Hitchcock ways of determining from afar the probability of life on Mars, argued that the red planet's atmospheric equilibrium – its elements rarely changing in proportion to each other – showed it unlikely to host life, while Earth's atmospheric signature is disequilibrium. When Lovelock expanded this observation into a vision of the Earth as a self-regulating system, his neighbor and friend, Nobel prize-winning novelist William Golding, named the hypothesis "Gaia." Prominent biochemist Lynn Margulis brought her knowledge to bear on the emergent theory and is now, with Lovelock, generally recognized as its co-founder. The hypothesis has inspired many contemporary theologians and theologians, its founders remaining aloof from, although not publicly disapproving of, such religious use of their ideas.

The non-mechanical vision of the Earth had been previously suggested by the Scottish founder of geology,

James Hutton, in the eighteenth century, and again by nineteenth-century Ukrainian scientist Vladimir Vernadsky. Like those forebears, Lovelock and Margulis argued that the Earth is understood better as a living being than as a machine. Rock, sea, cloud, tree, animal are, they argued, in continual and complex relation, with each affecting and subtly altering the others. Thus the exchange of planetary atmospheric gasses can be compared to an individual's breath, the water system to the circulation of blood, the ozone layer to the skin. Biota, atmosphere, ocean, and soil interact through feedback loops to maintain conditions conducive to life, a process known as homeostasis.

Both "living Earth" and "great machine" are metaphors that can be, and have been, understood literally. Lovelock and Margulis's use of the ancient goddess' name drew both fame and notoriety: general scientific scorn as well as an enthusiastic (although sometimes misinformed) embrace by nature mystics and citizens concerned about ecological issues. The controversial hypothesis – often stripped of the name of the goddess to become Earth System Science or Geophysiology – has gained increasing respect among some scientists but is derided by others as lacking sufficient scientific rigor.

While scientists debated, spiritual seekers embraced Gaia, often arguing that it descends from a primal religion. Paleolithic and other early human artifacts – especially the tiny but robust figurines called "Venuses" – are described as expressions of early worship of Earth's fecundity. The poetic language of Native American spiritual leaders like Claude Kuwanijuma (Hopi), who said that "The Earth remembers; the stones remember," similarly support contentions that tribal people sustain a connection or "participation mystique" (the term is from French anthropologist Levy-Bruhl) with the Earth. The sense of being part of a universal unity is traditionally associated with religious mysticism, which Evelyn Underhill and William James both describe as an experience of timelessness and a lack of boundary between self and world.

That Lovelock chose the name of a goddess for his living Earth derives from a consistent Western bias toward seeing the Earth as feminine. Under the influence of Greek Orphism, Persian Manicheism and other dualistic sects, "Earth" was set in opposition to "heaven." Other oppositions followed: evil/good, flesh/spirit, dark/light, moon/sun, with the former typically associated with the Earth and the female, the latter with the heavens and the male. The vision of the Earth as feminine attached itself to

essentialist visions of “femininity,” so that the Earth was often transformed into a maternal, nurturing being. Some theorists, such as Rosemary Radford Ruether, Carolyn Merchant, and Shirley Nicholson, have turned this dualism on its head, arguing for an ecofeminist view of nature that claims traditionally feminine values (relationship, cooperation) as more natural than those traditionally accepted as masculine (domination, individualism). Rather than domination of the Earth by humanity, Gaian ecofeminists call for a modest recognition of humanity’s place within a living Earth system.

The widespread public acceptance of the Gaia hypothesis – even while scientists argued over its merits – led to controversy in established religions, for acceptance of Gaia implies a pantheism or polytheism unacceptable to believers in established monotheisms. Yet some Christian thinkers, notably the Catholic monk Thomas Berry, see no opposition between honoring the Earth and worshipping a transcendent divinity, although such thinkers typically enforce the traditional distinction between “creator” and “creation.” Non-theistic Buddhism has had an easier time with the Gaian vision, with the conception of *sangha* (community) easily enlarged to include the community of earthly life and that of *dharma* (duty) embracing ecological responsibility.

Less orthodox religious thinkers have eagerly explored the philosophical possibilities of the Gaia hypothesis; most prominent has been William Irvin Thompson of the Lindisfarne Association, who has articulated a Gaian politics and economics. Many neo-pagan groups in the U.S. and European countries employ Gaian vocabulary, including the Unitarian-Universalist “Gaian Community” of Kansas and the “Gaia House” meditation center in rural Devon, England. Some neo-pagans specifically employ the name of the Greek goddess in their ceremonies, while others, especially the ReClaiming Collective founded by Starhawk and the ReFormed Congregation of the Goddess established by Jade River, make ecological awareness a primary part of their worldview. Finally, a general-interest, Pagan, ecological magazine bears the name PanGaia and declares itself dedicated to “an Earth-wise spirituality.”

Patricia Monaghan

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See also: Berry, Thomas; Environmental Ethics; Epic of Evolution; Holism; Gaia Foundation and Earth Community Network; Gaian Pilgrimage; Lovelock, James; Merchant, Carolyn; Reclaiming; Ruether, Rosemary Radford; Starhawk; Wicca.

P Gaia Foundation and Earth Community Network

The Gaia Foundation (henceforth Gaia), a small international non-governmental organization based in London, is committed to the protection of cultural and biological diversity, ecological justice and Earth democracy. Gaia was established in 1984 by environmental and social innovators, mainly from Southern Hemisphere countries including José Lutzenberger (Brazil), Wangari Mathaai (Kenya) and Vandana Shiva (India), known as Gaia Associates. Their common vision is for a holistic approach to human development, with respect for cultural and biological diversity and the primacy of nature. Gaia, Earth Mother Goddess, is also the name chosen by James Lovelock for the hypothesis that the Earth operates as a living organism. This convergence of mythological and scientific thought is the basis on which indigenous knowledge systems are founded, and one of the underpinning messages of the Gaia Foundation (Gaia).

Gaia was privileged to begin its work in Amazonia through José Lutzenberger and Martin von Hilderbrand (Colombia) where it was initiated into the indigenous world of Earth-centered cosmologies, still intact. Common to all these cosmologies is the recognition that the Earth is part of a bigger universe, all of which is animated by “thought,” consciousness, and spiritual force. Each element of the universe has guardian spirits with whom the shaman learns to communicate. Before any activity takes place, such as hunting, fishing, collecting food or medicine, the shaman asks permission from the guardian spirit of the species or the area to ensure the timing is appropriate. One of the fundamental principles which govern relationships within the human community and

with the wider Earth Community is reciprocity. This is the basis of all interactions in the universe, exchange and reciprocity.

This experience gave Gaia's founders an appreciation of how the modern human can nurture a sacred relationship with the Earth, where everything in the universe is understood to be imbued with the same spiritual energy, manifesting in different forms and levels of consciousness. While Gaia's work takes on many forms, the search is always for ways of stimulating a reverence for the Earth as a living being of which we are part.

Gaia's colleagues share the belief that industrial society has forgotten that we are an integral part of the wider community of life that has flourished on Earth. Our actions are based on the misperception that we are separate from and superior to the natural world. Consequently the way that industrial society functions is proving to be unsustainable and deeply damaging to the human spirit, other species, and the Earth herself.

There is a need for radical change in our worldview, behavior and understanding of the human role in the world. We need to recognize that we are members of the Earth Community: a spectacularly beautiful and intimately interrelated community of plants, animals, atmosphere, water, earth and energy. Each member is an expression of the ceaselessly creative whole that is the universe, and each has its unique part to play in the ongoing evolution of the Community.

As Einstein said, we cannot solve a problem at the same level at which it has been created. More efficient technology, recycling and reusing will not change the underlying cause of the problem: the crisis in the human-Earth relationship. We are an inextricable part of the wider Earth Community of species and elements, and if we harm any part of the whole we diminish the viability of the whole, and thereby ourselves.

The challenge facing our species as we move into the new millennium is to carry out the transition from a period of human devastation of the Earth to a period when humans are present to the planet in a mutually enhancing manner.

Toward this end, Gaia Associates met in 2003 to explore innovative ways of dealing with our escalating crisis in human consciousness. They asked themselves: What is it that will trigger enough of us to change our behavior to tip the balance away from self destruction? They concluded that the source of the problem is not that we need more information, but that we need to become conscious of the awesome evolutionary process of the Earth in which we are participating. The challenge is how to entice ourselves away from the mesmerizing industrial promises of instant gratification, and expose ourselves to experiences which transform our understanding of our role as humans in the wider Earth Community, such that our behavior changes.

It was out of this process that the "Earth Community Network" was founded – to provide individuals and communities with an experiential learning process in Earth Citizenship, and to promote Earth-centered systems of governance at all levels of society. The main sources of inspiration are nature (the primary text) and those cultural traditions that reflect equity and respect for the whole Earth Community. This is based on the understanding that for most of human history, our species evolved cultural systems that were highly adapted to their ecosystems through generations of accumulated knowledge, founded on observation and spiritual dialogue with the Earth Community over the millennia. During the last century, widespread documentation of these knowledge systems became available. Comparative analysis shows common archetypal patterns which provide us with the possibility of developing a unifying story. The Earth Community Network aims to explore this possibility together with Lovelock's Gaia Theory and the Universe Story of Thomas Berry and Brian Swimme.

Human transformation to a viable mode of being will require imagination and willingness to explore the unknown, so that fresh thinking can emerge.

Learning is not simply a logical conceptual process. We learn through all our senses, through experience and full-hearted engagement. Real learning is a transformation process. The learning centers in this network have evolved through decades of work with local communities from diverse cultural livelihood systems, mainly in Africa, Asia and South America. Against the ever-growing tide of industrial globalization, the challenge has been to enhance those governance systems that embody inter-generational equity, restorative justice, exchange and reciprocity with the community of life. These have been learned through observation of the Earth's laws, as basic principles by which the community and its relationship with the Earth is regulated. They therefore provide the foundation from which to develop a global governance system that coheres with the living Earth system, and can guide the industrial human back to Earth.

At the founding meeting of the Earth Community Network in Gaia House, London, May 2003, Thomas Berry spoke as a visionary for the Earth:

In the Twentieth Century the glory of the human has become the desolation of the Earth. The desolation of the Earth is becoming the destiny of the human. All human institutions, professions, programs and activities must now be judged primarily by the extent to which they inhibit, ignore or foster a mutually enhancing Earth-human relationship.

In these words he reminded us that sustaining life for future generations requires a more complex understanding of the dimensions that need to be nurtured by the life

process, as he pointed out that the universe provides beauty for the soul, wonder for the imagination, and intimacy for the emotions. It is simply a matter of awakening.

Liz Hosken
Fiona Worthington

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- See also: Berry, Thomas; Epic of Evolution; Gaia; Kenya Greenbelt Movement; Lovelock, James; Shiva, Vandana; Swimme, Brian.

Gaian Mass

In 1981, the Cathedral of St. John the Divine in New York City, the mother church of the Episcopal Diocese of New York, commissioned musician Paul Winter's "Missa Gaia" or "Earth Mass," an ecumenical liturgical composition aimed at expanding the traditional Christian celebration of the death and resurrection of Christ into a broader, consciously Earth-referent context. The Mass, recorded both in the institutional space of the Cathedral and in the wild space of the Grand Canyon, harmonizes human and non-human elements in a way that non-verbally communicates the message of a unified "whole Earth community." Drawing upon the voices of human chorus and sounds from humanmade instruments in conjunction with the "songs" of whales, wolves, and wind, the Mass embodies a theology of the senses that opens the way for participants to experience an intimate connection to the life community on a sensory, non-theoretical level.

The Mass itself has been performed each October since 1985 at the Cathedral of St. John the Divine on the Feast Day of St. Francis of Assisi (the patron saint of animals and, more recently, of ecology). An animal blessing is held in conjunction with the Mass, in which various beings from elephants and llamas to dogs and cats, even to fish and blue-green algae, process with humans down the aisle of the Cathedral to receive the Bishop's blessing. Over the course of two decades, the Mass has become a staple of "green worship," a common liturgy shared among humans of diverse religious backgrounds and in solidarity with other species. Winter's Missa Gaia has also come to stand for a kind of ecospiritual "interspecies ecumenism" that is

intended, ideally, to be translated from the worship space into practical "on the ground" action on behalf of the life community.

Winter has structured Missa Gaia explicitly as a "mass" and in doing so, he makes use of traditional, recognizable forms of liturgical music, such as a canticle, the Kyrie, the sanctus and the benedictus. The content of these traditional forms, though, has been "greened" to reflect the embrace of an ecological and cosmic consciousness. The canticle, for instance, takes the form of St. Francis's "Canticle of Brother Sun." There is also a "Sun Psalm" and other sections of the Mass that bear titles such as "Return to Gaia" and "For the Beauty of the Earth." The Mass' Earth anthem, "The Blue Green Hills of Earth," takes the conventional form of "anthem," but Winter infuses that form with "greener" content to emphasize planetary allegiance. This flexibility of form and content in composition not surprisingly translates into a flexibility of worship that includes liturgical dance and other modes of movement and gesture that enable the participants to play an active role in co-creating the ritual. There is also a flexibility of symbol, as evidenced by Gaian Mass celebrations, in which a 28-foot "world tree" has been pulled down the aisle of the nave, as a man stationed inside the tree beats a drum that has been built into its trunk. In other Mass celebrations, a gigantic planet Earth hangs above the transept and functions as the celebration's central sacred symbol.

The first performance of the Gaian Mass initially met with marked criticism from various institutional sources within the Christian community in the U.S. and Canada. This criticism is indicative of ongoing clashes in a number of religious communities between those who see the "greening" of religious practice as a force for spiritual and institutional regeneration and those who deem "greening" movements to be "heresy" and expressions of a dangerous "paganism." The late New York Roman Catholic Archbishop John Cardinal O'Connor castigated the Episcopal Diocese for promoting "biocentricity" through the Gaian Mass and for turning what are intended to be "celebrations of mankind" into celebrations of "snails and whales" (in Naar 1993: 24). Conservative clergy within the Episcopal Church were also rattled by the introduction of the Gaian Mass. A vocal clergy member from Pennsylvania chided the Cathedral of St. John the Divine for commissioning the Mass and quickly dismissed it as "a New Age gimmick whose novelty would soon wear thin" (in Naar 1993: 24). However, over time, it is telling that the same clergy person who initially dismissed the Mass eventually came not only to support its celebration but to refer to Reverend James Parks Morton, the former Cathedral Dean who commissioned the mass, as "a pioneer with the courage to challenge orthodoxy that was outdated" (in Naar 1993: 24). This shift in perspective highlights the fascinating negotiation process between tradition and change, in which clerical perspectives on the Gaian Mass have

morphed over the years from characterizing the celebration as “New Age apostasy” to embracing it as “innovative liturgical renewal.”

The mainstreaming of the Gaian Mass both at the Cathedral of St. John the Divine and within the Episcopal Church reflects a climate of increased public acceptance of the growing partnership between religious organizations and the environment. Year after year, sold-out performances accomplish the formidable task of actually filling what is, incidentally, the largest gothic cathedral in the world, by packing 3000 to 4000 participants into each celebration. At a time when sociologists of religion cite grim statistics on the decline of mainline Christian congregations in the U.S. that suffer from anemic church attendance, the Gaian Mass's ecological message and body-active worship seem to have struck a chord with those who resonate with the comfort and beauty of traditional liturgical forms infused with ecospiritual content.

Sarah McFarland Taylor

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- See also: Cathedral of St. John the Divine; Christianity (6c4) – Anglicanism; Christianity (7e) – Creation Spirituality; Francis of Assisi; Gaia; Music (various); Winter, Paul.

SP Gaian Pilgrimage

A great pleasure I share with my wife, Sandy, is walking in the countryside enjoying the natural world. We are singularly fortunate to live in the southwest region of England where we can walk on the 630-mile path that winds its fractal way from the seaport town of Poole in Dorset. It goes west along the channel coast to Lands End and travels back east over the rugged cliffs of Cornwall and Devon to end where Exmoor meets the Bristol channel at Minehead in Somerset. This path is more than our long-est trail, it is a contemporary pilgrim's way.

A pilgrimage implies something more than just a walk through the countryside. It suggests a goal, or a purpose, something spiritual. This trail, whatever the weather or the

season, always has the sea in view with its ever-changing color and motion. Such a view never ceases to uplift and enliven; but more than this, in the course of its undulations the path climbs a total of 91,000 feet, over three times the height of Everest. The effort sets free those natural opiates, the endorphins, which course through the blood and enhance the senses, so that we become aware of our part in the great system of the Earth, and then the trail is the pilgrim's way to Gaia.

The coast path proceeds uninterrupted for its whole length and it travels over rocks of widely different ages, from the fairly recent at Poole to the 300-million-year-old Devonian, where else but in Devon. To walk the path is to see displayed the fossil history of evolving life on its evolving planet, as in a live museum. At a time not accurately known, but over 600 million years ago, the Earth woke from its long three billion year sleep during which it was a habitat for microorganisms alone. The awakening brought forth the lively world we know of plants and animals, and our journey takes us back through more than half of the history of life forms such as animals and trees. But there is more to the coast path than a display of geology. What makes it so suitable as a pilgrim's way is that the shore and coastal strip between sea and land is the only remaining natural part of England where the plants and animals are primeval. All other parts of this densely crowded island people use for their own needs, as they do most of the inhabited Earth, so that everywhere it reflects their history, not the Earth's. Not only this, but the sea is also forever cutting away the land so that on the fresh faces of the cliffs we can see the timeline of the Earth's history revealed in the rocks and the fossils they bear. There is no better place to get to know our living planet, Gaia, and begin to glimpse our part in it.

The scientific Gaia theory views the Earth as a self-regulating system comprising all life, the air, the ocean and the rocks, that has always kept itself habitable. The theory has been much misunderstood by scientists and some have been unwise enough to condemn it without knowing what it was they condemned. The eminent physicist, Richard Feynman, said “Anyone who claims to understand quantum theory probably does not.” The same is true, although for different reasons, of Gaia theory. Quantum theory is incomprehensible because the universe itself is far stranger than the human mind can contemplate. Gaia theory is difficult to understand because we are not used to thinking about the Earth as a whole system. We often forget that almost all of the science of the nineteenth and twentieth centuries was reductionist. The triumphs of evolutionary and molecular biology that revealed the nature of our genes, the fact that we can almost see the edge of the universe and know the intricate details of inner parts of atoms, all this has come from the patient professional dissection of nature into its component parts. Systems science, which is about the whole not its parts,

has illuminated physiology, the understanding of the way our minds and bodies work, but its successes are lost in the omnipresence of reductionism. Modern science is so steeped in reduction that it is often unaware that there is any other science; the Nobel Laureate biologist, Jacques Monod, even called holists (system scientists) stupid. Gaia theory is a systems science of the Earth, geophysiology, and it requires knowledge of the sciences ranging from astrophysics to zoology and with most other disciplines of science included.

Soon after the start of the trail in the county of Dorset we walk over chalk cliffs, a layer of white rock, more than 1000 feet thick, and made entirely of the shells of algae that lived in the ocean during a period before 65 million years ago. From the clifftop vantage point we can look out to sea where the similar microscopic algae are now living in its surface, and wonder about their remote ancestors, whose shells sedimented onto the sea floor only to be uplifted and dried by the Earth's tectonic forces so as to become these cliffs. The path we tread is not dead ground; we tread on the living Earth. The chalk cliff represents the sequestering of about thirty atmospheres of carbon dioxide gas. Were most of the carbon dioxide in the atmosphere instead of in those fossil shells we would be on a dead planet half as hot as Venus. These algae did their part over tens of millions of years and so made sure that the carbon dioxide of the air was kept at a level conducive to a favorable climate and yet still sufficient for the needs of plants. Their skeletons, on which we stand, are the record of their contribution. Like the algae, all life, including us, evolves in a world that is made from the breath, the blood and the bones of our ancestors.

All living things are recondite and they are difficult to understand because we are not used to the circular logic of systems where cause and effect are inextricably tangled. Consider the complexity of the connection between blooms of algae living in the ocean, these chalk cliffs, and the climate. We could start by researching the way the different species of organisms in the ocean surface live with one another, but we would soon find that we needed to know the chemistry and physics of the ocean surface and the way the algae use the carbon dioxide to make their shells, and the way that CO_2 in the air keeps the Earth warm. But this would be less than half the story that the algae could tell. Through the inspiration of Gaia we discovered that algae could powerfully affect the climate in another way. Their response to the saltiness of the ocean causes them to synthesize the precursor of a gas, dimethyl sulphide, which plays a vital part in the cycle of the essential element sulphur between land and sea, but this gas is also part of Gaia's climate-control mechanism. Dimethyl sulphide oxidizes in the air to become tiny droplets of sulphuric acid, and without these, clouds would be fewer and less dense and the Earth a much hotter place. So we also need to know the chemical reactions in the air,

the physics of cloud formation, the way that clouds affect the Earth's radiation balance and the way all these related processes affect climate. More than this we still have to understand how climate feeds back on the growth of algal blooms, and this is just a small part of Gaia. No wonder the denizens of separated scientific disciplines are uncomfortable with this four-letter word, Gaia, which requires the understanding of a dozen or more apparently unconnected sciences.

As we walk on and leave the chalk cliffs behind we travel further back in time to the Jurassic period, made so familiar by Michael Crichton's novel *Jurassic Park*. We come first to the Purbeck limestone brimming with the man-sized spirals of fossil ammonites, and then on to the dark and somber cliffs of Kimmeridge shale. I recall the thrill of excitement felt when walking on a beach in this region and seeing, as if drawn in chalk, the white skeleton of an ichthyosaur on a flat black slab of shale. Walking on westward we come to Devon with its red sandstone cliffs dating back close to the time when the multicellular life of our world began. After Devon the westward trail takes us on to Cornwall and to Lands End. The cliffs now are of basalt and granite, there are no fossils in these rocks. They are the slag of past volcanoes and tectonic events. These dead rocks were once orange hot and molten but they are still part of our living planet. According to Gaia theory, plate tectonics and the persistence of water are the unique properties of a planet with abundant life. Further on, the trail turns east along North Cornwall's rugged coast until we reach the Cambrian rocks of Devon again where the uplands of Exmoor reach the sea. The trail ends in rocks of the Jurassic period at the Somerset town of Minehead, and from here we return home to the present and to think about our own relationship with Gaia.

Our planet is a unique member of the solar system. It is special not just because it bears life. The moon did not become a living system when the astronauts walked on it, nor would the discovery of an oasis of bacteria on Mars or Europa make them living planets. What makes the Earth special is not just the abundance and diversity of life but that our planet has always kept its material conditions habitable for them. On Earth the evolution of the living organisms and the evolution of their material environment have, since life began, gone forward tightly coupled together, and from this single evolution has emerged the self-regulation of the climate and chemistry, so that always the Earth was habitable. A consequence is that now and in the past the air, the ocean, and the rocks that go to make up the Earth's surface are utterly and impossibly different from those of a dead planet like Mars. They are as different as we ourselves are from a stone statue.

The coast path is a fine place to sense the presence of Gaia but a full understanding is probably beyond the most capable minds alive today. Gaia theory is not contrary to Darwin's great vision; but I suspect that it will be some

time before biologists and geologists collaborate closely enough for us to see the emergence of a truly unified Earth System science. The Oxford biologist, William Hamilton, in a television interview, referred to the Gaian view of evolution as Copernican, but added, we await a Newton to explain how it works.

Science is often said to be ethically neutral and the good or bad consequences of its application are attributed to those who apply it. The philosopher, Mary Midgley, reminded us that Gaia has influence well beyond science. She said,

The reason why the notion of this enclosing whole concerns us is that it corrects a large and disastrous blind spot in our contemporary world view. It reminds us that we are not separate, independent autonomous entities. Since the Enlightenment, the deepest moral efforts of our culture have gone to establishing our freedom as individuals. The campaign has produced great results but like all moral campaigns it is one sided and has serious costs when the wider context is forgotten (2000).

One of these costs is our alienation from the physical world. She went on to say:

We have carefully excluded everything non-human from our value system and reduced that system to terms of individual self interest. We are mystified – as surely no other set of people would be – about how to recognise the claims of the larger whole that surrounds us – the material world of which we are a part. Our moral and physical vocabulary, carefully tailored to the social contract, leaves no language in which to recognise the environmental crisis (2000).

President Havel of the Czech Republic expressed similar thoughts when he was awarded the Freedom Medal of the United States, and he took as the title for his acceptance speech, “We are not here for ourselves alone.” He reminded us that science had replaced religion as the authoritative source of knowledge about life and the cosmos but that modern reductionist science offers no moral guidance. He went on to say that recent holistic science did offer something to fill this moral void. He offered Gaia as something to which we could be accountable. If we could revere our planet with the same respect and love that we gave in the past to God, it would benefit us as well as the Earth. Perhaps those who have faith might see this as God’s will also.

Four billion years of evolution have given us a planet unsurpassed in beauty. We are a part of it and through our eyes Gaia has for the first time seen how beautiful she is. We have justified our ancient feeling for the Earth as an organism and should revere it again, and what better way

to do it than by a pilgrimage. Gaia has been the guardian of life for all of its existence; we reject her care at our peril. We can use technology to buy us time while we reform but we remain accountable for the damage we do. The longer we take the larger the bill. If you put trust in Gaia, it can be a commitment as strong and as joyful as that of a good marriage, one where the partners put their trust in one another and since they are, as Gaia is, mortal, their trust is made even more precious.

James Lovelock

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- See also: Epic of Evolution; Gaia; Gaia Foundation and Earth Community Network; Gaian Mass; Science.

Gandhi, Mohandas (1869–1948)

It is tempting to think that Gandhi may have been an “early environmentalist” and yet there seem to be insuperable problems in embracing this view. He was remarkably reticent on the relationship of humans to nature, and it is striking that he never explicitly initiated an environmental movement, nor does the word “ecology” appear in his writings. Though he was greatly animated by the subject of cow protection, the 50,000 pages of Gandhi’s published writings have otherwise little to convey about trees, animals, vegetation, and landscapes.

It is also doubtful that Gandhi would have contemplated with equanimity the setting aside of tracts of land, forests, and woods as “wilderness areas.” The enterprise of retreating into the forest was familiar to him from Indian traditions, but Gandhi spent an entire lifetime endeavoring to remain other-worldly while wholly enmeshed in the ugly affairs of the world. The problems posed, for example, by the man-eating tigers of Kumaon, made famous by Jim Corbett, would have left less of a moral impression upon him than those problems which are the handiwork of humans who let the brute within them triumph. It is reported that when the English historian Edward Thompson once remarked to Gandhi that wildlife was rapidly disappearing in India, Gandhi replied: “wildlife is decreasing in the jungles, but it is increasing in the towns.”

And yet, few people acquainted with Gandhi's life, or with environmental movements in India, would cavil at the suggestion that Gandhi has been supremely inspirational for Indian environmentalists, and even for the exponents of deep ecology. Arne Naess has testified that from Gandhi he learnt that the power of nonviolence could only be realized after the awareness of "the essential oneness of all life." To comprehend the ecological dimensions of Gandhian thinking and practice, we shall have to go well beyond the ordinary implications conveyed by the categories of "ecology" and "environment," for ethics, ecology, and politics were all indistinguishably interwoven into the fabric of Gandhi's thought and social practices.

The ecological vision of Gandhi's life opens itself before us in myriad ways. First, as nature provides for the largest animals as much as it provides for its smallest creations, so Gandhi allowed this principle to guide him in his political and social relations with every woman and man with whom he came in contact. Peasants and politicians received his equal attention; and in the midst of important political negotiations with senior British officials, he would take the time to tend to his goat. His own grand-niece, pointing to the meticulous care with which Gandhi tended to her personal needs, all the while that he was engaged in complex discussions on Indian independence, tellingly called her short book about him, *Bapu – My Mother*.

Secondly, without being an advocate of wilderness as that is commonly understood today, Gandhi was resolutely of the view that nature should be allowed to take its own course. He scarcely required the verdict of the biologist, wildlife trainer, or zoologist to hold to the view that nature's creatures mind their own business, and that if humans were to do the same, we would not be required to legislate the health of all species. On occasion a cobra would come into Gandhi's room: there were clear instructions that it was not to be killed even if it bit him, though Gandhi did not prevent others from killing snakes. "I do not want to live," wrote Gandhi, "at the cost of the life even of a snake." He was quite willing to share his universe with animals and reptiles, without rendering them into objects of pity, curiosity, or amusement.

Thirdly, Gandhi transformed the idea of waste and rendered it pregnant with meanings that were the inverse of those meanings invested in it by European regimes, which represented the lands that they conquered as "unproductive" and "wasteful," purportedly requiring only the energy and intelligence of the white man to render them useful to humans. Gandhi, contrariwise, was inclined to the view that humans were prone to transform whatever they touched, howsoever fertile, fecund, or productive, into waste. He was pained that people would "pluck masses of delicate blossoms" and fling them in his face or string them around his neck as a garland, as is still

common in India. Nor did he shy away from the subject of human waste. Gandhi made the dreaded subject of the disposal of human waste, a task relegated in India to the "untouchables," as much a matter of national importance as the attainment of political independence and the reform of degraded institutions. Unlike the vast majority of caste Hindus, Gandhi did not allow anyone else to dispose of his waste. His ashrams were repositories for endeavors to change human waste into organic fertilizer, and he was engaged in ceaseless experiments to invent toilets that would be less of a drain on scarce water resources.

Fourthly, and this is a point that cannot be belabored enough, Gandhi did not make of his ecological sensitivities a cult or religion to which unquestioning fealty was demanded. One writer credits him with the saying, "I am a puritan myself but I am catholic towards others." His attitude toward meat is illustrative of his catholicity in many respects. He was himself a strict vegetarian, but European visitors to his ashram accustomed only to meat were served their customary diet. Gandhi construed it as unacceptable coercion to inflict a new diet upon them. He partook of milk and milk products, and his reverence for life and respect for animals did not border on that fanaticism which is sometimes another name for violence.

Gandhi's ecological legacy survives in part among sarvodaya workers, the activists of the Chipko and Narmada Bachao (Save the Narmada) movements, anti-nuclear peacemakers, and many others. Though he was no philosopher of ecology, and can only be called an environmentalist with considerable difficulty, he strikes a remarkable chord with all those who have cared for the environment, loved flowers, practiced vegetarianism, cherished the principles of nonviolence, been conserving of water, resisted the depredations of developers, recycled paper, or accorded animals the dignity of humans. He was a deep ecologist long before the term's theorists had arisen, and one suspects that even the broadest conception of "deep ecology" is not capacious enough to accommodate the radically ecumenical aspects of Gandhi's life. He wrote no ecological treatise, but made one of his life.

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See also: Ahimsa; Bhagavadgita; Bishnoi; Chipko Movement; Deep Ecology; Earth First! and the Earth Liberation Front; Environmental Ethics; Hinduism; India; Macy, Joanna; Naess, Arne; Sarvodaya Shramadana Movement.

P Gardening and Nature Spirituality

One summer day, a child of 11, I woke early, went to my bedroom window, and was embraced by dawn's rose-and-gold. For a timeless moment I was held in the light; I was part of everything and everything was part of me. I did not think of God. God was ill-spoken of in our household, especially by my atheist ex-seminarian father. My family had no religious practices, no sense of the sacred. But that memory has stayed with me as an experience of sacredness and connection, of being held in the world's perfection.

We lived on a farm in south-central Pennsylvania. We kids worked in our father's vegetable garden and spent a lot of time roaming fields and hills, wading in streams, climbing fences, rocks and trees, sliding down leafy ravines. Always a scribbler, I wrote poems about sunsets, clouds and thunderstorms, oak trees, the moon. Sowing something greater than myself, I conceived it as Mother Nature, as Gaia the great mother, and Persephone, bringer of springtime and flowers. These early experiences developed my sense of wonder, and my love of and respect for what David Abram calls the animate Earth – that Earth, reliable and unpredictable, known and mysterious, which has always called me to it and revealed itself as embodying and emanating sacredness.

At age 13, I made my first wildflower garden with plants dug from our woods. This was followed, in my parenting years, by various tiny backyard city gardens. Over the years, gardening taught me that hope and faith are reasonable even in times of drought and despair, and that we humans must not value ourselves too highly, since one small-as-dust seed holds the secret of life and is a key (one of uncountable such) to infinity and eternity.

Even before Rachel Carson's *Silent Spring*, I figured pesticides could only poison our planet and ourselves and chose to garden organically. But, like many gardeners, I grew what I liked or what was in fashion – for my own pleasure. In the mid-1980s I acquired my own acre of that ecological disaster, the great American lawn, and went through a “get one of everything” phase, indulging passions for hostas, lilies, sedums, and other plants. Grass gave way to gardens. When I met the idea of gardening with native plants and creating spaces reflecting the

genius loci, the spirit of the place, I became a native plant gardener. I forgot conventional garden design principles of color, line, texture, balance, and so on (though, in truth, I had never paid much attention to them). I began trying to make my pleasure fit Earth's needs. I focused on incorporation of my gardening into Earth's ways of planting abundantly and irregularly, cycling and recycling through growth, decay and reincorporation.

Now I am trying to make my gardens into biologically diverse, agro-ecological communities – plants (natives or not) growing in sync with each other, feeding us, feeding other life and Earth itself. As these ideas have grown, my reading has shifted from gardening books and magazines to the more philosophical and spiritual approaches of deep ecology, ecofeminism and natural history writing.

Today I live eight miles east of my parents' farm. My garden is several acres of woodland, full of native plants, and an acre of sun gardens. Here I am an Earth mother. Of course I am not *the* Earth mother – just her helper. I call myself a spiritual gardener. That does not mean my gardening is ethereal. It is handwork, hard work, broken nails and grimy knees work. It is practical: I grow food as well as flowers. But my aim is to be in harmony with Earth, with the natural world, to be included in it as a gentle partner – to live in community with the land, as Aldo Leopold said. I am trying to create a healing landscape, a place that heals the human spirit and also heals our Mother Earth. I also aim to create beauty, not the beauty of conventional garden esthetics, but the wilder beauty of the Eastern Deciduous Forest, a beauty that was here before me and will, I hope, continue after me. For me, that is spiritual gardening – concerned with essences, with the eternal cycles of life and death, mystery and wonder.

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See also: Eden and other Gardens; Gardens in Islam; Japanese Gardens.

Gardens in Islam

The Qu'ran refers frequently to paradise as a garden that awaits the faithful on the day of judgment. Many passages elaborate upon this theme, describing the forms, water features, plants, companions – and, most importantly, the spiritual qualities – of paradise. These ideas, along with historic gardens built by Muslims, have contributed to ideas about what has been called “the Islamic garden.” Some of these ideas are unfounded, while other relationships among gardens, Muslim societies and cultures deserve much more attention. It is useful to distinguish between gardens in Islamic religion, historic gardens associated with Muslim societies, and the cultural forms such as painting and poetry that mediate between them.

The gardens of Islamic scripture may be considered under three headings: the garden of creation ('adn = Eden); the gardens of this world (*dunya*); and the paradise gardens (*jannah*) reserved for those who have faith, do good works, fear God, and are righteous. What distinguishes Islam from the other Abrahamic religions is its limited concern for the garden at the beginning of time and its absolute dedication to the garden at the end of time. Only a few passages in the Qur'an refer to the Garden of Eden (e.g., Qur'an 2:35), and while Adam is the first of the prophets, his expulsion from paradise is a relatively minor theme.

The Qur'an devotes somewhat more attention to gardens on Earth, as signs (*ayat*) of Allah's beneficence, providing sustenance for humans as well as for all creatures. Everything that sustains a garden, from rainfall to soils and plants and fruits themselves are provided by Allah who transforms the “land that is dead” (*mawat*): “We do give it life, and produce grain therefrom, of which they do eat / And we produce gardens with palm trees and vines / And we do cause springs to gush forth therein” (36:34). However, worldly gardens are also signs that are “wrongly demanded by the unbelievers” (25:7), which are destroyed and replaced by “bitter fruit, tamarisks, and a few nettle shrubs” (37:17). “How many are the gardens they left behind?” (26:57).

The Qur'an devotes by far the most attention to an eschatology that contrasts a beatific paradise garden with a torturous hell. Those admitted to paradise are righteous, truthful, and faithful. Among their many virtues, they “curb their anger,” “forgive their fellow men,” “seek forgiveness,” “fear Allah,” “attend to prayers,” “keep from evil,” “humble themselves before their Lord,” “avoid profane talk,” “give alms to the destitute,” “follow the straight path,” and “strive for a Paradise as vast as heaven and Earth.” Although some militant and anti-Islamic groups stress the martyr's (*shahid*) place in paradise, drawing usually upon *hadiths*, their arguments obscure the broader Qur'anic vision of paradise as a place where, “they shall hear no idle talk, no sinful speech, only the greeting,

‘Peace! Peace!’” (56:20). Those admitted to paradise shall dwell “in gardens watered by running streams,” in “a cool shade,” “in peace and safety,” “nor shall they ever leave.” They shall “eat therein of every fruit” (47:17), “sit with bashful dark-eyed virgins, as chaste as the sheltered eggs of ostriches” (37:47), and find “two gardens planted by shady trees . . . And beside these there shall be two other gardens of darkest green” (55:46). Most important, they shall be “brought near to their Lord in the gardens of delight” (56:11).

Compared to these scriptural passages, the historical gardens built by Muslim societies have complex cultural origins and associations with Islam. As with other forms of art, architecture, and landscape, they had pre-Islamic and non-Islamic roots. The Prophet's simple grave was open to the sky in a garden (*rawdā*) in Medina. *Shari'a* law proscribes monumental funerary monuments of the sort constructed by dynasties in Persia, Central Asia, and Mogul India. The latter historic gardens were more frequently places of political conquest, social control, and personal pleasure than the places of sober piety enjoined by Islam. Gardens of Andalus and the Mediterranean had antecedent Roman influence while the gardens of Turkey have Byzantine influence, those of Persia have Achaemenid influence, and those of South Asia, Indic influence. Garden forms varied across cultures, and common forms, such as the fourfold *chahar bagh* garden, had changing meanings in space and time.

Arguably, the art, craft, and sciences of gardening have mediated between religious ideals and human behaviors. While Muslim poets and painters often evoke garden scenes and flowers in stock phrases, in the best cases they reinfuse those forms with religious significance. And when anonymous gardeners humbly tend the plants, soils, and creatures of a garden, however mundane or magnificent, they draw daily attention to the true signs of Allah's mercy, beneficence and provision for those who understand and are grateful.

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Gebara, Ivone (1944–)

Ivone Gebara is a Brazilian Sister of Our Lady (Canoneses of St. Augustine) and one of Latin America's leading theologians, writing from the perspective of ecofeminism and liberation theology. For nearly two decades Gebara has been a professor at the Theological Institute of Recife. The author of *Longing for Running Water: Ecofeminism and Liberation*, Gebara articulates an ecofeminist perspective that combines social ecofeminism and holistic ecology, promoting an "urban ecofeminism" shaped by her experiences of working with poor women in Brazilian *favelas* (slum neighborhoods). Gebara claims that ecofeminism is born of "daily life" and thus considers garbage in the street, inadequate healthcare, and other daily survival crises faced by poor women as they provide for family sustenance to be central issues in ecofeminist liberation theology. Gebara proposes a new theological anthropology, model for God, trinitarian language, Christology, and "religious biodiversity" from the perspective of Latin American ecofeminism.

Gebara received notoriety when silenced by the Vatican for two years in 1995. Her difficulties with the Vatican began in 1993 with an interview in the magazine, *VEJA*, in which she said that abortion was not necessarily a sin for poor women. Given the extreme poverty of many women in Brazilian *favelas* and the overpopulation in cities like Sao Paulo and Rio de Janeiro, more births would result in extreme hardship for mothers and children, increased strain on natural resources due to population pressures, decreased access to potable water, etc. For these reasons, Gebara claimed that the "preferential option for the poor" demanded by liberation theology called for more tolerance of women's choice for abortion than that of the official Roman Catholic Church. Following numerous meetings with the President of the Conference of Bishops of Brazil during 1994, Dom Luciana Mendes de Almeida reported the case closed, citing Gebara's commitment to the pain of poor women. The Vatican's Congregation of the Doctrine and Faith disagreed and began a review of her theological writings, interviews, and courses. On 3 June 1995, Gebara was instructed to refrain from speaking, teaching, and writing for a period of two years. She was ordered to move to France for two years of theological reeducation.

Following her period of theological reeducation,

Gebara returned to Brazil and again became active in writing and speaking about ecofeminism. Her strong critique of the anthropocentric and androcentric view of the world found in the Christian tradition continued after her theological education, as she took on the project of reinterpreting "key elements within the Christian tradition for the purpose of reconstructing earth's body, the human body, and our relationship with all living bodies" (Gebara 1999: 6). In 1997–1998, she organized the *Shared Garden* theological program with the Latin American ecofeminist collective, Con-spirando, based in Santiago, Chile. During each of the three "Gardens," which were held in Santiago, Chile (January 1997), in Washington, D.C. (June 1997), and in Recife, Brazil (July 1998), participants from throughout the Americas met to explore themes and principles of an ecofeminist liberation theology. Gebara remains a central figure for the Con-spirando ecofeminist collective and organizes numerous classes, workshops, and conferences throughout Latin America.

Ivone Gebara and the Costa Rican theologian, Elsa Tamez, chart three phases of feminist theology in Latin America, placing themselves in the third stage. The first phase (1970–1980) coincided with the growth of Christian base communities and of liberation theology. Women theologians tended to identify with liberation theology and see themselves as oppressed historical subjects. During this stage the word "feminist" was rejected as a concept imposed from the North. Construction of a more explicitly feminist consciousness grew during the second phase (1980–1990). Efforts were made toward the "feminization of theological concepts" as well as the reconstruction and questioning of biblical texts from a feminist perspective. The third phase (1990 onward) is characterized, according to Gebara and Tamez, by challenges to the patriarchal anthropology and cosmovision in liberation theology itself and by the construction of a Latin American ecofeminism. Gebara in particular has been critical in articulating the premises of holistic ecofeminism in a Latin American context. By holistic ecofeminism, Gebara means that the daily lives of women in slums of the south show the ways "that the exclusion of the poor is to linked to the destruction of their lands" (Gebara 1999: vi) and to women's oppression. For Gebara, just as holism in ecology means that all things are interdependent, so all forms of oppression are interdependent. All oppressions however, are not the same and not experienced by all groups with the same intensity. Her concern is with the most oppressed, which in her context means poor women in urban slums. Thus, Gebara self-consciously articulates an "urban ecofeminism" shaped by the absence of sewers and safe drinking water, poor nutrition, and the numerous daily survival needs of poor women.

Lois Ann Lorentzen

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See also: Christianity (6a) – Roman Catholicism; Christianity (7c) – Liberation Theology; Christianity (7d) – Feminist Theology; Con-spirando Women's Collective (Santiago, Chile); Ecofeminism (various).

Genealogy and Spiritualities of Place (Australia)

Across the Western world many people are engaging in family history research. The internet abounds with sites and email lists for genealogical investigation. Large public libraries and records offices have areas set aside for such research. In post-colonial societies such as Australia, both indigenous and non-indigenous peoples conduct genealogical searches, often for different purposes. For indigenous people who were forcibly removed from their families as children, this research may provide information that will help them reconnect with family and country. For those seeking to make native title claims to traditional lands, genealogical research may offer evidence of connection with place acceptable in a Western court of law. For non-indigenous people, however, the search for origins inherent in genealogical quests involves journeying either imaginatively or actually out of place to the places from which ancestors emigrated.

At the same time indigenous peoples are sometimes seen as bearing a sense or spirituality of place which non-indigenous people both lack and desire. The non-indigenous desire to articulate a spirituality of place can tend toward an appropriation of indigenous spiritualities of place. In this context the genealogical quest emerges as an alternative mode of identification with place, reminding the researcher that she or he is not indigenous to, but nevertheless connected with, both a home place and perhaps a myriad of other more distant places. But the scope of this connectedness to place may be limited by the patterns of genealogical research.

In a particular way family history narratives, both fictional and nonfictional, suggest settler spiritualities of place. Notable among these are the two volumes by Australian poet and environmental activist, Judith Wright. The first, *The Generations of Men* (first published 1959; revised, 1995) traces the story of Wright's grandparents May and Albert. May's settler ancestors are likened to the patriarchs and matriarchs of biblical religion, and both the country left behind and the home they build in Australia are figured as Eden. Wright's genealogical narrative, like Frederick McCubbins' painting, *The Pioneer*, describes a

family history that appears to begin in the place of immigration without reference to the conditions that made possible that immigration. Wright's second genealogical narrative, *The Cry for the Dead* (1981), retells the story of this immigration as a narrative of Aboriginal dispossession and displacement. It relates as well the economic and social circumstances that occasioned the other (albeit voluntary) displacement of her settler ancestors from their former English homes. An acknowledgment of the conditions of being in place for non-Aboriginal Australians forms a context for the articulation of spiritualities of place which involve not only a loving attentiveness to place as displayed, for example, in Wright's poetry, but also an openness to the relationships, responsibilities and claims to place of indigenous peoples.

In Australian Aboriginal contexts, such as that of the Yarralin people described by anthropologist Deborah Bird Rose in *Dingo Makes Us Human* (2000), linear patterns of genealogy are enfolded within the more complex patterns of kinship that describe connectedness to and responsibility for country. For Nyoongah writer Kim Scott in his novel *Benang* (1999), country is the locus for a meandering family history narrative that resists linear patterns, remembers Aboriginal dispossession and displacement, and calls into question non-indigenous narratives of a settler genesis.

As Scott's work suggests, the genealogical quest itself is destabilizing. For family history researchers the search for origins has no end-point: there is always another great someone to discover. But the question of an origin in place remains. Settler relationship to place in Australia has been marked by profound changes to country, such as the destruction of ancient forests and the salination of land. How might our senses of ancestry create new ways of connecting with place?

For poet Gwen Harwood in "Mother Who Gave Me Life" (Harwood 1990: 161–2) the ancestral trail takes us back to our nonhuman primate ancestors. This suggests an intersection between genealogical imaginings and theories of evolution. This kind of genealogical intersection opens a way for Westerners to reimagine their kinship with other-than-humans and to experience their connectedness with the Earth community in new ways. Although a pattern of linearity remains, the paradigm is less the biblical line of fathers and sons than a tree of life.

But this sense of a wider connectedness within the Earth community, while promising much in terms of an ecological spirituality, does not speak directly to a spirituality of place. What might be needed as well is a sense of the ancestry and agency of place. Judith Wright's poem "The Ancestors" (Wright 1994: 111) offers a way to re-imagine our genealogies in conversation with a spirituality of place. In a poem evoking the lush fertility of a rainforest, a curled fern frond waiting to open is an ancestor, whose fetal-like appearance recalls in human generation "the old

ape-knowledge of the embryo." The sleeping ancestors that the place summons gather "round the spring / that feeds the living."

Anne Elvey

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- See also: Aboriginal Spirituality and the New Age in Australia; Australia; Sacred Space/Place; Wright, Judith.

Genesis Farm

Genesis Farm is an ecological learning center and community-supported organic farm located on 220 farmland-preserved acres in western New Jersey. Founded by Dominican Sister Miriam MacGillis in 1980, Genesis Farm has been an important "seed community" for the growth and development of the Green Sisters Movement by providing critical training, informational resources and networking support, all of which have helped Roman Catholic religious sisters start their own ecological ministries across North America. MacGillis is a long-time disciple of Father Thomas Berry, who speaks of the ecological healing of the planet as "the Great Work" of our time (Berry 1999). For Berry, this Great Work involves a resacralization of nature and an embracing of Earth as primary revelation. It also necessitates a conscious recognition of the fundamental interconnectedness of the universe – a consciousness awakened by a greater appreciation of cosmogenesis (the "universe story" as revealed through modern science) as the central and defining sacred narrative of our time (Swimme and Berry 1992). Berry draws inspiration on both of these points from the work of Saint Thomas Aquinas and French priest-paleontologist Pierre Teilhard de Chardin (Berry 1988).

Genesis Farm's ecological learning center offers programs that embody Berry's philosophies and perspectives yet translate them into "on-the-ground" practices such as organic farming, permaculture (sustainable landscape design), natural foods cooking, bioregional activism, straw bale construction, and voluntary simplicity. The farm's "Earth Literacy" courses introduce students to the Earth community in its many variations. There are modules, for

instance, on geology, natural history, plants, star constellations, vermicomposting (worm-based organic waste recycling), seed saving, and even on basic organic chemistry and evolutionary science.

An intensive course called "Exploring the Sacred Universe" immerses students in the cosmic epic of evolution as told by Western science but does so through varied creative media: storytelling, "bodyprayer," ritual, drawing, sculpting, walking meditation, contemplative gardening, and mindful cooking and eating. Miriam MacGillis' work is dedicated to spreading Berry's vision of an interconnected sacred cosmic community; however, she is also a thinker and prophet in her own right, and Genesis Farm's learning center programs reflect MacGillis' unique creativity and perspective as a green visionary.

Some programs, such as MacGillis' popular "Re-Visioning the Vowed Life" course, as the name would suggest, are selectively targeted toward vowed members of Roman Catholic religious congregations. This particular program helps participants explore their religious vows within a broader ecologically conscious context. MacGillis also extends this premise to the need for all of Earth's citizens, regardless of affiliation, "to re-vision the committed life." She explains that "the committed life is about the deep spiritual call to all people, especially those of industrial, non-sustainable cultures, to reconnect with the natural world in our spiritual, ethical, emotional and intellectual roots" (Genesis Farm 2002).

Although sponsored by the Dominican Sisters of Caldwell, New Jersey, Genesis Farm is neither an intentional community nor a religious order. The ecological learning center staff at different times has been made up of sisters from a variety of communities, including Sisters of Charity, Sisters of St. Joseph, Franciscan sisters, Dominican sisters, and even a Brigittine sister from Australia. The staff also includes Protestant and Jewish laymen and laywomen, among those from other religious backgrounds. Many of those who come to study at Genesis Farm are Roman Catholic religious sisters, but the programs also attract (and increasingly so) laypeople from both Catholic and non-Catholic backgrounds. Students from the local area, from all over the United States, and from abroad come to live and study at the farm for anywhere from a weekend to twelve weeks at a time, although interns may commit to one or two years of working there. Through Saint Thomas University in Miami, Earth Literacy students can earn credit toward a Pastoral Ministries Master's Degree.

The farm's mission statement and published materials identify Genesis Farm specifically as "a learning center for *re-inhabiting* the Earth." ("Re-inhabiting" is a term that comes from the philosophy of bioregionalism and is about finding more sustainable ways to live in place in order to heal and reclaim that place from ecological damage. "Re-inhabiting" is thus the antithesis of "making a mess"

and then moving on to colonize new ground.) At Genesis Farm, various examples of reinhabiting dot the landscape. A section of woods and brush where humans are directed *not* to go has been specifically designated a non-human wildlife area in order to conserve vital habitat.

A central feature of Genesis Farm is its "Earth Meditation Pathway," a wooded trail on which the traveler stops at various stations to contemplate his or her spiritual connection to the Earth. The winding trail, designed as a pilgrimage, works with the natural features of the landscape and culminates in a large altar filled with decorated stones that lie under the shelter of cedar trees. Those who travel the trail carry a stone with them from the beginning, holding it in their hand during the progression of meditative stations. At the end, they stop and decorate it with a design that represents their unique commitment or gift to the Earth. The trail configuration thus forms a kind of "stations of the Earth" that opens up the traditional Roman Catholic meditative practice of walking the "stations of the cross" to ecological meanings and green interpretations.

The biodynamic garden, which provides shares of organic produce 52 weeks out of the year to over 250 local families, replaces conventional food that would otherwise be trucked thousands of miles and consume large quantities of fossil fuel. The garden itself is planted with organic heirloom varieties, native to the region – some of the seeds circulated through seed-saving networks. Through biodynamic methods pioneered by Austrian mystic philosopher Rudolf Steiner, Genesis Farm's gardeners work on increasing the vitality of the soil and conserving its minerals and microbes, reinhabiting the farmland in ways that restore and revitalize the soil rather than deplete it.

Modes of "re-inhabitation" on the farm also include two straw bale structures on the property, including a hermitage that was made from straw grown and baled by local farmers. In giving a tour of these structures, MacGillis speaks of how we must look to the Earth's ways of sheltering and providing, and learn from them as our models. For a growing number of student-seekers, Genesis Farm itself has become a model for reinhabiting landscape, culture, community, and religious tradition in ways that are more ecologically sustainable and spiritually satisfying.

Sarah McFarland Taylor

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See also: Aquinas, Thomas; Back to the Land Movements; Berry, Thomas; Bioregionalism; Bioregionalism and the North American Bioregional Congress; Christianity (7e) – Creation Spirituality; Community Supported Agriculture; Epic of Evolution (and adjacent Epic Ritual); Green Sisters Movement; Re-Earthing; Seed, John; Snyder, Gary; Steiner, Rudolf – and Anthroposophy; Swimme, Brian; Teilhard de Chardin; Pierre.

Geomancy

Geomancy is today the Western equivalent of the Chinese fengshui, but previously it referred to the system of divination based on signs derived from the Earth. Configurations of Earth could be either natural (such topographical contours as hills, crevices, large stones, water formations, etc.) or artificial (as in the random patterns made by throwing down a handful of Earth or making markings in sand). By Napoleonic times, geomancy comprised simply predicting on the basis of interpreting lines of haphazard dots made by a pencil on a piece of paper. The contemporary understanding of geomancy, however, is captured by Nigel Pennick who describes it as the "detection of various subtle qualities of land and place, and the modification of those qualities so as to harmonize human activity there with the inherent natural character of the place" (1990: 189). More broadly, geomantic art is understood as psychic communication with nature spirits.

Consequently, geomancy embraces the various nuances of sacred geography that explore and interpret megalithic stone circles and alignments, shrine distribution, creation through augury of the *templum* as marked out sanctuary or temple space, and such hypotheticals as ley lines. Related to this paranormal sensitivity is the practice of dowsing – the esoteric use of a forked stick to locate underground water, minerals or lost objects. "However absurd such an institution as a college of Augurs may to us seem, . . . it had, in part, its origin from nature" (Bell 1790: 253). The underlying principle of geomancy is the acceptance of talismanic meridian currents interlacing the Earth. These are understood as invisible but natural formations of telluric energy that inform any immediate surroundings and that influence behavior and outcomes within that locale. The geomancer – whether dowser, pagan augur or

Earth Mysteries seeker – attempts not only to discern these subtle patterns but also to harness or modify them for an optimal holistic environment.

Michael York

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See also: Earth Mysteries; Fengshui.

SP Geophilia

Extrapolated from E.O. Wilson's concept of biophilia, geophilia asserts that humans have an organic propensity to find wildlands emotionally compelling. It exists as a human tendency to emotionally connect with natural landscapes. While the biophilia hypothesis proposes that humans have a propensity to focus on life and lifelike processes, geophilia relates to our tendency to find compelling the landscape and its component features. This inherent inclination emotionally and spiritually to affiliate with a landscape is, perhaps, part of our evolutionary heritage, associated with genetic fitness, and related to the human propensity for symbolic reasoning. The geophilia hypothesis suggests that landscapes are compelling for humans, and exert significant influence on intellect, intuition, and action. Its cultural expressions are often complex and bear upon prospects for the preservation of wild places.

If geophilia exists as part of our species' evolutionary heritage, then it is probable that there is evolutionary advantage to emotional, intellectual, and spiritual affiliation with land. Research in this area is young, and findings have yet to appear that irrefutably support the proposition that positive response to nature has a partly genetic basis. The most convincing findings are the decisive patterns across diverse cultures, which reveal a preference for natural scenes over urban scenes, as well as the remarkable predilection for geophysical settings that presumably offered survival-related advantages for humans.

Landscape is part of the iconography of every culture. It provides an "image" of the invisible, a physical link to the creative forces contained within it. Not only are there practical bonds of subsistence between peoples and landscapes, there are also potent religious, social, and emotional bonds. It is through these bonds that people develop a sense of place and affinities with particular locales.

Part of the human quest for meaning involves the ordering of landscape into places. Places are centers of cultural and personal meaning; they exist as foci of

emotional attachment. A sense of place unfolds through the religious, moral, and aesthetic discernment of specific locations. Through the sense of place, the boundaries between person and "other" become blurred. People develop a sense of responsibility to the land, which suggests that geophilia is an important element of a land ethic.

Places are fundamental expressions of human involvement with the world. They provide foundations for existence, imparting not only a geographic context to activity, but providing physical and spiritual security and identity. Through natural places humans gain insight into their existence, for there is self-discovery in place. Landscapes are ontologically significant; people are components in the continuation of the land. An individual exists not only in relation to other individuals, but also in concert with the landscape. Through geophilia, self-and-other exist as a continuous and extended entity.

Geophilia is different from bioregionalism in that it just might be inscribed in our DNA; if it indeed exists, it expresses tens of thousands of years of evolutionary encounters with landscape. It is part of our deep psychology, and is rooted in the essential patterns of human life on Earth. Geophilia suggests that humans are *of* the landscape, and that as a species *Homo sapiens* belongs to the land in ways profound. Geophilia reminds us that it is our nature to be resourceful and attentive to the world in which we live. Through reinhabitation we can begin to dwell in ways that respect ecological limits and engender social justice.

In contemporary industrialized cultures, wilderness as sacred space can be understood partly as expression of a land ethic informed by a deferred geophilic response to nature. On some level – perhaps deeply subconscious – geophilia is the motivating force behind the establishment of wildlife refuges, national parks and other conservation lands, and a variety of sacred sites.

Various research projects have documented human-kind's strong preference for natural settings, and the literature in environmental perception is rich with examples. People give aesthetic preference to landscapes in which they can function effectively. People tend to prefer, for example, landscapes with water features, trees with broad canopies, and both panoramic views and sheltered refuges. Aesthetic reactions, then, are not trivial; indeed, they form a template for human behavior that is both ancient and far-reaching.

People in both Western and Eastern societies consistently dislike spatially restricted environments but respond positively to landscapes with moderate to high visual depth. This preference can perhaps be related to our common evolutionary heritage in which our hominid ancestors found abundant plant and animal food on the savannah, as well as lower risk because of visual openness and escape opportunities. Modern humans prefer land-

scapes with savannah-like properties such as openness, scattered trees, and grassy ground cover, and this may be a partly genetic predisposition. Biology tells us that non-human vertebrates show a widespread preference for the kind of environments in which their species prospers. Humans, too, express aesthetic preference for habitats conducive to survival, which suggests that geophilia is a characteristic of our species.

Land is the organic, emotional, and aspirational core of culture. Peoples from diverse geographical regions and cultural traditions express geophilia (or something close to it) through religion; their myths, rituals, totemism, sacred sites, and the like. For many indigenous peoples, this shared identity is sagaciously articulated through the mythologies, wherein people, spirit-beings, natural species, and localities are viewed as interconnected. This extension of self onto landscape enables the articulation of personal traits in terms of graspable phenomena. Not only is landscape understood as the material manifestation of the highest values and ideals, but it is also understood as a psychological and physiological continuance of the individual.

Rituals and myths arouse emotions; they heighten awareness, bring fresh insight, and enable us to become conscious of connections between the world and ourselves. People construct mythologies to fit the land; to affirm and express their place in the world. In the industrialized world, the substitution of these Earth-based mythologies for materialism parallels the loss of fundamental contact with the land, and it relates to a host of problems that are becoming increasingly apparent and dangerous. Often, our solutions are inadequate to solve the ecological problems facing us – the very directions of our thoughts and policies repeatedly lead us deeper into trouble. Any solution derived from the same paradigm as the problem seems only to worsen things. Moreover, our emotions are no longer structured to make us *want* to deal adequately with those problems. We seem unable to stop desiring the very things that are destroying the world we long to treat with respect.

Geophobia, the corollary of geophilia, is the fearful response to landscapes. In some cases, geophobic responses sharpen perceptions and make us physically and emotionally more agile; fear of exposed heights and dark caves have, in some instances, adaptive value. Geophobia may correlate with some sacred sites (special caves, mountains, etc.) through the notion that visiting these sites by overcoming our earthly fears can bring us closer to spiritual enlightenment. Mediating between the ancestral realm and the human realm, such landscapes serve as indexes of sacred as well as secular events.

Geophilia may provide the basis for the ethics of both radical ecology and mainstream environmentalism. Radical ecology purports to be largely altruistic, concerned with preserving the *intrinsic integrity* of nature.

Mainstream environmentalism, on the other hand, is most concerned with preserving the *utilitarian value* of nature. Combining the strands of these two perspectives, an ethic based on our affinity for landscape can be understood partly as an ethic of altruistic selfishness.

Paul Faulstich

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Ghost Dance

While the Ghost Dance is widely known and has been studied in great detail, scholars have often emphasized social, political, and symbolic interactions between Indians and non-natives in the context of the dances without paying enough attention to the role and significance of a tremendously important third party: the Earth itself. Our present task, then, is to chart a broad map of the profound religious and discursive relationship of the Ghost Dance to nature.

James Mooney's classic assessment of Ghost Dance doctrine offers a reasonable starting point for understanding the phenomenon:

The great underlying principle of the Ghost dance is that the time will come when the whole Indian race, living and dead, will be reunited upon a regenerated earth, to live a life of aboriginal happiness, forever free from death, disease, and misery. . . . The white race, being alien and secondary and hardly real, has no point in this scheme of aboriginal regeneration, and will be left behind with other things of earth that have served their temporary purpose, or else will cease entirely to exist (Mooney 1991: 777).

In terms of a bare historical sketch, the Ghost Dance came toward the end – in ways, marked the end – of a long history of Native American millennial movements and was practiced widely throughout the West by groups as diverse as the Ute and the Arapaho, who embraced the

dance according to specific needs and channeled it through preexisting traditions. The dance had two seminal leaders: Wodziwob, whose version of the dance was promulgated in 1869, and Wovoka, whose dance emerged twenty years later. The phenomenon culminated in tremendous violence on 29 December 1890. Suspected by government officials, who were in turn driven by inflated and inflammatory media reports and public panic, to be mobilizing armed resistance to the local non-native population, an exhausted group of several hundred Lakota Indians were surrounded and killed at Wounded Knee Creek in South Dakota. Few survived, dashing the hopes of a despondent people who sought spiritual relief from earthly suffering in the Ghost Dance.

While the Ghost Dance signaled a nadir in Indian/white relations and the end of physical resistance to non-native domination, it marked the florescence if not beginning of a new form of political resistance to the dominant society: Pan-Indianism, wherein native peoples self-consciously emphasize their solidarity *vis-à-vis* a common history in order to seek a better common future. Moreover, while the millennial agenda of the dance was not realized, it did represent a this-worldly triumph of sorts in symbolic and rhetorical terms. Through the appropriation and recasting of tropes drawn in part from the dominant culture (namely, messianic apocalypticism), Ghost dancers refined a strategy of cultural criticism that has become one hallmark of Native American political and legal agitation to the present. Speaking in the oppressor's terms – of paradise lost, for example – has enabled Native Americans to make their grievances audible to an otherwise inattentive and detached nation. Their grievances, more often than not, concern a paradise lost in concrete, historical terms: the land.

Violation of the land was the ultimate source of Native American anxieties expressed through the Ghost Dance. The 1860s–1890s was an era of unprecedented non-native incursion into the West. Railroad tracks cut the land, treaties were crafted and recrafted, territories and states came into being, and Indians were pushed onto ever-shrinking reservations. This process had profound economic and political effects on all tribes. Traditional modes of subsistence were rendered untenable and old alliances and antagonisms took on new and unpredictable configurations. Along with economic and social chaos, Native American religious life was threatened by the newcomers and their treatment of the land. Generally speaking, Native Americans view themselves – now as then – in a kin relationship to nature, which entails obligations of responsibility and reciprocity. Non-native effects upon the landscape imperiled this relationship, causing many Indians to look for novel remedies to their predicament.

If violation of the land was a cause of the Ghost Dance, restoration of the land was its goal. Moreover, religious restoration of the land was imagined to be thoroughgoing,

eliminating all traces of pollution and decay and restoring nature and her kin to their rightful place. Here we see an inversion of the moral order of European savagism, even while its basic structure is reproduced. That is, Indians aligned themselves with and as nature *vis-à-vis* civilization and its representatives. Thus, the restoration of nature and “natural” Indian traditions entailed and would be catalyzed by explicit rejections of certain markers of “civilization,” including, among other things, metal and elements of Western dress (though not including train travel, writing, and messiah imagery). In this way, restoring “nature” was both a goal and a mechanism of the Ghost Dance.

What is more, nature herself was understood to be the primary agent – final cause – of millennial justice. In a radical eruption of the natural order, the land would consume and cover all traces of non-native society. Consider an Arapaho song recorded by Mooney:

My children, my children,
Look! The earth is about to move,
Look! The earth is about to move.
My father tells me so,
My father tells me so (Mooney 1991: 973).

Such imagery suggests comparison with other apocalyptic movements, including Christian ones, wherein social order is imagined to be restored through and as the restoration of the natural order of the world. With the Ghost Dance, as with so many religious movements that image a better world, nature takes on mythic proportions, acting as the hero in an all too historical drama.

Greg Johnson

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- See also: Dance; Lakota; Lakota Sun Dance.

Gimbutas, Marija (1921–1994)

Marija Gimbutiene/Gimbutas, a Lithuanian archeologist, contributed to major advances in the understanding of Bronze Age Indo-European migrations. Author of 22 books and more than 200 articles, she directed five excavations in Europe. As Professor of Archeology at the University of California, Los Angeles, Gimbutas became director of its Indo-European Studies program. She was the first prominently to propose an identity between the *kurgan*-burying peoples of Central Asia and the speakers of proto-Indo-European. The *kurgan* or “barrow” refers to the prehistoric burial mounds used in the steppes of South Russia. While the Indo-European homeland remains a contentious and debatable question within the fields of archeology and comparative linguistics, Gimbutas’ locating the *Urheimat* with the lower Volga steppe lands and Kazakstan remains the most plausible among alternate possibilities (e.g., central or northern Europe, Anatolia or in the Balkans.) As the chief articulator of the conventional conquest theory of language, she became a leading opponent to Colin Renfrew’s “wave-of-advance” theory, namely, that the Indo-European languages spread gradually across Europe with the diffusion of new agricultural techniques. Gimbutas coined the term “archeomythology” to describe her own methodology as a multidisciplinary approach that combines the study of mythology with archeology, linguistics, comparative religion, ethnology and cultural history. In this respect, she adverts the growing diversity and trend toward a less exclusively specialized focus within the academic study of prehistoric society.

On the other hand, Gimbutas’ later theory concerning a goddess-centered belief system underlying East European Neolithic communities is much more controversial and unaccepted in archeological circles. Gimbutas claims that the non-belligerent matrifocal societies stretching from the Balkans to Crete were later destroyed by patriarchal Indo-European invaders in a westward expansion between 4000 and 3500 B.C.E. from their original homeland. For the matrilineal societies of Old Europe themselves, Gimbutas posited the existence of three goddesses: the Bird and Snake Goddess – principally a water-mother, the Great Goddess of Life, Death and Regeneration; a moon-goddess; and, with the emergence of agriculture, the Pregnant Vegetation Goddess – an Earth-mother who develops from the Great Goddess. She argued that these Goddess worshippers delighted in nature and the crafting of sophisticated pottery and avoided war and the production of military weaponry. Her critics reject what they consider subjective and partial interpretations. Nonetheless, this lack of overall academic endorsement has not prevented Gimbutas from becoming an iconic champion in the eyes of many within contemporary goddess spirituality. Her later works, *The Goddesses and Gods of Old Europe, 6500–3500 B.C.* (1974, 1982), *The Language*

of the Goddess (1989), and *The Civilization of the Goddess* (1991), as well as *The Living Goddess* (1999) edited by Miriam Robbins Dexter, form the corpus of goddess feminists’ belief and/or focus on a “golden age” in “Old Europe” consisting of sedentary, peaceful, egalitarian societies who worshipped a female deity. In this respect, Gimbutas continues to play a central role in the contemporary movement that values femininity and nature in contrast to industrial pollution and its supporting belief systems in which the Earth becomes allegedly devalued as simply something to be technologically used rather than organically nurtured.

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- See also: Christ, Carol; Ecofeminism (various); Eisler, Riane; Feminist Spirituality Movement; Goddesses – History of; Griffin, Susan; Merchant, Carolyn; Paganism – Contemporary; Sexuality and Green Consciousness; Wicca.

Glacken, Clarence James (1909–1989)

Clarence James Glacken authored what many consider to be the most important book on the history of Western ideas about nature, *Traces on the Rhodian Shore: Nature and Culture in Western Thought from Ancient Times to the End of the Eighteenth Century* (1st edn, 1967). A Professor of geography at the University of California, Glacken produced his magnum opus through the long-standing support of the Institute of Social Science at Berkeley. Declining health prevented him from fulfilling his dream of bringing his monumental study up to contemporary times.

Glacken’s long-term interest in how ideas affect the landscape arose out of his own role in public service and his exposure to a variety of cultures during decades of social and environmental crisis. Upon graduating from college at Berkeley in the early 1930s he worked with Dust Bowl refugees in California’s Central Valley, and traveled through Europe and Asia. During World War II he served

in the Army as a specialist in Japanese language and culture, and afterward authored studies of deforestation in Korea, and *The Great Loochoo: A Study of Okinawan Village Life* (1955).

Glacken's great work examined the depths to which early Western thinkers focused their interests on nature. He included important chapters on both classical Greco-Roman ideas of nature (derived from various philosophical treatises and evocative poetry) and those central to the biblical tradition, which frequently extol creation's marvels and beauties. He laid bare the remarkable extent to which medieval religious writers paid attention to *natura* and environmental custodianship, writing over 350 pages before turning to Renaissance thought (including the later Renaissance and thus seventeenth-century ideas), and after that, to the eighteenth-century Enlightenment mind. In the main, he covered religious thought, and a key argument in the book is that much in the medieval literature reveals applied theology, or the practical stewardship of God's world, while modernity is marked more by theoretical constructs to explain natural laws, sometimes (but actually not that often) with a view toward controlling nature. *Traces* presented an alternative way of viewing environmental history, giving new attention to Western spiritual and ecological insights about the care and management of environments through three and a half millennia. Glacken demonstrated what cannot be as clearly shown from any other part of the world: that, in the West, there was a continuous concern among thinkers either to care for environments or create better ones. The implication is that "Environmentalism," then, has been born out of the Western tradition and its religious lineaments. The book is thus a neglected yet brilliant foil to the (earlier, pre-qualified) claims of the medievalist Lynn White, Jr. that Christianity was basically an anthropocentric, environmentally unfriendly tradition, responsible in the long run for the present environmental crisis. Not only does Glacken's account of medieval (especially monastic) environmental ideals reveal White's neglect of vital materials, but the history of post-medieval environmentalism is shown to be littered with Christian thinkers of one type or another. Glacken is well aware, however, that Western ideas and principles cannot be properly understood without attending above all to both the symbioses and enduring tensions between the Greco-Roman and Judeo-Christian apprehensions of the cosmos. Both these major trajectories have impetuses that are sacralizing and secularizing, nature-conserving and utilitarian, cyclical and linear.

Glacken's work did not examine the modern wilderness movement; it stressed how the image of the cultivated garden prevails in Western environmental conceptions. Thus wild places are thought to be capable of being transformed into utopian spaces because they are away from areas already "spoilt." Yet we must remember that he was

documenting the thoughts of intellectuals, not the conditions of environments themselves. Whole wilderness areas were left unsubdued for centuries even to the eighteenth century, inhabited by subsistence dwellers, and had a profound impact on others (let us say on the edges of forests) who did not reflect on their surroundings. Glacken's greatness lies in bringing religion and nature into interface with a patient attention to the resulting complexities, and in his clever detailing of the threads that make up a rich historical tapestry. Unfortunately, his declining health in the 1970s limited the amount of attention he could give to the Americas in the nineteenth and twentieth centuries.

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See also: Ecological Anthropology; Ecology and Religion; White, Lynn – Thesis of.

Glastonbury

The small southwest English town of Glastonbury, located in the lowlands and reclaimed wetlands of Somerset county, touts a long history as a center of religious pilgrimage. In medieval times it attracted pilgrims from across Europe, and its abbey was, for a time, the second most powerful landowner in all of Britain. When the abbey's fortunes had fallen in the late twelfth century, monks purportedly discovered the remains of King Arthur in the abbey grounds. Further legends – about Joseph of Arimathea's voyage with his nephew, the young Jesus, to nearby Wirral Hill, and about the visits of Saints Patrick, Bridget, Columba, and others – are traced back by historians to this time, though they purportedly occurred centuries earlier.

Glastonbury has attracted scattered bands of poets, artists, and mystics throughout the last two centuries, its spiritual and antiquarian reputation promoted by Alfred Lord Tennyson, John Cowper Powys (author of *A Glastonbury Romance*), occultist Dion Fortune, and more recently Arthurian scholar Geoffrey Ashe and author Marion Zimmer Bradley (*The Mists of Avalon*). In the 1930s Canadian artist Katherine Maltwood claimed to find the remnants of a massive terrestrial zodiac carved into the landscape surrounding the town. Since the 1960s Glastonbury has

become established once again as a mecca for pilgrims, not only Christians but an eclectic variety of New Age believers, neo-pagan and Theosophical occultists, Goddess devotees, neo-Druids and Celtic revivalists, for many of whom it is equated with the legendary Isle of Avalon. With its strangely shaped 500-foot-high tor (rocky peak) and its numerous wells and springs, it is variously believed to be a center of mysterious Earth energies, a convergence point of ley lines, an ancient place of Druid learning, a pre-Christian Goddess-worshipping site, and a center of UFO activities.

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See also: Celtic Spirituality; Druids and Druidry; Earth Mysteries; New Age; Paganism – Contemporary; Stonehenge.

SP Globalization

What is called globalization today has deep roots in history. We find first expressions of it in the empires of the Ancient Near East and the Hellenistic-Roman empires, which subjugated peoples and occupied their land in order to exploit their resources and labor. Even in these early cases the conquest went hand in hand not only with socio-economic extraction of wealth (tribute) but with a legitimizing imperial religion (e.g., Roman emperor worship) and ecological destruction (e.g., the deforestation of Italy). In imperial systems there is always a complex interaction between economic, political/military, social, ecological and ideological/religious dimensions.

In modern times since the fifteenth century we have observed different phases of empire-building. The conquista of the sixteenth century is characterized by direct violence. Mercantilist colonialism (seventeenth and eighteenth century) dominated and exploited by triangular trade (manufactured goods–slaves–raw materials/monocultures). The national liberal imperialism of the nineteenth and early twentieth century linked industrial capitalism, waged labor and finance-dominated trade. In the second part of the twentieth century the transnational economy dominated by the USA emerged, eventually leading to global neo-liberalism.

It is capital accumulation on the basis of private property which drives and determines the modern interaction of globalization, religion and nature. This is not only true in macro-economic terms but also in regard to human behavior. In the early days of the money economy, Aristotle differentiated between the need-oriented household economy and the money-accumulation economy. The former includes local markets and confines itself to the limits of the natural environment and the life of the community. The latter concentrates on long-distance trade and the business of interest-bearing loans. As money creates the desire for limitless growth in individuals, giving the illusion of eternal life, it destroys the community and is against nature. Therefore, according to Aristotle, money-accumulation including charging interest is to be rejected. Jesus in a similar way calls for the decision between God and Mammon, adding the *religious* dimension to the argument, but religion not as one dimension beside others – as in bourgeois religiosity. Rather, Mammon is seen as the fetish, the idol, asking for the sacrifice of the whole of life. For the followers of God all human needs will be cared for by nature given abundantly by God's grace and full of beauty, while worshipping Mammon is destroying life (Matt. 6:19–34; 16:26).

The ideologists of the modern age promote the contrary. Human beings by nature try to expand their power and wealth (Hobbes). Francis Bacon in his *New Organon of the Sciences* (1620) introduces science and technology as instruments bringing greater power – for one's own nation and over other nations and nature. Being responsible for the trials of the women known as witches, he recommends torturing nature in order to extract her secrets. Violence against nature goes hand in hand with the violence against women and indigenous peoples (in German *Naturvölker*).

It was John Locke who in his *Second Treatise of Government* (1690) showed how money helps to increase power and wealth beyond need. The key category is "property." Because man has property in his own person and, therefore, his labor "whatsoever then he removes out of the State that Nature has provided, and left it in, he hath mixed his Labour with, and joyned [sic] to it something that is his own, and thereby makes it his Property" (B27). So the Earth is being regarded as absolute private property. In B36ff., he develops the thesis that money, because it is durable, has been introduced by "tacit agreement" (B50) in order to allow industrious people to get "larger Possessions, and a Right to them" beyond use. As a motive he identifies the "desire of having more than Men needed" (B37). "Government has no other end but the preservation of Property" (B94). Locke religiously legitimizes the appropriation of the Earth by quoting Gen. 1:26–28: "God, by commanding to subdue, gave Authority so far to appropriate" (B35). And God gave the Earth to the "Industrious and the Rational" (B34).

Behind Locke's concept of property lies the Roman legal idea of "dominium." This means absolute power and gives the owner the right to do as he pleases with his property: "Ownership is the right to use and to consume (*ius utendi et abutendi*)."

This concept was taken over by the Code Napoleon (Art. 544), which was the basis for later constitutions in Europe: "Ownership is the right to enjoy and use things in the most absolute manner." All these arguments contain the Western capitalist system in a nutshell: industrious and rational men have the absolute, religiously justified right to use the Earth (and slave and waged labor according to Locke) limitlessly to follow their desire to increase their possessions by money mechanisms to lead a comfortable life – not taking into account the consequences for people and nature. And government has to protect this accumulation of property by money mechanisms.

Karl Marx was the first to analyze the fetishist (i.e., religious character of money and capital accumulation on the basis of private property). He also saw that it leads to the destruction of people and nature: "The capitalist production develops only the technique and the combination of the production process in society by at the same time undermining the fountains of all wealth: the Earth and the worker" (Marx 1969: 529f.).

Neo-liberalism – winning the day since the 1980s and even more after the breakdown of the competing system – is the attempt to globalize this fetishist system of unfettered capital accumulation by turning all of life into a commodity. The legal instrument for doing so is the Trade Related Intellectual Property Rights (TRIPs) Agreement in the framework of the World Trade Organization (WTO). By the right to patent plants, animals and now even the genes of human beings, transnational corporations (TNCs) increasingly control all natural resources (e.g., seeds, therapeutic plants and bacteria, more and more forests and even the human genome) for the single purpose of private capital accumulation. Consequently more and more biodiversity is being destroyed and the nutrition and medical care of the world's population endangered.

Politically U.S.-led Western state power is being used to deregulate, privatize and liberalize the economic mechanisms dominated by finance capital. Its agents are undemocratic international institutions like the G8, WTO, IMF and World Bank. Their institutional policies are speeding up capital accumulation by speculation, tax flight, pressurizing governments by the threat of capital flight to cut taxes and subsidize profits, and using the privatized media to induce the pseudo-religious, neo-liberal values of limitless consumption and money into people's hearts and minds ("cult-marketing"). The result is ever-increasing poverty, exclusion, social degradation, violence, ecological destruction and the decline of democratic participation of the people, not only in the impoverished but also in the rich countries. One example

of imperial politics consciously tolerating natural disaster is the decision of the Bush administration in 2001 not to ratify the international Kyoto Protocol asking for the reduction of CO₂-emissions, with the simple argument that this would be bad for the economy, (i.e., capital accumulation).

As the large majority of governments has been co-opted or disarmed by the power of capital and public deficits, opposition and alternative vision and spirituality mainly come from civil society. There has been some support from the UNDP's Human Development Reports. These have developed the "Human Development Index" measuring economic success not only as growth in monetary terms like the GNPs, but adding social and ecological indicators. Since the UN is becoming increasingly weakened by capital and the Western powers, the main actors remain the social, ecological and human rights movements. In industrial capitalism it was the labor movement that created countervailing power. In neo-liberalism, capitalism has become global and total, affecting all dimensions of society and life. Consequently all sectors have started to organize resistance: women against the feminization of poverty, Indian farmers against the manipulation and monopolization of seeds and against dams, and indigenous people in Latin America against the destruction of the rainforests and their own social, cultural and religious life. Fishing communities protest against the commercial overfishing of their waters, the majority of Bolivian society against the privatizing of water, French farmers against the "McDonaldization" of the globe – and a growing part of the labor movement is joining in.

What are these people's movements worldwide asking for? There is no blueprint for one alternative top-down system as real socialism thought. The key demand is to give people back the control over their culture and economies, building the economy from the bottom up based on social, ecological and democratic criteria. The key question is: how to serve the concrete life of people in harmony with nature? Given the present power situation a double strategy is being followed.

On the one hand, people can satisfy their basic needs in harmony with nature as much as possible by themselves at the local and regional level, breaking the fetishist totalitarianism of capital accumulation. Douthwaite (1996) has identified four crucial areas: interest-free exchange (LETS); cooperative banking leaving people's savings in the region; decentralized ecological energy production (sun, water, wind, biomass); local ecological food production and marketing. The latter has gained even broader support in Europe after the disasters of industrialized agriculture (BSE etc.).

On the other hand, new beginnings at the local level will be constantly destroyed if the macro-structures of the markets are not politically regulated according to social, ecological and democratic criteria. Therefore, the

movements will have to form alliances at all levels, including the global, as has been shown in the successful campaigns against the total rule of TNCs through the Multilateral Agreement on Investments (MAI), the new liberalization round of the WTO (Seattle 1999), the (often illegitimate) debt (Jubilee 2000) and the undemocratic structures of IMF, World Bank and G8 (Prague 2000, Genoa 2001). A special emphasis will need to be given to the democratic control of the financial markets including the taxing of speculative capital transactions (Tobin tax), the drying out of tax havens to curb tax flight, regaining the control of capital flows in order to stop the "hot money" which caused the Asian crisis (Kairos Europa, Pax Christi, ATTAC and other movements).

Breaking the absoluteness of property is the underlying issue at the local as well as the global level. Even the Romans had the concept of "*patrimonium*" besides "dominium." It means the property which has to be preserved as a legacy for children and grandchildren. So we need legal systems with a variety of property forms: personal property for basic needs-related use, cooperative, communal and national ownership of public goods and services, and private ownership of the means of production – this being linked to the obligation to also serve life and the common good (e.g., as expressed in the German and Swiss constitutions). This will help humanity protect nature from being exploited, polluted, degraded, and communities from losing control over their public goods (like water) and services. This will also allow nations to redistribute privately produced wealth through progressive tax systems. At present globalization is increasingly eroding these basic rights.

The political will to implement changes has to be created by the people affected. Here the religions have a pivotal role. There is no religion allowing for the basic values of capitalism like greed, egoistic individualistic competition, consumption and a limitless accumulation of wealth at the cost of people and the Earth. Particularly, indigenous peoples clearly state that the Earth does not belong to human beings, but human beings belong to the Earth. In 2000 there was a colloquium which brought together people from the Judeo-Christian traditions, Buddhism, Islam and Hinduism who expressed their determination to work for the redirection of the global economy and the capitalist culture in order to stop the destruction of people and nature. Over the last century the ecumenical movement has challenged the adaptation of the post-Constantinian churches to power and money. Since 1997/1998 the World Council of Churches and the denominational world communions have been engaging the churches in a "committed process of recognition, education and confession (*processus confessionis*)" against economic injustice and destruction of nature" (World Alliance of Reformed Churches, The 23rd General Council). This means that the issue of globalization, religion and

nature has been qualified as a question of the same seriousness as Nazism in Germany and apartheid in South Africa – affecting not only the practice but also the being of the Church.

Ulrich Duchrow

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G-O Road (Northern California)

As early as 1963 the U.S. Forest Service began considering plans to build a two-lane, paved road 55 miles from Gasquet to Orleans (G-O Road) through a remote and rugged area of northern California, rich in Douglas fir and in the traditions of Karuk, Tolawa, and Yurok peoples. The Forest Service claimed it needed the road to maintain the Six Rivers National Forest, to help control fires, to provide access to recreation, and to allow loggers to haul timber to mills in Crescent City. After creation of the Redwood National Park preserved 70,000 acres of the Forest in 1968, the timber industry increased pressure to build the road.

The Indian peoples believed that some 13,500 acres in the Blue Creek Unit of the Forest, a span of about six miles in the middle of the proposed G-O Road corridor, were sacred, places where they could engage in spiritual activity. There, approximately 140 elders meditated and guided adolescents through rites of passage, and tribal healers made medicine, gaining power to lead such rituals as the White Deerskin Dance of the World Renewal Ceremony. These rituals were meaningful only if leaders became empowered by visiting the sacred sites in solitude surrounded by unspoiled natural environment. They contended that any manmade interference with nature in this area prevented their exercising religion freely as guaranteed by the First Amendment of the U.S. Constitution.

This belief was explained and documented by the *American Indian Religious Freedom Act Report* and by an anthropological consulting firm hired by the Forest Service. The consultants concluded that "intrusions on the sanctity of the Blue Creek high country are . . . potentially destructive of the very core of Northwest [Indian] religious beliefs and practices" (Theodoratus 1979: 420).

Then, in 1981, the Keeper of the National Register of Historic Places declared the area eligible for special status, and the national Chairman of the Advisory Council on Historic Preservation wrote a letter to the Secretary of Agriculture, superior to the Chief of the Forest Service. He maintained ". . . it is fundamentally wrong to so seriously impact an area held sacred by a group of American citizens, if any feasible alternatives exist" (Aldrich 1982: 1). Yet the Forest Service ignored these admonitions and proceeded with plans to build the road. It claimed it could mitigate the adverse impact on Indian religion by not building the road over any "archeological areas" and by protecting specific religious sites from logging activity.

With their administrative remedies exhausted, Indian leaders turned to the judiciary. The U.S. District Court found evidence to support the Theodoratus Report and issued an injunction to stop the road. The Court of Appeals affirmed, but a 5-3 U.S. Supreme Court reversed.

Writing for the Court's majority, Justice Sandra Day O'Connor relied on a rational basis test rather than strict

scrutiny, which is usually applied in cases involving fundamental rights or insular minorities. Instead of demanding that the government justify the road on grounds that it was necessary to achieve a compelling state interest, she said the road could be built if it were rationally related to a legitimate governmental purpose. While she acknowledged that the G-O Road "could have devastating effects on traditional Indian religious practices," she perceived that building the road was merely an internal governmental decision related to the use of its own property. Further, she wrote,

. . . the affected individuals [would not] be coerced by the Government's action into violating their religious beliefs; nor would . . . governmental action penalize [religious] activity by denying any person an equal share of the rights, benefits, and privileges enjoyed by other citizens (*Lyng v. Northwest Indian Cemetery Protective Association* 1988: 485 U.S. 439, 450).

She claimed the road was merely an "incidental" interference with religious freedom, not a deliberate government attack on a person's faith. Therefore, it was permissible.

It is true that members of the Indian community were not prohibited from going through the motions of meditation, making medicine, or performing ceremonies. In that sense the G-O Road would not infringe upon the free exercise of religion. But the Supreme Court decision failed to take into account the nature of Indian religions. Unless the high country remained sacred, where leaders and members of the community could find privacy, silence, and undisturbed natural conditions, their religious acts were meaningless.

Nearly two years after the Court's decision, on 2 January 1990, the Northwest Indian Cemetery Protective Association and three individuals appealed to the Inter-American Commission on Human Rights of the Organization of American States. They stated that they had spent their legal remedies under U.S. law and requested the OAS to intervene and protect their basic, human rights. They supported their petition by citing provisions in two international documents.

American Declaration of the Rights and Duties of Man, Article III: "Every person has the right freely to profess a religious faith, and to manifest and practice it both in public and in private."

American Convention on Human Rights, Article 12: "Everyone has the right to freedom of conscience and of religion. This right includes freedom to maintain . . . one's religion or beliefs . . ."

Further, the Tolowa Nation Tribal Council adopted a formal resolution supporting the request, which the parties attached to their petition.

Eleven months later, on 27 November 1990, the petitioners wrote to OAS, withdrawing their request. They said, Congress has “passed certain legislation that prohibits construction of the G-O Road.” This legislation, the Smith River National Recreation Area Act, signed by President Bush on November 16, preserved most of the natural surroundings in the region (PL101-612).

It was a long struggle with an abrupt and curious conclusion. Persons from three Indian tribes failed to persuade the Forest Service and the U.S. Supreme Court to guarantee the right to exercise their religion in a national forest. But, finally, they were able to join with environmentalists and convince Congress to prevent the government from building a paved road through their sacred lands in northern California.

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- See also: Black Mesa; Deloria, Vine, Jr.; Devils Tower, *Mato Tipi*, or Bears Lodge; Indigenous Environmental Network; Law, Religion, and Native American Lands; Manifest Destiny.

Goddesses – History of

Books with titles such as *The Rebirth of the Goddess* are now common but were unheard of thirty years ago, at least as serious offerings to theological literature written in European languages. While there were Pagan groups who worshipped goddesses before the second wave of feminism, beginning in the late sixties and early seventies of the twentieth century, there is no question that, at least in Euro-American contexts, feminism spurred the growth and acceptability of female imagery and language about deity immensely. Today, the “rebirth” of the goddess is not only commonplace in Pagan religions, but is also a theological issue for Jews and Christians, as is demonstrated by the many controversies about non-sexist liturgies in those religions.

A title such as “rebirth of the Goddess” contains two theses that deserve examination. First is that it is proper and permissible to imagine the deity in female terms. Second is that this language represents a “rebirth,” a return to something familiar; it is not a new phenomenon or an unheard of feminist innovation. However, a title such as “rebirth of the Goddess” hides another thesis important to the history of goddesses: some religions are not experiencing a “rebirth” of the goddess because they never lost her in the first place. This third thesis strengthens the cogency of the first thesis while demonstrating the anomaly of a religious context in which the “rebirth” of the goddess could be necessary or controversial.

However, the first two theses are contentious for large segments of the European and North American public, who take for granted the convention that deity could only

be properly addressed in male terms and regard it as silly, offensive, or both to suggest the deity could be addressed as female. But at the beginning of the third millennium, many passionately religious people in the Euro-American context do call the deity with whom they relate “she” and “goddess.” They also often claim that such namings of deity are a vast improvement over the male-only language and imagery for deity with which they grew up, especially concerning reverence for nature and environmentally sound practices. However, many other people who care passionately about the environment and about the dignity of women regard goddess worship and discussions about the antiquity and ubiquity of such practices as a diversion from dealing with more critical issues, a luxury that is costly when so much is at stake environmentally and politically.

Many feminist theologians and scholars of religion who work to reconstruct goddess worship base their case on logic, on knowledge of how religious symbols work, rather than on historical precedent. Feminist Christians and Jews rely on the argument that gender cannot be an attribute of deity but is only an analogy based on familiar human experiences. Therefore, the acceptability of female analogies for deity has much more to do with society than with deity, and the horror with which some religious people react to the image of “goddess” says a great deal about their views of society and of women. For obvious reasons, historical precedent is not the first line of argumentation for such Jewish and Christian theologians, though they do appeal to the nearly universal use of female images of deity in world religions.

But what of the claim that contemporary Paganism represents a “rebirth” of the Goddesses worshipped in ancient times? This argument is more complex and difficult to sustain. For some contemporary Pagans, it is important to claim that their practices involve direct historical continuity with ancient religions practiced in pre-Christian times and, perhaps, in an underground fashion, throughout the Christian era until it was safe for them to be practiced openly again in recent years. Some contemporary Pagans, especially in some feminist spirituality movements, combine their fervent belief that they are practicing an ancient goddess-worshipping religion with an equally fervent belief that these ancient religions fostered societies of equality and peace in which women were honored equals, if not rulers. Some would claim that a “matriarchal golden age” existed before the rise of patriarchy and male monotheism.

Other contemporary Pagans are less concerned with claims of direct historical continuity and more likely to regard their religion as a new religious movement partially inspired by and drawing upon the sacred stories and religious practices of ancient religions. They would also state that the validity of their practices and beliefs does not depend on their antiquity and that some or even

all their religious forms may be of recent origin even though they resemble ancient myths and rituals. Such practitioners also make strong arguments about the contemporary worth and value of goddess worship, without necessarily claiming that such religious practices led to a social utopia in ancient times.

The weight of opinion among scholars of religion, whether or not they may also practice some form of goddess worship, favors the second version of this hypothesis. Direct historical continuity with ancient goddess worship and the secret practice of goddess-worshipping paganism throughout the Christian era are difficult, if not impossible, to prove. In addition, most scholars of religion are well acquainted with the historical nature of all religious beliefs and practices and regard religions as ever changing and developing collections of ideas rather than static entities having an unchanging essence that endures through time.

The claim, so important to some feminist spirituality groups, that ancient goddess-worshipping societies were ideal peaceful and egalitarian societies has been controversial even among religious feminists. Most versions of the so-called matriarchal hypothesis attribute the rise of male dominance to invasions of peaceful Old European societies by male-dominant warrior societies who worshipped male deities. This event replaces the “Fall” of Christian sacred history in the narratives told by many goddess-worshipping groups. Many critics have pointed out that no explanation has been offered for the emergence of male dominance among the invading warriors, which means the fundamental riddle of why male dominance is so common has not been solved. Furthermore, it is pointed out that evidence about the character of earlier societies is scant, making it difficult at best to assert much about their social and religious practices. Finally, this sacred history still relies heavily on one of the core myths of Christianity, in that it posits a fall into “sinful” history, simply changing the story of how that fall happened. Many religious feminists have questioned the relevance of that motif for feminist forms of religion and many feminists would claim that the appropriateness of naming deity as “she” does not depend on the accuracy of this sacred history.

Thus, one could claim a contemporary “rebirth” of the goddess, if one means a contemporary recurrence of an almost universal religious form among Euro-Americans, rather than a phoenix-like resurrection of ancient deities or direct historical continuity with ancient religions. It is important to set this “rebirth” in global context. Nothing is more useful to these debates than a dispassionate look at the data of world religions in longer and bigger perspective than the history of monotheism or Christianity. The most important fact learned from such study is that the absence of goddesses in monotheistic religions, not their presence in all other religions, ancient or contemporary, is

the unusual situation, the religious practice in need of explanation. In other words, contemporary pagans and other goddess worshippers, including Jews and Christians who address the deity using feminine pronouns, are doing nothing remarkable or innovative if their practices are looked at from the bigger perspective of human religious activity overall, rather than through the much narrower lens of familiar Abrahamic, monotheistic religions.

Goddesses were important in the earliest known religions and all the religions of the ancient world in which monotheism grew up, a point well known to the many religious groups that reject monotheism as part of their advocacy for the rebirth of the goddess. Many have pointed to numerous female figurines found in archeological sites from at least 25,000 years ago, among the oldest religious artifacts known, even though their exact significance cannot be ascertained. All the great ancient civilizations, so thoroughly studied by Western scholars and so beloved by many, were familiar with numerous goddesses. The Sumerian Innana, who became the Mesopotamian Ishtar, was a goddess who celebrated her love for her husband Dumuzi (Mesopotamian Tamuz) in lusty poetry that still inspires many. The Egyptian Isis also loved her husband Osiris, who she revived from the dead to conceive their son Horus, whom she raised in secret. Representations of her with her great wings outspread or her son seated in her lap are still common. The goddesses of the Greek pantheon – Athena, Aphrodite, Artemis, and Demeter – are also still well known and their stories are often retold. The story of Demeter and her daughter Persephone is one of the few mother-daughter stories in classical mythologies around the world. Other mythologies of pre-Christian Europe, such as Celtic, Germanic, and Nordic mythologies also included goddesses.

These stories vary greatly, but all of them involve, in some form or another, death and resurrection, which most scholars think is an analogy for the changing seasons and the growth of the crops on which life depended. Sometimes the male deity dies and is reborn in some fashion, but just as often the dying and rising deity is a goddess. Innana descends into the underworld, and growth stops until she returns. Persephone is abducted into the underworld, and while Demeter wanders in search of her, drought and famine prevail in the world of humans. Parallels with the basic Christian story have been noted many times.

Goddesses are also found in the great Asian religions, including contemporary forms of Hinduism and Buddhism, undercutting the contemporary Westerner impression that goddess worship is an archaic or ancient phenomenon outmoded in the modern world. Hinduism is the most “goddess friendly” of the major contemporary religions, and the goddesses are at least as popular and important as the male deities to most Hindus. Their images are everywhere in India and are even becoming familiar in the West.

Perhaps the best known is the beneficent Durga riding her tiger, her many implements displayed in her many arms. But the wrathful Kali is also well known, as is Sarasvati, who especially patronized art and scholarship. Every Hindu businessperson attends to Lakshmi, the goddess of wealth and well-being.

More surprising is the presence of “goddesses” in Buddhism, which is a non-theistic religion in its philosophical forms. But Buddhism also involves a great deal of symbolism, mythology, art, and ritual. In these dimensions of Buddhism, various anthropomorphic forms, both male and female, abound. As in Hinduism, the female mythological figures are at least as popular and important as the male figures. Tara, a peaceful helper, is especially popular among Tibetan Buddhists and Kwan-yin, her counterpart in Chinese Buddhism, is universally venerated, especially by women. Many Westerners have now begun to do meditation practices associated with both these popular female figures. These are only two of the best-known Buddhist female figures in a mythological universe populated by hundreds, if not thousands, of female figures. In addition to these female compassionate helpers and saviors, the esoteric schools of Tibetan Buddhism use the image of sexual complementarity to convey many of their central teachings. The deities portrayed in their esoteric art are often interpreted as representations of enlightenment, and the female deities convey this message as much as the male deities.

Many have pointed out that even the monotheistic religions imagine deity as female and call upon her. Even in the Bible, the wisdom literature includes the image of personified Wisdom as a feminine dimension of deity. Many contemporary Christians searching for traditional but feminine ways to think of deity have turned to this image and studied the literature about her. In many Christian contexts the Virgin Mary has been the most accessible and beloved divine figure for most ordinary churchgoers, both historically and in many parts of the contemporary world. Some would argue, correctly, that Mary is not really a goddess, but only a human. Nevertheless, if one looks, not to theological judgments, but to how Mary functions in the religious lives of many Catholics, one would have to say that she functions as a goddess, whether or not formal theology regards her as such. Jewish mysticism in the Kabbalah also contains significant female imagery of the deity. In the complex diagram of the flow of divine life used by Kabbalists, a number of the deity’s attributes are female, including the Shekhinah, the indwelling presence of deity who goes into exile with her people.

Clearly, most religions have never lost the practice of goddess worship. For reasons that are still not completely understood, monotheistic religions that developed in the Middle East did begin to regard goddess worship with horror at some point in their development and, as a result,

it became unthinkable to many adherents of those religions that deity could be called “she” as easily as “he.” Until the second wave of feminism, most Jews and Christians took it for granted that masculine language would be used about the deity, even while they also believed that God does not have a body and could not be imaged. But when people began to question other aspects of Abrahamic religions, it was inevitable that they also questioned its peculiar use of gendered images for the deity. Some who are dissatisfied with male monotheism have rejected those religions for a neo-pagan identity, inspired in many cases by our relatively scant knowledge of ancient goddess worship. That is one kind of “rebirth.” Others have tried to reintroduce feminine pronouns and imagery into traditional monotheistic contexts. That is another kind of “rebirth.”

In view of this information, contemporary Western goddess worshippers, whether Pagans or theological radicals in Judaism and Christianity, certainly can sustain the thesis that it is normal, permissible, appropriate, and traditional to imagine deity as female. The weight of religious traditions globally and historically is on their side, not on the side of advocates of male monotheism.

The “rebirth” of the goddess in contemporary Western religious contexts is a deliberate religious innovation set in the context of rebellion against a traditional religious form, male monotheism. As such, its reference point is more often what it is *not* – the worship of a singular deity spoken about through male analogies – than extant traditional practices of goddess worship, which most of those attempting to midwife this rebirth have never experienced. All varieties of goddess worshippers are definite about the sociological and psychological value of imagining deity as female for a culture which had forgotten how to do that. The goddesses invoked may take many forms and have many antecedents, but the most important thing about these deities for the followers is their *femaleness* itself, which is probably not the case in religious contexts in which goddess worship is traditional. Additionally, especially in many Pagan contexts, a deliberate effort to speak of “goddesses” rather than “the goddess” is now common. This represents a deliberate attempt to distance goddess worship from religiously familiar monotheism, whereas in religious contexts in which goddesses are traditionally worshipped, a single female figure is often the central deity even though doctrinal insistence on monotheism is not the norm. Western goddess worshippers emphasize many other contrasts with monotheism. They usually claim that ritual is more important than belief; they pride themselves on their lack of creeds and their doctrinal flexibility.

Many contemporary goddess worshippers, whether they are overtly feminist or not, and whether they are Pagans or non-pagans, claim that their religions are decidedly more ecological than their more traditional

counterparts because of ideas and practices common to goddess religions. They claim that theologies of immanence, in which the deity is seen as immersed in nature rather than separate from it, foster concern for this Earth. They point to their sacred story which celebrates the seasonal rhythms of nature and a ritual cycle that focuses on the sun and the seasons. For Pagans, the preferred setting for religious activity is out-of-doors. Many goddess worshippers as well as many Jews and Christians who favor female imagery for deity are also environmental activists.

Many advocates of goddess worship would claim that this link between worship of female deities and ecological consciousness is inherent in the symbolism of female deities. Others would dispute such a claim, disagreeing with the gender essentialism implied in positing an inherent link between goddess worship and reverence for nature. The evidence of world religions also undercuts this claim. Goddesses tend to mirror and validate the concerns of those who worship them, and the propensity of goddesses to patronize warriors when they are worshipped by warriors is only the most obvious case in point. Thus the tendency of contemporary Western goddess worshippers to be unusually environmentally aware is probably due more to their social location than to anything inherent in the worship of female deities. Contemporary goddess worshippers are iconoclasts who critique the received tradition in many ways; breaking with the ecologically irresponsible ways of mainstream culture is just one way they break with tradition; imagining deity in female ways and relating with her is another. Reverence for nature and female imagery for deity converge in contemporary Western goddess worship, but it would be difficult to sustain that link for all religious contexts in which female deities are worshipped.

Rita Gross

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See also: Christ, Carol; Daly, Mary; Ecofeminism (various); Estés, Clarissa Pinkola; Feminist Spirituality Movement; Gimbutas, Marija; Griffin, Susan; Merchant, Carolyn; Paganism – Contemporary; Reclaiming; Sea Goddesses and Female Water Spirits; Sexuality and Green Consciousness; Shakti; Shiva, Vandana; Sjöö, Monica; Spretnak, Charlene; Starhawk; Walker, Alice; Wicca; Women and Animals; Z Budapest.

Golden Dawn

The Hermetic Order of the Golden Dawn was founded in England on 12 February 1888 by William Wynn Wescott, Samuel Liddell Mathers, and William Robert Woodman. It was a graded initiatic magical order that based its structure on the Kabalistic Tree of Life – a diagram purporting to show the structure of the universe and its relationship to the divine – and placed itself within the tradition of Rosicrucian spirituality. Its members included a number of prominent figures, including poet William Butler Yeats and the controversial figure Aleister Crowley. The Golden Dawn is also notable in that, from its inception, it accepted women on equal footing with men. In 1892 Mathers founded a second order, within the structure of the Golden Dawn, to teach practical magic, the Rosae Rubeae et Aureae Crucis. In 1900, because of a controversy over the legitimacy of Crowley's initiation into the second order, Mathers, who then resided in Paris, was expelled from the order by the British contingent. Further political conflicts over revising the constitution after Mathers' expulsion led to multiple schisms by 1903, and with the closing of the original Isis-Urania temple in London in 1914 the Golden Dawn's life as an institution ended. A number of initiates founded derivative orders, some of which remain active through their successors in the present day.

Although rooted in a Christian worldview, the Golden Dawn presented a spiritual paradigm which both affirmed engaged work with the world and approached the cosmos as a manifestation of the divine. Its course of study synthesized wide-ranging European esoteric lore, including alchemy, astrology, tarot, and the Kabbalah. One of the key rites of the Golden Dawn, the Adeptus Minor initiation, identified the "Great Work" of the individual as "to purify and exalt my spiritual nature that with the Divine aid I may at length obtain to be more than human." This encapsulates much of the teaching of the Golden Dawn; rather than rejecting material existence and human

will, it sought to transform them through ritual, meditation, study, and ethical living.

Although its institutional life was relatively brief, the Golden Dawn had a great influence on twentieth-century magical movements in the United Kingdom, Europe, and the Americas. It provided basic liturgical structures and esoteric assumptions for Thelema, the religious tradition founded by Crowley, as well as many of the particular symbolic systems and magical approaches for contemporary Pagan and Wiccan spirituality. A clear example is the method of consecrating a ritual space, common in most Wiccan traditions, by calling upon the Aristotelian elements in four directions, which derives from the rituals for invoking the four elements in the Golden Dawn's Ritual of the Portal and the later Watchtower Ceremony. Numerous early writers and leaders of the Pagan and Wiccan world participated in Golden Dawn-derived groups, and early twentieth-century occult writers who were members of the Golden Dawn, such as Crowley and Dion Fortune, continue to be very influential. Both traditional esoteric groups and contemporary Pagan traditions benefit from the Golden Dawn's synthesis of Western esoteric systems that revere the natural world as both a manifestation of spiritual mysteries and a key to their understanding. By synthesizing this lore and providing a context for the study of practical magic, the Golden Dawn opened the door for later magical religions, which not only used the natural world as a path to the divine, but located divinity there.

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See also: Alchemy; Magic; Magic, Animism, and the Shaman's Craft; Paganism – Contemporary; Western Esotericism; Wicca.

Goodall, Jane (1934–)

London-born primatologist Jane Goodall is most famous for her ground-breaking study of chimpanzees in Tanzania, but by the turn of the twentieth century, and into the twenty-first, she had become one of the world's leading conservationists. She founded the Jane Goodall Institute

(founded in 1977) and its “Roots and Shoots” program (in 1991) to reach out to young people and get them involved in protecting animals, vulnerable humans, and the environment. She has become increasingly open about her belief in God, in part to bring hope to those who experience despair as they learn about and cope with environmental degradation, species extinctions, and human violence.

Goodall’s fascination with animals and the natural world began early, during her childhood in Bournemouth, England, and waxed stronger as she matured. Encouraged by her mentor, the legendary anthropologist and paleontologist Louis Leakey, Goodall began her landmark study of chimpanzees on the eastern shore of Lake Tanganyika, East Africa in 1960 at the age of 26. This began what would become the longest continuous field study of animals in their natural habitat.

Early in her fieldwork Goodall observed chimpanzees making and using tools by stripping leaves off twigs to fish termites out of a nest. This tool-making behavior, previously believed to exist only in humans, represented so significant a discovery that Leakey concluded: “Now we must redefine tool, redefine man, or accept chimpanzees as humans.” Goodall’s discoveries and unconventional methodology, which included living in her subjects’ habitat, distinguishing them by personality, and giving them names instead of numbers, revolutionized the field of primatology. Her methods were also criticized, however, by many scientists, as insufficiently objective.

Although not formally trained when she began her research, Goodall later earned a Ph.D. in Ethology at Cambridge University in 1965 and then returned to Tanzania to establish the Gombe Stream Research Centre. This began a lifelong pattern of establishing institutions to carry out and continue scientific and conservation work that would benefit science, humans, and the natural world. In 1971 Goodall began working as a professor at Stanford and then later at Tufts, the University of Southern California, and Cornell. She subsequently published more than sixty scientific articles and has been involved in numerous videos and films produced by National Geographic, Discovery, HBO, Public Broadcasting Service (PBS), and others. She also authored more two dozen books, including *My Friends the Wild Chimpanzees* (1967), the best-selling *In the Shadow of Man* (1971), and her autobiography *Reason for Hope: A Spiritual Journey* (1999), which explored her religious and ethical pilgrimage. Her writings have been published in more than a dozen languages.

Goodall’s philosophy is expressed in one of her often-quoted aphorisms: “Only if we understand can we care. Only if we care will we help. Only if we help shall all be saved” (2000: 5). Through her work and activities she strives to foster understanding of the connection between environmental conservation and human development, while calling on people to care, take responsibility, and act

heroically for the sake of all living creatures. Goodall’s message also includes sharing some of the lesser-known characteristics and abilities of chimpanzees, such as being omnivorous, expressing violent behavior at times, and being capable of learning sign language. Some that she has encountered also enjoy painting and like to watch sunsets. By describing how chimpanzees express emotion, communicate, and share to some degree the human trait of abstract thinking, and perhaps even religious feelings, Goodall has helped change many people’s perceptions about wild animals and the acceptability of species loss as a cost of progress. In *Reason for Hope* Goodall envisioned a future of ever more environmentally sustainable human progress. She grounded this optimism in the energy, enthusiasm, and commitment of young people, in the potential of humans to solve problems and overcome great odds, and in the “indomitable human spirit.”

Goodall embodies what some have called the “civic scientist” – one who goes beyond teaching and research to educate and actively engage society in solving pressing problems. She has received more than a dozen honorary doctorates and fifty awards of distinction including, most recently, the Ghandi/King Award for Non-Violence and the Benjamin Franklin Medal, the United States’ oldest science award. In 2002 United Nations Secretary General Kofi Annan named Goodall a United Nations Messenger of Peace, noting her “dedication to what is best in mankind.”

Well into the twenty-first century Goodall continued touring the world (averaging 300 days a year on the road), promoting grassroots development and conservation work in more than seventy countries. In 2002 she was appointed to a United Nations advisory panel to the World Summit on Sustainable Development in Johannesburg, South Africa. As she put it during the summit itself, she was there to bring “the voices of the animals” into that important human council (author Taylor’s fieldnotes, August 2002). She did so in part by speaking strongly in favor of the Earth Charter, as well as by participating in pilgrimages celebrating the nearby Cradle of Humanity, where ancient human ancestors were found. The comments made there by Goodall and the other luminaries constituted a kind of consecration of the Earth’s evolutionary story, and had many affinities with the so-called Epic of Evolution.

Goodall’s message and writing have broad appeal in part because they are suffused with a religiously inclusive spirituality; her theism is not sectarian and is panentheistic in tone. She believes animals have spiritual significance and are able to communicate with humans, even bringing their own messages of hope, oracle-like, into the human world. A lifelong observer of chimpanzees, she also believes that some of them may even have their own forms of nature-related spirituality. It is in such spirituality that her ethics is grounded, namely, an ethics that understands all life has intrinsic value and is related as kin in the evolutionary story. It is also from her spirituality that she

finds her optimistic expectation of a significant world improvement through individual empowerment. Through numerous media and her continuing efforts, Goodall has inspired countless people at all levels of influence around the world to make wider and deeper exertions on behalf of each other, the environment, and life on Earth.

Paula J. Posas
Bron Taylor

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Gordon, Aharon David (1856–1922)

Aharon David Gordon was one of the leading ideological figures of the labor Zionist movement. Born in Troyanov, Russia in 1856, Gordon received a classical Orthodox Jewish education from private tutors, while studying secular subjects on his own. He found employment for 23 years helping to manage the estate of his celebrated relative, the great banker and philanthropist Baron Joseph Guenzberg. In 1903 ownership of the estate changed hands. Gordon, 48 years old and out of a job, made the remarkable decision to leave Russia in order to join the young *halutzim* (pioneers) who, through strenuous physical labor, were creating the material basis for the Jewish return to Palestine. He was to be joined by his wife and daughter only five years later. Working until cancer drained his physical strength, Gordon died in Kibbutz Deganyah in 1922.

Although Gordon never held any official posts in the Zionist movement, his ideas, writings, and personal example made a powerful impression which still continues to influence Israeli thinking. In his single systematic treatise, *Ha'Adam ve'HaTeva* (*The Human Being and Nature*) and many occasional essays and letters, he

advanced a general philosophical anthropology, a critique of modernity and a theory of religion, which he constantly applied to the immediate challenges faced by the Zionist community in Palestine.

Gordon held that human beings relate to their world in two essentially different ways. Firstly, we experience the world through the intuitive, inclusive, and largely unconscious activity of *living* as integral components of the cosmos. Secondly, we critically inspect our lived experience in order to formulate limited, rational, and fully conscious *knowledge* of the world. The role of religion is to reintegrate us with the natural world, to re-establish the proper balance between life and knowledge. Agricultural work takes on tremendous religious importance. By physically working the land, people take their place as part of nature and make their uniquely human contribution to its creative organic processes. Gordon felt that the human connection to the cosmos must be mediated through membership in an ethnic national community whose culture and religion reflect the connection made to the cosmos through the experience of life in a particular geographical setting. This doctrine did not admit of any innate superiority of one group over another, but rather rejected universalistic systems (e.g., Marxism and Christianity) which eschew ethnic identity and call for individuals to see themselves purely as members of the human race.

Gordon's program for Jewish renewal in Palestine was a direct application of his broader philosophy. Judaism and the Jewish people had both been alienated from nature during their 2000 years of exile from Palestine. The Jewish people had been cut off from the natural environment which constituted their original and particular link to the cosmos. In the Diaspora, Jews had been further alienated from nature by anti-Semitic restrictions on Jewish land ownership and Jewish employment in agriculture. By returning to Palestine and working the land, Gordon hoped that the Jewish people could be revitalized and even serve as a moral exemplar to other members of the human family of nations.

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See *also*: Eco-Kabbalah; Gush Emunim; Israel and Environmentalism; Jewish Environmentalism in North America; Jewish Law and Environmental Protection; Judaism; Kabbalah.

Gore, Albert Jr. – See Cathedral of St. John the Divine.

Gorman, Paul – See Cathedral of St. John the Divine; Religious Partnership for the Environment National.

Goshalas

The Hindi word *goshala*, literally “place for cows,” means cowshed, dairy, or pasture, but also specifically refers to institutions in India and Nepal which are homes for aged and non-productive cows.

Respect for animal life has deep roots in South Asian civilization. The doctrine of *ahimsa*, or non-injury to sentient creatures, first appears at the very end of the Vedic period (ca. sixth century B.C.E.) and in the following centuries becomes central to the philosophies of Hinduism, Buddhism and Jainism. The specific Hindu focus on the inviolability of the cow, however, does not emerge until the fourth century, and is not accepted by the general Hindu populace until much later. It is the Hindu concept of the cow’s sanctity that provides the rationale for the existence of goshalas.

Many scholars see the Hindu sacred cow concept as essentially religious in nature. W. Norman Brown, for example, cites as contributing factors ancient associations of the cow with the Mother Goddess and fertility; the role of the cow in Vedic ritual; the figurative use of words for cow in the Vedic literature and their subsequent literal interpretation; Vedic prohibitions against violations of a Brahman’s cow; and the *ahimsa* concept. Other theories of origin, however, invoke a variety of political, economic and ecological factors. The most controversial of these, anthropologist Marvin Harris’ cultural ecological explanation put forward in the mid-1960s, initiated a spirited debate in the social sciences over the nature of India’s sacred cow concept. In Harris’ view, the sacred cow concept is not so much a religious phenomenon as a cultural mechanism that evolved to protect an important economic resource in the context of the Indian subcontinent’s specific ecologic and political setting. However, in challenging this interpretation, Frederick Simoons argues that religious factors play a significant, if not necessarily all-encompassing role, in explaining Hindu attitudes toward the cow.

Whatever the origins of India’s sacred cow concept, modern goshalas reflect the complexity of their origins. Thus, many temples dedicated to the Hindu god Krishna, for whom the cow is a favored animal, operate goshalas to provide milk for temple rituals. Before independence, Hindu rajas (kings) maintained goshalas at their courts as expressions of Hindu piety. But most numerous in number are the goshalas maintained by India’s business castes (*vanias*). These Hindu merchant communities (many of whom are Vaishnavas, followers of Vishnu in his incarnation as Krishna) provide financial support for cows which are beyond milking age or are sick, lame, or ill. The reasons given for this support are service to the cow (*go-seva*) and cow protection and development (*go-rakshan*). The goshalas are also the locale of Hindu rituals such as cow worship and Krishna-related festivals such as Gopashtami and Goverdhan Puja. Vania goshalas are concentrated in northwestern India (Gujarat, Rajasthan, and the Bombay region), where vania communities are concentrated. (Jains in this region also shelter cattle in animal refuges called *pinjrapoles*.) Wherever vanias have migrated in India, they have taken the institution of the goshala with them. Hence, goshalas may be found as far afield as Assam and Tamil Nadu.

Two modern forms of the goshala are the Gandhian goshala and the gosadan. Service to “Mother Cow” and cow protection were central to M.K. Gandhi’s (the Mahatma’s) philosophy and teaching, and ashrams founded in the Gandhian tradition often maintain goshalas. These serve both as refuges for “useless” cows as well as dairies providing milk for the ashram’s inhabitants. The most recent incarnation of the goshala is the *gosadan*, reserves for unproductive cattle established since the 1950s in remote rural areas as part of the Government of India’s Five Year Plans.

Goshalas were estimated to number around 3000 in the mid-twentieth century. Three decades later, this writer observed that the institutions were declining in numbers and importance as India modernized and became more secular in outlook (Lodrick 1981). However, recent events in India may require this view to be reevaluated. The emergence of Hindu revival movements (the Vishwa Hindu Parishad [VHP], for instance, has incorporated support for goshalas into its political platform) has given goshalas increased significance as symbols of traditional Hindu religious values.

Deryck O. Lodrick

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See also: Animals; Domestication; Ecological Anthropology; Ecology and Religion; Gandhi, Mohandas; Harris, Marvin; Hinduism; India.

Graves, Robert von Ranke (1895–1985)

Robert Graves was an English poet, novelist and critic, author of about 140 works ranging from poetry to biography, anthropology, and mythology. His "grammar of poetic myth," *The White Goddess* (1948) has been especially influential for nature religion in the twentieth century, and remains his most famous spiritual work.

Born in Wimbledon, South London, Graves was the son of the writer and folklorist A.P. Graves (with whom W.B. Yeats quarreled over his treatment of Irish folklore), and a descendant of the German historian, Leopold von Ranke. As a baby, he had his head patted by Algernon Swinburne, and in later life he joked that something of the poet's unconventional spirituality was passed on to him at that moment. After service in the First World War, in which he was badly wounded and read his own obituary in *The Times*, Graves studied at Oxford University and was briefly Professor of English Literature at the University of Cairo before becoming a full-time writer. Accompanied by the American poet and critic Laura Riding (1901–1991), with whom he had a complex and often troubled relationship (1926–1940), he moved to Mallorca in 1929. This lifelong residency was broken only by a return to England during the Second World War. He was Oxford Professor of Poetry from 1961 to 1966.

Graves is known for his love poetry and his historical fiction, the latter of which is distinguished by its willingness to offer creative interpretations of myth and history. This is well illustrated in novels such as *I, Claudius and Claudius the God* (1934), *The Golden Fleece* (1944), *King Jesus* (1946) and *Seven Days in New Crete* (US title, *Watch the North Wind Rise*, 1949). Graves' complex scholarly works such as *The Nazarene Gospel Restored* (co-authored with Joshua Podro, 1953), and his two-volume compendium *The Greek Myths* (1955) are similarly imaginative, with the latter restoring some of the violence and even barbarity of the original legends and perhaps

encouraging modern Pagans to de-sentimentalize the ancient world. "Poetry is a condition, not a profession," he was wont to remark, and throughout his life he emphasized the bardic, even sacred function of the poet, often linking the art of poetry with its pagan origins.

His famous investigation of poetic myth, *The White Goddess*, has proved extremely popular with practitioners of nature religions for a number of reasons, although it has also been challenged. Graves' fondness for Celtic literature, especially ancient Irish and Welsh poetry, helped to generate contemporary interest in these literatures and the spiritual practices of their creators, while his central argument that the One Goddess is the great Muse of Western culture has won widespread support within nature religions. Building on the work of Jane Harrison, Graves linked the faces of the Goddess as Maiden, Mother, and Crone to the phases of the moon, and saw her as eternally contested by the God of the Waxing and of the Waning Year. For Graves, the Goddess and the poetry she inspires is a profound challenge to rationalist and patriarchal thought, epitomized by Christianity and the industrialized, war-torn Europe that so horrified him.

The book has been seen as eccentric in academic circles, where it has been challenged on historical, literary and political grounds, and it has also met with criticism in the wider world. Laura Riding was particularly critical, perhaps because many of Graves' readers believed her to be the book's inspiration. In 1975 she denounced Graves, claiming that he misappropriated her ideas about women and spirituality and served up "a foamy grandiose effusion of nothingish spiritualistics" rather than a work of genuine profundity and feminist consciousness. The essentialism of Graves' thinking about gender, neatly expressed in the title of his poem, "Man Does, Woman Is" (1964), has also generated considerable debate. Graves himself was ambivalent about *The White Goddess*, perhaps because parts of it were, he felt, magically inspired rather than consciously researched and written. In 1955 he is said to have written to a stranger: "Some day scholars will sort out the White Goddess grain from the chaff. It's a crazy book and I didn't mean to write it" (Seymour-Smith 1982: 405).

Despite or even because of such criticism, the influence of *The White Goddess* continues to be far-reaching. Its impact on Wicca, Paganism, Druidry and contemporary Celtic spiritualities has been especially profound. Graves' biographer Martin Seymour-Smith has called him "a kind of prophet of 'the Return of the Goddess.'" "

Nick Freeman

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See also: Celtic Spirituality; Druids and Druidry; Feminist Spirituality Movement; Goddesses – History of; Paganism – Contemporary; Wicca.

Greco-Roman World

The notion of nature was used in several different ways in the history of the Greco-Roman world. This had much to do with the semantic range of the original terms themselves. The Greek term *physis* comes from the verb *phyein/phyesthai*, which means "originate," "spring from"; the Roman term *natura* is semantically equivalent to the Greek, which it probably translates, as it derives from the verb *nasci*, meaning "give birth, origin." The Greek term in particular was used in at least five senses in antiquity; first, to indicate the origin of plants (*phyton*), which literally spring from the Earth (*phyton* < *phyein*), and in this sense it contrasts what comes into being otherwise, which is indicated by the verb *gignesthai* (= come into being, be born). Secondly, the term is used more generally as a noun to indicate the origin of everything (i.e., like *gignesthai*) and also the principle that gives rise to everything. Thirdly, the term is used, especially by early Greek philosophers, to indicate the process of becoming, growth, and differentiation of things. Fourthly, the term is used to indicate the result of this process of differentiation; that is, the essence of a thing, its special constitution, which makes it the particular kind of thing it is. In this sense the term is used in expressions such as "the nature of man," "the nature of trees," and so on, and involves a contrast between the essential characteristics of a thing and its acquired or imposed ones. Used in this sense, nature is contrasted with artifacts and conventions, and natural entities are distinguished from what man creates, such as tables and statues, but also laws, constitutions, the principles of economy and trade. Finally, the term "nature" is used to indicate the natural condition of a thing (i.e., the condition which is determined by its essence).

This conception of nature determined the attitude that ancient man took toward nature. On the one hand he respected nature and its powers, toward which he felt fear and anxiety, and this combination of respect and anxiety led the ancient man to assign divine qualities to natural powers and personify them as gods. Yet on the other hand, the ancient man also felt the urge to inquire into nature. Such an inquiry was usually called *ta physika* or *physike* (i.e., *episteme* = science), and had a philosophical and

religious dimension but also what we now call scientific character. It typically included an inquiry into the origins of the universe, the nature of man and all animal beings, the nature of heavens and the celestial bodies, the nature of gods and so on. This kind of inquiry had been fascinating Greek philosophers and scientists from a very early stage, that is, from the sixth century B.C.E. to the end of antiquity, and it progressively became quite elaborate, complex, and systematic.

Archaic and Classical Age (Eighth–Fourth Century B.C.E.)

Literature

In early Greece nature was a power that inspired awe, as it was beyond man's control, and this awe often gave rise to a religious feeling. Traditional Greek gods were to some extent connected with natural powers, such as the sea, the heaven, the fire and so on. This belief in the divinity of natural powers can be found in the early Greek literature. In the Homeric poems some gods are presented as masters of specific natural elements (e.g., Poseidon is the god of the sea). Although Greek gods are not always identifiable with natural powers (e.g., Zeus), it is quite significant that natural elements such as rivers and springs are gods and nymphs respectively, while we also know that winds, Earth, sun, and the ocean enjoyed widespread cults. In the Homeric poems natural elements are often described, sometimes in quite some detail. Yet nature is never described for its own sake, but is almost always considered in connection with man's activity. Natural scenes when introduced have a metaphorical value aiming to highlight certain qualities of a hero. We can discern a Homeric predilection for the wild side of nature, which serves comparisons pointing to a hero's manliness or bravery. Nature is not depicted as sympathetic to man, but rather as having little influence on man's mind. Nevertheless the Homeric man can look at nature as such and appreciate its beauty, especially of flowers, trees, rivers, but also of heavens and the stars, and this becomes particularly evident in the *Odyssey*.

We find a similar attitude to nature in the rest of early Greek literature and also in that of the classical age. Nature was still considered in connection with man's activity, but now its beauty was more highlighted. We often find descriptions of the nature of spring, of the rising or setting sun, of the night with or without moon, of the sea, and animals. Tragic poets in particular often give expression to man's dependence on nature and also to man's feeling of belonging to nature. Further, nature is often personified and ascribed human emotions.

Early Greek philosophers, sophists, and scientists (sixth–fifth century B.C.E.)

Early Greek philosophers were engaged in giving a comprehensive and rationalistic explanation of the natural

world. This concern was so central to them that later generations used to call them *physiologoi* or *physikoi*, that is, natural philosophers, and invariably gave to their books the conventional title *On Nature*. They were characterized by their tendency to give rational explanations of natural phenomena instead of the traditional mythological ones by appealing to the nature of a thing, which they contrasted with what is fake or conventional. Heraclitus, for instance, talked about what is according to the nature of a thing, and also claimed that real nature loves to hide. The process of change in natural entities was central for those philosophers. Heraclitus stressed that change is inherent in all natural beings and at no point is a thing identical with itself. This was a starting point for Parmenides. He contrasted actual beings, which he considered as everlasting and unchangeable, from natural ones, which are always in a fluid state, and as such they cannot be thought of or expressed linguistically. In support of Parmenides' views Zeno tried to show through a series of paradoxes that the world of nature (i.e., of change) is illusory and unreal. Anaxagoras came to suggest that everything is actually unborn and unchangeable, and change arises because of reapportionment of certain ingredient features. In a similar spirit Empedocles maintained that everything consists of four primordial, imperishable elements, which are blended in different portions due to the motive forces of Love and Strife, and change is to be reduced to the different allocations of these elements. The atomists like Democritus on the other hand suggested that all things consist of an infinite number of corpuscles, which are eternal and indivisible (atoms), and change is due to their motion and collision in the void.

In fifth-century Athens, sophists rejected religious explanations of natural phenomena and devoted themselves to educating young Athenians in how to give rational ones. The notion of nature plays an important role in their thought. They understood nature as a power that includes everything and recognized it as a source of value. Being concerned with the question of whether ethical and political norms exist by nature or by convention – that is, whether they are absolute or relative to the species or the individual – they argued that man must conform with nature rather than with the conventional law. This appeal to nature most of the time was specifically to human nature; in their view something is good if it advances human nature. But the sophists did not seem to have given clear answers to the question of what is nature's way, if we are to judge from the extant fragments including sections from Plato's *Gorgias*, *Republic I*, and the *Protagoras*, where the antithesis between nature and convention is discussed. Yet most sophists appear to have retained a place for convention and law; Protagoras apparently argued that man began in a natural state and proceeded to civilization in which law was necessary for the maintenance of the community. Other sophists also seem

to have been concerned with substituting misplaced norms with more natural ones instead of rejecting them entirely.

The desire to inquire into nature in a more systematic and detailed way gave origin to scientific disciplines, most importantly to medicine, historiography, and geography. Early Greek medicine sought to investigate nature with a purely empirical method and explicitly opposed the speculative investigation of the natural philosophers (cf. the Hippocratic work *On the Art of Medicine*). The Hippocratic doctors understood nature as the original and normal state of a thing against which all divergences are to be measured. In the case of human health, they considered diseases as divergences from a model of a healthy living body by reference to which they can be assessed and eventually reversed, and yet these are neither sent by gods nor do they have causes other than natural ones which cannot be explained by scientific means (cf. the Hippocratic treatises *On the Sacred Disease*, *On Airs, Waters, Places*). Hippocratic doctors proposed a physiological theory according to which the well-being of the human body is determined by four humors that have to be in balance. They were the first to examine the role of climate on humans and also the first to investigate scientifically the female body and its particular functions (e.g., menstruation).

Plato and Aristotle

With Plato and Aristotle the inquiry into nature took a new turn. Plato elaborated on the thought of Parmenides and Heraclitus and was concerned with the question of what there is, and whether something that comes into being and changes, as happens with natural entities, is also a true being. In his mature period Plato suggested a distinction between sensible particulars in the world around us, which are subject to change, and their intelligible, eternal forms which constitute their essences. This view has much to do with Plato's conception of matter, according to which matter is inherently chaotic and in need of taking shape. Most probably Plato studied nature systematically with his students in the Academy, but his conception of sensible reality as a realm of change which cannot be the subject of scientific, that is, secure knowledge, suggested to him that the results of such inquiry do not constitute science (*episteme*). This is why he considered the account of the origins and the nature of the world, which he set out to give in a late dialogue, the *Timaeus*, as merely a "likely one" (*Timaeus* 29d). According to this account, the world has come into being out of chaos by a divine intelligence, a creator God, who brings into being all sensible entities by imposing form onto matter. This process takes place in the receptacle, a peculiar Platonic notion, which constitutes a third kind of being next to the intelligible forms and the sensible particulars, where the forms are reflected and imprinted in

matter. According to the *Timaeus*, the world as such is a being with intellect, soul, and body. Noticeably Plato tried to explain the constitution of the world, which he considered as an harmoniously ordered whole, by means of mathematics and geometry, an idea which was favored by the Pythagoreans; the world's body is presented as consisting of four elements bound properly and as moving in circles. The Creator also brings into being four kinds of animals, the ones who live in heavens (i.e., the stars), in the air, in the sea, and in Earth. A special section of the *Timaeus* describes the creation and constitution of man; we are told that man has a soul with an immortal and a mortal part which are located in specific bodily parts.

Plato's immediate successors did not seem to have shown much interest in natural science, and apparently suggested that the *Timaeus* was a fiction meant for pedagogical purposes (e.g., Xenocrates). Aristotle, however, showed much zeal in the study of nature (later generations called him "the student of nature"), and his efforts to cultivate natural science became evident in his many relevant writings. Aristotle distinguished sharply between natural science (i.e., physics) from theology and the science of abstract numbers (i.e., mathematics). For Aristotle, the inquiry into nature was the study of things which do not exist independently of matter; more specifically, it is the study of the entities which are self-caused and self-moved (i.e., have the cause of their existence in themselves). He was the first to write a work with the title *Physics* in which he discussed the first principles of the natural world, but also investigated the origins, behavior and interactions of the natural objects; Aristotle examined in detail the nature of physical existence, of weight, change, types of motion, and also time and space. He criticized all earlier attempts to explain change and substance; in his view each substance has an essence (i.e., a set of features that make it the thing it is). He agreed with Plato that the essence of a thing is its form. But the question is how Aristotle understood forms. He argued against Plato that there are no universal forms, but each substance is a composite of a particular form and matter, which the form actualizes. Yet this allows for the possibility that general forms as a theoretical abstraction may play an explanatory role, and this seems to be supported from parts of Aristotle's work. Aristotle's understanding of substance informed his conception of change; in his view, for a change to take place there has to be a change of something, which means that there exists a subject that in part changes but in part also persists. Besides, he argued that a thing changes according to its nature (i.e., its essence); if a man, for instance, becomes a musician, this does not mean that he has ceased to exist in his previous form, but rather that it is in his nature (i.e., his essence) to change thus. To understand why a thing is the way it is, Aristotle argued, there are four basic factors which play a causal role: the matter

of a thing, its form, the agent or the agent's ability, and finally the reason for the sake of which the thing has come into being. The last factor is particularly crucial. For Aristotle something comes into being because it is motivated by a particular end, which determines its nature. But this also means that the features of a thing are to be explained in terms of its distinctive end; if a bird has a beak, this is not to be explained primarily as a feature which serves its feeding, but rather as a feature which determines the bird's distinctive essence. Aristotle considered this so-called teleological explanation (from the Greek *telos*=end) as the proper way to study nature. In these terms he tried to study natural kinds, especially animals, and to explain their basic features in his several zoological tractates such as his *Researches about Animals*, *Parts of Animals*, *On the Movement of Animals*, but the coherence of his theory is open to discussion. As regards the universe, Aristotle considered it as finite and without a beginning. In his view all things in the universe are moved, that is, come into being and change by something else. More specifically, all motions originate from the first heaven, which is placed in the outer sphere of his geocentric universe; this first heaven in turn is moved by the unmoved mover, which is the ultimate origin of all "motion" (i.e., change in the universe), which is identified by Aristotle with God.

The heirs of Aristotle's school, most importantly Theophrastus and Strato, continued their teacher's studies into nature. Theophrastus made pioneering inquiries in botanology, and his work *Historia Plantarum* is the first herbal manual in Greek to survive. He was the first to distinguish between monocotyledons and dicotyledons and to maintain that geography accounts for the differences in shapes and properties of plants.

Hellenistic Times (Third–First Century B.C.E.)

Hellenistic literature

Hellenistic poets showed much more attention to nature than their predecessors and described nature in a more detailed fashion. This time descriptions served as a means not only of illustrating man's emotions, but also of indicating man's desire to return to nature. In this period we have the origins of the bucolic poetry, which is set in the countryside and which has as its subject herdsmen, their animals, their loves, and their songs. The countryside is highly idealized: specific indications of places and times are avoided in favor of timeless scenes which emphasize the beauty of the countryside and the pleasures of its colors, smells, and sights. Poets like Moschus, Callimachus, and especially Theocritus, implicitly or explicitly contrast the world of nature (i.e., the countryside) with the world of civilization in which they live. Nature is often presented as animate and also sympathetic to man, especially to one's erotic adventures.

Philosophy – Stoics

The Stoic inquiry into nature was an essential part of their philosophical concern with the world and the place of man in it. For the Stoics the universe is a unity organized to the last detail by divine laws and is also maintained by divine providence. In their view there are two basic principles in the world which exist always joined, a passive one (i.e., matter) and an active one, which they called *logos* (reason) or nature. For the Stoics nature embodies reason and is present in the entire universe in a specific sense (i.e., as a power that gives form to things). In this sense nature exists everywhere and is both the created universe as a whole and the creative force behind it. Since nature is the ultimate rational force in the universe, the Stoics identified it with God, and, as a result, they held that natural philosophy promoted true piety. As regards the world as such, the Stoics confined existence solely to bodies and rejected the view taken by Plato and Aristotle that there exist incorporeal entities. Even their active, divine principle (i.e., nature) is material, and the Stoics identified it with a form of fire. This element transforms the other three (i.e., air, water, and Earth); more specifically, every single thing is constituted by fire and air in different proportions. The divine fire, known as *pneuma*, they argued, exists in all beings (even the human soul is part of the *pneuma*), and makes the world a coherent whole and also interacting. According to the Stoics, the world is a finite body surrounded by an infinite void and results from a series of transformations of the divine fire (i.e., various cosmic phases, in which the world contracts and expands). They contended that the world is perishable and will end in a total conflagration, but it will be reconstituted. As the world is ruled by reason, nothing in their view happens by chance. The Stoics held that there are causes for everything and, given these causes, nothing else could happen. In their view, everything is determined by the divine providence, that is, reason or nature. Yet in their view there is still quite some space for free human action; something may be triggered by a set of causes but is not necessitated, as man himself is one of the causes and actually the primary one, so whether something will happen or not is up to him/her. Given the Stoic conception of nature as a divine all-comprising power, Stoic philosophers had both philosophical and religious reasons for studying it closely. Posidonius (2nd c. B.C.E.) exemplified this tendency. He was an accomplished scientist whose interests ranged from geography to history and astronomy. Noticeably the Stoic conception of nature exercised much influence in contemporary and later philosophy and science.

Philosophy – Epicureans

Epicurus tried to return to the conception of nature of the early Greek philosophers, especially of the atomists like

Democritus and Leucippus. He maintained that “nothing comes from nothing” (*Letter to Herodotus* 38, Lucretius, *De Rerum Natura* I 152–3) and, like Parmenides, he contended that the sum of beings never changes, and yet, in his view, within the beings themselves change takes place. Epicurus denied Aristotle’s distinction between matter and form arguing that matter carries form in itself. He distinguished two aspects of natural reality, the body and the void. In his view, bodies consist of atoms which have size, form, and weight, yet in his view bodies also have features which the atoms do not have, such as color, temperature, etc. The atoms, he argued, move vertically in the void and sometimes clash; their unpredictable motion can explain all natural phenomena and there is no need to postulate the interference of the divine. Epicurus explained the creation of the world in terms of random collisions of atoms, while he explained sensation in terms of influxes or effluxes of atoms moving across the void, and this suggested to him that sense perception provides us with reliable knowledge; according to Epicurus even the soul consists of atoms which disperse at death. Yet Epicurus tried to avoid the risk of postulating a purely mechanistic universe like the Democritean one, in which everything is explained in terms of moving atoms, by introducing an uncaused swerve that some atoms make at random times. This would allow for the exercise of human free will, but how exactly this works in the Epicurean universe is a matter of debate.

Science

In the Hellenistic period scientists made remarkable steps toward understanding nature. Two Alexandrian doctors, Herophilus and Erasistratus (fl. early 3rd c. B.C.E.), were the first to perform systematic scientific dissections on human cadavers, and as a result they made numerous anatomical discoveries including the discovery of the nerves and a better understanding of the role of the pulse and the function of the heart. An expansion of geographical knowledge also took place, partly because of the expedition of Alexander the Great. Further, we witness the development of a tradition of writings on wonders of nature. In astronomy, noteworthy is the theory of Aristarchus of Samos of the heliocentric system, which was proposed in order to explain the variations in the apparent diameter of the sun and the brilliance of the heavenly bodies. Yet this theory was far less influential than the competing theory of Theon of Smyrna, according to which two planets, Mercury and Venus, orbit the Sun, while the latter orbits the Earth. Quite characteristic of astronomy at this age but also of the other sciences is the systematic observation of natural phenomena and the collection of data before the construction of any scientific theory.

Imperial Times (First Century B.C.E.–Second Century C.E.)

Literature

As in Hellenistic literature, in the imperial centuries nature continued to be a central theme and often is described in detail. Entire poems deal with nature, such as Meleager's epigram. Life in the countryside is contrasted again with life in the city. Horatius for instance contrasted the peaceful life of the countryside with the noise of the city (*Satire* II.6), and elsewhere he asked what is more beautiful, the channels of the city or the murmur of the little rivers. This close attention to nature has much to do with the fact that Latin poets, who loom large in this period, imitated Hellenistic models such as Theocritus and Callimachus, as can be seen at best in the *Eclogues* and the *Georgica* of Vergil. Some of them also expressed nostalgia for the time when men had been living closer to nature. Quite characteristic of Latin poets is their appreciation of beautiful landscapes conducive to a life of reflection. Notable as an exception is Lucan's representation of nature in his *Pharsalia* as full of mysterious forces which can be manipulated by witches to terrifying effects.

Science

Natural science made significant progress in the imperial age. Particularly significant among the scientific treatises of this period is Pliny's work *Historia Naturalis* (*Natural Researches*) in 37 books. The author wrote this comprehensive work being influenced by the Stoic conception of nature according to which nature is divine, and as such, rational, providential, and benign. The work contains material for many disciplines ranging from geography to botanology and zoology. The structure of Pliny's inquiries is dictated by that of the natural world, as viewed by man whose existence allegedly nature means to support; the work starts with the cosmos as a whole in book two and progresses through all its subdivisions, animal, vegetable, and mineral. Greek astronomy and geography reached their peak with Ptolemy (2nd c.); his *Almagest* discusses all known astronomical phenomena of the time, while his *Planetary Hypotheses* deal with the motions of the celestial bodies. In medicine Galen is an extremely prolific author who wrote on almost all medical questions. He made some steps of progress in several issues but he largely remained faithful to the Hippocratic tradition; his physiological theory, for instance, is an elaboration of the four-humor system of the Hippocratic doctors.

Philosophy

The Stoic view that man must live according to nature gained wide acceptance at this time, but was construed in different ways. Cicero argued for a theory of natural law, according to which legal rules are based on reason, which he, like the Stoics, considered as permeating nature. Several Platonists, like Antiochus of Ascalon, Taurus,

Apuleius, and also Peripatetics like Xenarchus, Boethius, Aspasius, and Aristocles, endorsed the Stoic view of a life according to nature, and integrated it into the doctrinal system of their school-authority. Philosophers at this age showed much interest in Plato's *Timaeus*. Platonists, but also Peripatetics (e.g., Adrastus) and also others (e.g., Galen), commented on it by writing commentaries or monographs on specific issues (e.g., Plutarch *On the Creation of the Soul in the Timaeus*). One of their prominent concerns was the sense in which the world is created according to Plato. Platonists tried to articulate an interpretation of the dialogue which would escape Aristotle's criticism, according to which the world of the *Timaeus* cannot come into being and also be eternal, because, in Aristotle's view, what comes into being also perishes. Some Platonists suggested as a solution that the world in Plato's *Timaeus* is prevented from destruction through God's will, while others argued that the world was not created in the sense of coming into being at a certain point in time out of nothing, but rather has always existed and is created only in the sense that a principle, namely God, accounts for it.

Late Antiquity (Second Century–Sixth Century)

Literature

The tendency to describe nature in detail, which, as has been mentioned, started with the Hellenistic poets, took on striking dimensions during this period. Authors of novels like Longus, Achilles Tatius, Heliodorus, or pseudo-Callisthenes described landscapes, especially exotic ones, in great detail; on the one hand they tend to give an idyllic character to their descriptions, and in this they were influenced by the Hellenistic bucolic poets, yet on the other their descriptions are quite realistic. Such realistic descriptions can be found also in the epic poems of Quintus Smyrnaeus and Nonnus. Further, rhetoricians, representatives of the so-called second sophistic, such as Themistius and Libanius, composed entire treatises in which they set out to describe or to praise nature or aspects of it.

Philosophy

Philosophers of this age are mostly Platonists who continued to show much interest in the cosmogonical account of the *Timaeus*. Their cosmological interests are tightly connected with metaphysical concerns, and as a result they examined the *Timaeus* in connection with the *Politicus*, *Republic* X, especially the myth of Er, and *Laws* X. They were concerned with the status of the creator of the *Timaeus* and his relation to the forms which he imposes on matter so that the world can come into being. Since Porphyry (3rd c.), Platonists paid considerable attention to Aristotelian works on natural science, and they wrote commentaries on Aristotle's *Physics*, the *De caelo*, the

De anima. Yet Aristotle's science was also attacked vehemently by Philoponus (6th c.). His criticism first concerned Aristotle's assumption of the eternity of the world. Philoponus argued for a Christian conception of creation according to which the universe had a beginning in time. He further criticized Aristotle's doctrine that the celestial bodies are made of indestructible *aether*, making reference to astronomical observations which spoke against such a theory. Finally, he criticized Aristotle's explanations of dynamics, arguing that the void is possible and that velocity in void does not have to be infinite. At this time we also find the culmination of a debate which had started already in classical times on the question of whether the world is mathematically describable. The Pythagoreans had always contented that the world is a harmonious whole that can be expressed in mathematical terms, a view which Plato largely shared. Pythagorean Platonists like Iamblichus (3rd c.–early 4th c.) and Proclus (5th c.) returned to this idea and tried to express the harmony of nature in mathematical terms by exploiting the mathematical parts of the *Timaeus*.

Christianity

Early Christians relied on the Bible for their views on nature and the universe. Since they believed that God created the world out of nothing, they considered the natural world as being sacred in some strong sense. They considered human nature even more sacred, as they believed that man is created in the image of God, and they agreed with the Stoics that man is the center of the universe. Early Christian thinkers like Clement, Eusebius, and Origen found the biblical account compatible with the Platonic conception of the world, and often argued for this quite explicitly. Christians agreed with Platonists that the world is essentially good, as it has been created by a benevolent God.

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- See also: Creation Myths of the Ancient World; Delphic Oracle; Greece – Classical; Greek Paganism; Ovid's Meta-

morphoses; Roman Britain; Roman Natural Religion; Roman Religion and Empire.

Greece – Classical

The religion of classical Greece was based in reverence for various aspects of nature, and can provide many examples of how attitudes to nature affected treatment of the natural environment in positive and negative ways. The deities of the ancient polytheistic beliefs of the Greeks reflected the natural forces they experienced in the Earth, waters, atmosphere, and forms of life. They regarded certain features of the landscape as sacred, and established rituals associated with activities that involve human interaction with nature, such as agriculture, hunting, and consumption of food and drink. Their religious views and practices affected, if they did not always determine, the ways they used natural resources and reshaped their environment.

Greece is a mountainous country, both the mainland and the islands, with many high peaks culminating in Mount Olympus, almost 3000 meters (9600 feet) high. Only one-fifth of Greece's territory consists of arable lowlands. Agriculture faces difficulties because rainfall is generally light. Athens, for example, averages about 380 mm (15 inches) of annual precipitation, and most falls in the winter. The climate, typical of the Mediterranean, has a dependably hot, arid summer extending from April to October and a cool, moist winter the rest of the year. The environment is everywhere affected by the presence of the sea; there is no place in Greece further than 110 kilometers (70 miles) from the nearest sea-coast.

The gods of the Greeks reflect the environment; Zeus, the chief god, personifies storms and rain and was worshipped on high mountain peaks. Poseidon, in early times an underworld god who shook the mountains with earthquakes, became the chief sea-god. Athena concerned herself with birds (the owl being only the most famous), snakes and olive trees. Her helmet, spear, and shield are later additions. Artemis frequented woods and mountaintops, which she protected along with wild animals, especially their young. She expected her worshippers to exercise care when they hunted, avoiding waste and impiety. The music of her twin brother Apollo, also called Smintheus, the mouse-god, charmed lions, lynxes, fawns, and other beasts, causing them to dance with delight. The fruitfulness of the fields was the grain-goddess Demeter's work. Asclepius, the physician-god, healed through snakes and dogs. Indeed, all major gods had associations with nature, and many minor ones were spirits of natural features like winds, rivers, trees, and springs.

Two gods with paramount roles in nature are of special interest. The worship of Ge or Gaia, Earth herself, mother of gods, mortals, and every living thing, can be traced

from the Neolithic. The Greeks believed they were born from her, nourished by her, and returned to her at death. Her law was a natural law deeper than human enactments and impossible to repeal. As Xenophon put it, “Earth is a goddess and teaches justice to those who can learn, for the better she is served, the more good things she gives in return” (*Economics* 5.12). Those who treat her well receive blessings, but those who treat her badly suffer adversity. Gaia forgives, but only to a certain point, when the balance tips and it is too late: famine, disease, and death ensue.

As Greek religion developed, Pan became recognized as a universal god of nature. His name was partly responsible for this identification, since *pan* means “all” in Greek. Originally a god of herd animals and the environment of pastures, he became Great Pan, the all-god, nature personified, who ruled all things.

The Greeks felt that certain places in their surroundings were sacred landscapes hallowed by traditions. Usually these were localities of innate charm. Great gods and lesser spirits haunted wild, beautiful locations such as springs, caves, groves, and viewpoints. Each sanctuary had an orientation dictated by its natural setting. The oracular temple of Delphi, for example, was located in a spot commanding a spectacular scene, looking up at the shining cliffs of Mount Parnassus and down a deep gorge to the Gulf of Corinth. The healing shrine of Asclepius is set within a comforting natural amphitheater at Epidaurus. The sacredness of these places, the Greeks were sure, existed before they were dedicated or temples constructed, and anything built there would take cognizance of powers present in Earth, waters, and sky.

The Greeks knew wilderness as *eremos*, a place with few or no human inhabitants. But gods were present there. People erected altars on mountain summits for Zeus or other deities. Olympus, the highest mountain in Greece, was home to the gods of the upper world, but many other mountains had divine presences. Apollo haunted Parnassus, and mountain-born Dionysos roamed the forest on its flanks. Poseidon held forth with Athena on the high cape of Sunium. Mount Helicon sheltered the Muses, goddesses of the creative arts. Tortoises on Mount Parthenium might have been made into sounding boxes of lyres, but “the men on the mountain [were] always afraid to capture them, and [would] not allow strangers to do so either, thinking them to be sacred to Pan” (Pausanias, *Description of Greece* 8.54.6–7). Artemis outdid the others; when her father, Zeus, allowed her as a girl to choose her own presents, she asked for all the mountains in the world, and he gave them.

Many rituals involved the enactment of a connection between the participants and nature. The most renowned was celebrated every four years at Eleusis. There thousands saw and heard the enactment of the myth of Demeter, whose daughter Kore (or Persephone), had been

seized by Pluto and carried off to his underworld kingdom. Desperately searching for her beloved child, Demeter stopped the crops from growing, threatening to destroy human life and thus end sacrifices to the gods. Zeus relented, ordering Kore to be restored to her mother as long as she had not eaten anything in the underworld. She had tasted only four pomegranate seeds, so the gods worked out a compromise: Kore would spend four months each year underground, when the crops would not grow, but for the other eight months she would live with her mother, seeds would sprout, and Earth would be clothed in living green. The myth signified the origin of the seasons, the four months underground being the dry season between the grain harvest and planting, when the winter wheat does not grow. These mysteries identified the life and death of humans with the dying and rising of vegetation and its goddesses in the cycle of being: people die and, like seeds, are buried in the Earth, but as seeds send forth shoots in response to the rains, the initiates of the mysteries would live a happy life in the other world.

Another nature initiation ritual was the Arkteia, an Athenian festival dedicated to Artemis at Brauron, a rural sanctuary. Little girls, and sometimes little boys as well, covered with bearskin robes and called “bears” (*arktoi*), performed a dance with slow, solemn steps imitating the movements of bears. Bears became rare in Attica by the fifth century B.C.E., and saffron-dyed linen replaced bearskins. The festival was appropriate for Artemis, since she cared for the young of humans and animals. Sculptures and vases show children affectionately holding small animals such as rabbits and doves, sometimes kissing them. These were not killed; the sacrifice was only a symbolic drop of blood from a small cut. This initiation inculcated respect and love for wild creatures. So Artemis might be seen as a patron of environmental education. A renewal of the festival was held on the Acropolis for young women of marriageable age.

In Greece from earliest times, sacred groves dotted the landscape. These outdoor sanctuaries were the first temples of the gods. In Greek, an *alsos* or grove consecrated to a deity was called a *temenos*, a demarcated place. They were used for worship and supervised by local authorities. As time went on they took on the aspect of parks, with planted or cultivated trees. On the island of Lesbos, for example, there was a grove of apple trees dedicated to Aphrodite.

Some tree species were considered sacred to individual deities. Oaks belonged to Zeus, willows to Hera, olives to Athena, the laurel to Apollo, pines to Pan, and so forth. But there was no automatic identification between the species in a grove and the deity to whom it was dedicated. The people of Colophon worshipped Apollo in an ash grove, while a grove of laurel, usually sacred to Apollo, was sacred to the Dioscuri at Pharae.

In the earliest period the grove itself was the temple, and sacrifices were offered without benefit of statues or buildings. Later, statues of gods or goddesses were erected in the groves, and then shelters were built over these images to protect them and to provide a place for votive offerings. This shelter, originally of wood but later of stone with fluted columns and carved reliefs, became the temple building. But the Greeks continued to conduct public rituals and sacrifices out-of-doors. The association of grove with temple was never lost. Every temple, it was felt, needed to have trees around it, and where there were none, they were planted. When the Athenians chose the Acropolis, a barren limestone outcropping, as the site for the Parthenon, they excavated two rows of pits in the rock, filled them with soil, and planted cypresses. Similar holes have been found beside other temples.

The groves varied in size. Some were only a few trees, but the sacred land of Crisa near Delphi covered many square kilometers, and a grove near Lerna stretched down a mountainside to the sea. Since sacred groves numbered hundreds, the total area was considerable.

Laws forbade injuring sacred groves in any way. Specific rules varied in different places and times, but the pattern is consistent. There was a boundary and a prohibition against trespass. To step over the line was to pass from ordinary ground to holy ground, and was allowed only for those who would not pollute it. In a few, only priests could enter, but usually ordinary persons could do so if they were ritually clean. Sometimes women, or more rarely men, were forbidden to enter. A law found everywhere forbade felling trees or cutting branches. "Men call them the holy places of the immortals and never mortal lops them with the axe" (*Homeric Hymn to Aphrodite* 257–72). Even the removal of dead, fallen timber was prohibited. Individual trees in them were often of remarkable dimensions. This resulted from the religious feeling that notable trees in the groves were uniquely cherished by the gods, and served as dwelling places for venerable tree spirits, or dryads. If a tree was felled, it was believed that its dryad died, and that the god might leave the sanctuary. These trees were allowed to live out their lifespans until wind or rot brought them down. At Pharae, the plane trees were hollow with age and big enough to sleep or picnic inside. The Maidens, cypress trees at Psophis, were said to overshadow a mountain.

The other living denizens of the groves were protected, and hunting was not allowed. Hunters could not take dogs into a sacred enclosure, and had to stay outside if their quarry fled into a grove. At Mt. Lycæus, it was believed, a hunter who violated this rule would die within a year. Most groves contained springs, streams, or lakes. Pollution of these was strictly forbidden, and there was usually a ban on fishing. While wild animals were granted haven, domestic ones were excluded. Penalties were set for herders who allowed cows, sheep, goats, swine, or horses

to graze in the precincts. Other rules prevented plowing, sowing, or erection of unauthorized buildings. Setting fire to a sacred grove was a heinous crime, even in wartime, although it did happen. Human beings, even slaves, who sought shelter in a grove were granted sanctuary. Cleomenes, who burned five thousand Argives to death in a god's forest, was driven mad by the thought of divine retribution.

Exceptions to rules were allowed under certain conditions. Sometimes wood might be taken for a sacrifice, or animals in the grove, such as goats and deer, might be captured and offered. At times trees in a grove were used in building a temple. The magistrates of Carpathos once ordered a tall cypress to be felled in the precinct of Apollo and sent to Athens for use in rebuilding the temple of Athena. The Athenians raised an inscription of thanks, recognizing that such use of a sacred tree was appropriate. Other buildings of religious and public character were erected in groves. Public meetings and elections were held there. If the amount of environmental damage done to sacred groves was limited, however, the same thing cannot be said of the land outside them, where a religious motive leading to practices of conservation did not operate to the same degree.

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- See also: Creation Myths of the Ancient World; Delphic Oracle; Egypt – Ancient; Egypt – Pre-Islamic; Greco-Roman World; Greek Paganism; Mesopotamia – Ancient; Roman Natural Religion; Roman Religion and Empire.

Greek Landscape

Greek landscape was and still is for the most part represented topographically, symbolically and institutionally by its religious features, the most salient of which are the ancient temples dedicated to one of the Olympian deities or the whitewashed churches of the Aegean islands. Such features, however, are not the physical expression of a deep-seated religiosity characterizing Greek people, but rather an indication that religion was and is pivotal to the Greeks' perception of their identity in relation to outsiders. Indeed, religion is what still "exoticizes" Greece.

The natural landscape of ancient Greece had an ample mythical and religious structure. Mount Olympus, the highest Greek mountain, was considered to be the residence of the twelve predominant deities. Many of them were representing specific natural forces and elements – such as Zeus, the god of thunder and lightning; Poseidon, the god of the sea; or Dionysus, the god of vegetation and fertility in nature. Taking into account the characteristics of the Olympian deities, one may make a distinction between two types of landscape, the natural and the social. Thus, Athena, the goddess of wisdom, was associated with city life that provided the ordered landscape for social reproduction, while Artemis with wilderness and natural female reproduction. The population of each city usually honored a different tutelary divinity and certain patronal festivals were used to promote a feeling of community, thus forbidding non-citizens to participate. The temple of Parthenon, dedicated to Athena, still remains the most important centerpiece of Athens today.

Equally important religious markers of the landscape of ancient Greece, which were also Panhellenic in character, were the sanctuaries of Apollo at Delphi – the Earth's *ομφαλός* (navel) uniting the heavens with the underworld and the most famous oracular site – and that of Zeus at Olympia. It is worth noting here that the sanctity of such places and of others of lesser importance was preserved in Byzantine and modern times by building Christian churches on them. Apart, however, from the sacred places devoted to major divinities, the natural landscape of ancient Greece was believed to have been inhabited by other supernatural beings, such as Nymphs who were found and actually embodied the spirits of mountains, trees and rivers. The belief in such spirits still exists in many provincial places of modern Greece. The "wild" space outside human settlements, especially that near water, is considered to be the dwelling of dangerous and demonic female spirits called *νεράιδες* or *ξωτικά*.

As in Classical so in Christian Greece the landscape is given meaning in relation to what exists above and below it. The capricious ancient divinities were replaced by those of Orthodox Christianity: God, Jesus, the Mother of God, the saints and holy ascetics. As the religious landscape changed, so did the natural one. The marble Doric and

Ionic temples were substituted first by basilicas and later on by the Orthodox domed churches. In Byzantine times the marvelous architectural constructions of the cenobitic monasteries gave the land an intense mystic atmosphere. Such constructions culminated in the great monasteries of Mount Athos resembling a medieval town with its fortress, towers and the domes of its main church and chapels. But while in the Byzantine era and under Ottoman rule, monasticism was very influential in the organization of the social landscape in Greece, today monasteries have largely lost this strong authority. Most of those existing in Greek cities became historical monuments, while the new ones built in remote rural areas provide basically an oasis of spirituality away from the profane urban environment.

The big voluminous domed churches, however, still occupy a central position in spatial organization. Every urban Greek belongs to a parish church, which is at the same time the center of neighborhood and a spiritual and social one. In rural areas, the village church is found at the center of the village and together with the square becomes the axis for the organization of social life. A characteristic feature of the rural landscape is also the *εικονοστάσι* (shrine). Shrines are usually found at the four edges of the village, marking its boundaries and protecting it from the demonic forces of the wilderness surrounding its space. Such shrines are also erected at the sides of roads as fulfillments of a vow by those who miraculously survived a serious car accident or in memory of those who died. Shrines are not the only material markers of death or of boundaries. Cemeteries with tall cypresses and pine trees surrounded by high walls are found at the outskirts of the cities or villages, marking a distant "other" world, the world of the dead, which should be kept separate from the world of the living. The cemetery is a miniature city symbolically reflecting the existing social structure as well as the different attitudes of modern Greek society toward death. In Greece the egalitarian structure of the village cemeteries strongly contrasts with the material display of wealth in the urban cemeteries, reflected in the elaborate graves and markers in the ossuaries. Finally, the institutionalized sacred space is not the only place where one comes into contact with the supernatural in Greece. Many sites exist in nature bearing the seal of apparitions by the Mother of God or various saints that sanctify wilderness and that one can visit and be filled with divine grace.

While markers of sanctity abound in the Greek landscape and many rituals exist in the Greek Orthodox religion that purify nature and encourage people to consider it as blessed, one can still observe many sets of practices within the Greek Orthodox Church that are at odds with environmental concerns to which the Church has devoted the first of September, namely the start of the ecclesiastical year. To mention but one example, this can be clearly seen at modern Greek burial practices. Greece is the only country in continental Europe that does not

allow cremation on religious grounds. Spurred on by an ever-increasing urban population, cemeteries no longer exist outside the city limits – a sound practice used in the past to save valuable space and to prevent the spread of diseases. Cremation, which may be considered as a “cleaner” practice than the decomposition of the body and more in line with the reasonable use of urban landscape, is seen by the Church as a violation of the natural order and its doctrine of the body. This ban on cremation results in overcrowded urban cemeteries, whose overworked soil is unable to properly decompose the corpses, making those who prefer cremation “migrants in death” by being cremated in another country. The Church’s uncompromising attitude on this issue indicates that protective environmental practices fostered by the Church on certain occasions come second when its own traditions are threatened.

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See also: Christianity (6b1) – Christian Orthodoxy; Christianity (6b2) – Greek Orthodox; Delphic Oracle; Greco-Roman World; Greece – Classical; Greek Paganism.

Greek Paganism

Pagan (or neo-pagan) currents in contemporary Greece exhibit a unique characteristic, namely a close relation to the primordial and native faith of the ancient Hellenes. Hellenic paganism generally enjoys a prominent status within the international pagan scene, while Hellenic culture as a basic pillar of Western and world civilization continues to exercise major influences upon many domains. These facts bestow special importance upon this revival in Greece, which has been initiated by ethnic Greeks proud of their ancestors. It claims allegiance to and continuity with the spiritual values bequeathed by the ancient forefathers. It opposes the established Orthodox Church and promotes a Hellenic understanding of nature as a sacred entity. This Earth and nature-based spirituality has not developed in Greece as a broader environmentalist countercultural movement, but rather within the specific context of Hellenic paganism.

Modern Greek paganism is not a mass and widespread phenomenon. Rather, it is represented by different groups and associations and has not yet overcome its social marginality. Up to today there has been no major organization

to coordinate the varying pagan endeavors. This lack of institutionalization has caused the fragmentation of the entire movement and the dispersion of its potential. In addition, paganism has had to fight against the established official ideology of the country concerning the historical fusion between Hellenism and Christianity. This ideology has not left enough room for the flourishing of pagan endeavors, although there have been such isolated revivals in various contexts from the nineteenth century onwards (e.g., the “Delphic Feasts” organized by the poet Angelos Sikelianos in 1927 and 1930). Hellenic traditions and elements do survive today both explicitly and implicitly in popular customs, rituals and worship, even within a Christian framework. Some of these idiosyncratic trends are related to specific concepts of nature, and this is manifested in the flirtations of popular novelist A. Papadimitantis (1851–1911) with paganism and the continuing sanctity of place.

Within this loosely structured landscape of contemporary Greek paganism, a distinction must be made between pure pagan and broader Hellenic-oriented groups. It concerns related but differing trends. Both of them are concerned with the quest for pre-Christian national identity and roots. But the latter pertains more to a wider Hellenic revival, expressed in various non-homogeneous forms, with an emphasis on Greece’s indigenous heritage and usually at the expense of the Orthodox Christian tradition. The most characteristic current is centered around the monthly journal *Δαυλός* (*Torch*), published since 1982 and devoted to all aspects of Hellenic civilization. The promotion of the unique and unparalleled contributions of the Hellenes to universal civilization and the superiority of Hellenic race, spirit and culture worldwide are particularly stressed. The incorporation of esoteric trends, “New Age” spirituality, nationalistic ideas or anti-Semitic propaganda within a *bricolage*-context is not out of the ordinary. Nature and environmental issues are occasionally taken into account by attracting public attention to or by organizing protests against environmental degradation, while Christianity is held responsible for the desecralization and the devaluation of nature.

Yet, the above currents do not belong clearly to Greek paganism. Even the fundamental opposition to Christianity is in some cases blurred and room is left for a potential coexistence of Hellenism and Christianity. In addition, there is no systematic attempt to revive Hellenic religion and culture, including nature religion and an Earth-respecting spirituality. This is basically true for the pure pagan groups that accept the Earth as the primordial locus of reality and of the forces of life. A particular aspect of Greek paganism differentiating it from other forms of paganism worldwide is its predominant ethnic character. Further aspects include: worship of nature as a divine element in its entirety, because the divine dwells everywhere in nature; polytheism including many gods,

goddesses, myths, symbols and rites; lack of specific founders, because the native faith has evolved out of the natural beliefs of the indigenous people; and the importance of sacrifice as a gift to the gods, who are basically understood not literally but as archetypes. Based on their particular scope, sacrifices may be offered to some specific gods of the polytheistic pantheon and are accordingly structured (animal sacrifice, libation of wine and other products, etc). The term “(Neo)Pagans” is not usually accepted by the groups under discussion, for it is considered a negative and bigoted label on the part of their opponents. In turn, they prefer other terms such as *Ελληνες Εθνικοί* (Gentile Hellenes) or *Αρχαιοθρησκοί/Αρχαιοτρόποι/Ελληνότροποι* (followers of the ancestral Hellenic religion and way of life). They also prefer to use the term “Hellas” and its derivatives instead of “Greece.”

The bearers of such ideas are dispersed in various groups, which despite common orientations are not identical. One such group is *Διΐπετές* (Fallen from Zeus/ from heaven), which since 1991 has published a homonymous bi-monthly journal with the subtitle “In the Defense of the Ancient Psyche.” This is an organized effort to restore Hellenic religion, to de-Christianize and de-Byzantinize Greece, and to create modern Hellenes in the literal meaning of the word. Hellenic religion is not considered a “religion” in the Judeo-Christian view, but as something much broader; namely, as a comprehensive system, worldview and way of life aimed at providing humans with a serious religious-philosophical meaning of life. The ancient psyche is understood not as a dogmatic and authoritarian revealed religion, but as an internal fire existing in and leading every person. It signifies the possibility of deification of human nature, which in turn is seen as a consubstantial element of the Great Goddess or the Great Mother, the Nature of the Universe.

Nature (Gaia) is considered a giant living organism and interdependent unit (ecosphere), whose appropriate stewardship is necessary for enabling life to persist. Related modern theories (James Lovelock) are not usually drawn into the account, because emphasis is usually placed upon the ancient Hellenic background of such ideas. Thus, all nature has a great value and must be protected by humans, who must locate themselves properly within it. This entails an optimistic understanding of life, leading humans to enjoy every aspect of life and nature as a whole, broadening human perspectives and seeking inner peace and harmony. Christianity is held responsible for turning these ancient coordinates upside down by desacralizing and consequently degrading nature. The variety of species in nature is also seen as a model for sustaining a wealth of human cultural expressions and toleration. The need to worship nature is not only expressed theoretically. It has also been put into practice by following a Hellenic calendar with holidays and organizing meetings with appropriate outdoor rituals (libations,

prayers, hymns, songs), usually in natural settings under sun or moon (mountains, forests, springs) to celebrate seasonal changes and astronomical rhythms (agrarian holidays, summer and winter solstices, spring and autumn equinoxes, full and new moons). There also are activities directed toward the location of ancient sacred places and monuments (groves, trees, stones, buildings, temples). This attests also to the strong environmentalist sensitivities of the movement, which remains in contact with analogous groups abroad (the *World Congress of Ethnic Religions*) and which occasionally organizes protests and campaigns to protect such places from the negative effects of the modern, desacralized, utilitarian and consumerist culture.

In addition, there exist other major or minor pagan groups such as the *Ελληνική Εταιρεία Αρχαιοψίλων* (Societas Hellenica Antiquariorum) devoted to the revival of the Hellenic religion of the twelve Olympian gods and the pantheon of demons and heroes. This nonprofit society offers quite a large variety of activities for its members including rituals and worship of the gods in the traditional manner, and the quarterly magazine *Ελληνικόν Πάνθεον* (Hellenic Pantheon) published on the solstices and equinoxes. Its cosmological views are derived from the Orphean theology and hymns, while the worshipping of nature as a whole occupies a central place in its cultic milieu. Further, in 1997 there was an attempt to create a higher coordinating body entitled *Υπατο Συμβούλιο των Ελλήνων Εθνικών* (Supreme Council of the Gentile Hellenes) for the preservation and restoration of the genuine Hellenic tradition, which has become publicly active in various domains since then. Yet, this forum lacks the necessary credentials to undertake this major task.

The problem of the dispersion of Greek paganism is accentuated by the fact that some groups are mainly the personal constructs of certain individuals. Such is the case with Tryphon Kostopoulos-Olympios, an economist, who back in 1987 was married according to the Hellenic ritual on Mount Olympus, causing a negative reaction from the Orthodox Church. Kostopoulos criticizes sharply the present socio-political and religious situation in Greece and intends to transform Greece into a sacred place and a model for the entire world. He also regularly organizes rituals and feasts in Hellenic style in his country-house situated near Litochoro at the foothills of Mount Olympus. Another person presently following an individually created path is the writer Vlasia Rassias. He has published a lot in recent years, criticizing the Christian attitudes toward the Hellenic spirit and intending to render the present, tormented Hellenic soul a new and promising way of life.

Despite the marginal character of Greek paganism, its limited activities have not escaped the attention of the Orthodox Church, which has on several occasions condemned the revival of Hellenic religion including the worship of nature as idolatrous (e.g., the aforementioned

festivities organized by Kostopoulos). In this context, there was also in 1995 an official condemnation of the *Anastenaria*, the fire-walking practices in Northern Greece, although these are practiced within a predominantly Christian framework. Generally, the Church fears that this revival could be detrimental to the established ideology concerning the harmonious fusion of Hellenism with Christianity throughout history, which is officially propagated in the modern Greek state. This fear among certain Orthodox circles is sometimes extreme, as they even condemn ceremonies like the lighting of the flame in ancient Olympia for the Olympic Games as a potentially dangerous pagan ritual.

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See also: Delphic Oracle; Gaia; Greco-Roman World; Greece – Classical; Paganism (various).

Green Death Movement

Perhaps one of the most evocative areas of "greening" ritual and ecospiritual practice today can be found in the greening of burial practices. In his comparative work on religious attitudes toward death, dying, and the afterlife, historian of religions Kenneth Kramer observes that dying is "the final ritual. The last opportunity we have to discover life's ultimate meaning and purpose" (Kramer 1988: 1). For this reason, says Kramer, religious traditions ascribe acute importance to ritualizing the death process and teaching the faithful "how to die artfully." For those who have spiritually and ethically committed their lives to environmental sustainability, ensuring a comparably "eco-friendly" death is increasingly becoming an art unto itself. In response, the so-called "Green Death Movement" or "Natural Death Movement" promotes low-impact, environmentally sound ways to recycle human remains back into the biosphere.

The catalysts for the growth of "green burial" have been primarily twofold. First, the environmental consequences of conventional burial have become untenable to those morally and ethically devoted to caring for the Earth. For green Christians, green Jews, and neo-pagans alike, among others, the ideal of a "dust-to-dust" death is a considerable challenge in an age of widespread use of formaldehyde and other toxic embalming fluids, steel-lined caskets, and concrete-lined vaults or graveboxes.

More than 800,000 gallons of toxic embalming fluid and 30 million board feet of prime hardwoods are buried per year (Warchol 2002). The run-off of toxic chemicals into nearby rivers and streams, the use of particle board and plywood caskets laden with leaching chemical glues, the use of endangered hardwoods (like mahogany) for luxury caskets, and even the use of large volumes of pesticides and herbicides on cemetery lawns, all pose ethical difficulties for the environmentally conscious.

The second motivation for choosing a "green burial" is less tangible but no less compelling. It is about allowing for a spiritual corporeal connection to the ecosystem and to the natural cycles of decay and rebirth. In short, for some individuals, "getting back to nature" in death becomes just as important as "getting back to nature" in life (Albery, et al. 1997). The Green Death Movement has thus been nurtured by those who view "walling away" one's remains from the reclaiming and recycling forces of water, soil, and worms as yet another manifestation (indeed a literal and perhaps ultimate manifestation) of modern humans' problematic alienation from the rest of the Earth community.

There is clearly nothing "new" about natural burial. The fairly recent evolution of contemporary embalming methods in the U.S., for instance, can be traced back to the need to transport large numbers of dead bodies over long distances back to their home towns during the Civil War (Laderman 1996; Mitford 1963). In its most recent revival, natural or "green" burial has been particularly enthusiastically received within the United Kingdom. In 1991, "The Natural Death Centre" formed in London as an organization dedicated to providing guidance and resource assistance with planning inexpensive, do-it-yourself, environmentally friendly funerals. For instance, for families who do not wish to embalm with Earth-polluting chemicals but who would still like to conduct a traditional wake, the Centre provides suggestions for portable electric "cold plate" rental to preserve the body until burial and/or non-toxic saline solution embalming. The UK is now home to over 160 "natural" burial sites where unpreserved bodies are wrapped in simple shrouds or put in biodegradable caskets ("ecopods" made of cardboard or 100 percent recycled hardened paper) that are then buried within wooded nature preserves where they can decompose naturally and "return to the Earth."

The Green Death movement has been slower to gain momentum in the U.S., in part because of powerful funeral directors' lobbying organizations. However, in 1996, a couple in Westminster, South Carolina, opened "Memorial Ecosystems," a forested wildlife preserve where no toxic embalming fluids are permitted and only biodegradable caskets are allowed. Memorial Ecosystems' literature speaks, for example, of one lifelong outdoorsman who was simply buried in his favorite hiking poncho. Graves are marked by natural rock cairns, flowering trees, gardens,

and eco-sculptures that also provide habitat for wildlife. Other states with wildlife preserves offering “natural” burial sites include Florida and New York, and there are similar movements afoot in California, Vermont, Utah, Ohio, Wisconsin, and Washington. The “rural cemetery movement” in the nineteenth century that gave rise to such famed parks as Mount Auburn Cemetery in Boston (1838) and Laurel Hill Cemetery in Philadelphia (1836) sought to provide “cultural uplift” through the aesthetic beauty of a meditative landscape (McDannell 1995). These older “garden cemeteries” retain much more of a “natural” feel to the landscape than do their contemporary offspring. New “green burial” solutions certainly retain the Romantic sentiment toward nature so present in the early rural cemetery movement; however, they place a greater value on wildlife habitat conservation than on the manicured and manipulated landscapes of the conventional cemetery.

A Georgia-based company called “Eternal Reefs” has responded in a different way to the growing interest in “green burial.” The company provides a service that mixes the ashes of the cremated deceased with concrete and then casts the mixture into the form of an artificial reef that will create new habitat for threatened marine wildlife. The memorial concrete reefs are sunk to the bottom of the ocean in places where they are most needed, but each reef still bears a nameplate of the loved one so that family members can identify their relative on scuba diving visits.

Cremation, although it provides a “greener” solution for some because it avoids many of the problems of inefficient land use, deforestation, and groundwater pollution, is still an area of intense debate within the movement. The cremation process itself still releases dioxin, hydrochloric acid, hydrofluoric acid, sulfur dioxide, and carbon dioxide into the atmosphere, although the pollution is worse if the body has been embalmed prior to cremation. Green Death advocates suggest that those who do choose cremation seek ovens with updated “air-scrubbing” capabilities to minimize air pollution (Albery, et al. 1997).

If Buddhist teacher Sogyal Rinpoche was right that “You die exactly the way you live,” then the growing number of those choosing “green burial” provides valuable insights into shifting trends in contemporary culture. One of the central themes of ecological spirituality today, as it had been historically within the Romantic movement and subsequently Transcendentalism, is the importance of healing the alienation of humans from the natural world. If steel-lined, durable caskets and concrete-lined graves signal a culture of death-denial, fear of nature, and the realities of mortality connected with it, then perhaps burying bodies in “ecopods” left to decay naturally in wooded wildlife preserves, or transforming bodies into coral reefs, signals an important countercultural response. If nothing

else, it reveals the tensions between the consequences of modernity and the persistent appeal of “getting back to nature.”

Sarah McFarland Taylor

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- See also: Church of Euthanasia; Death and Afterlife in Robinson Jeffers and Edward Abbey.

Green Man

Green Man is the name given to the leaf- or vine-covered faces peering out from hundreds of medieval cathedrals scattered across Europe. Usually portrayed as a human face with skin blending into leaves or vines, Green Man is also shown disgorging vines or leaves out of his mouth and nose.

His face blurs the distinction between vegetation and human, hinting at an ancient closeness to nature, now lost. The leafy fertility of many portraits – the vines or leaves bearing fruit – shows the male figure as a protector/lover of the Earth goddess. This interpretation has made Green Man into a modern day patron saint of the men’s movement, which seeks to emulate his ecological intimacy and closeness to mother nature.

Literature as diverse as J.R.R. Tolkien’s *The Lord Of The Rings*, with its Ents and Entwives, and the anonymous *Sir Gawain and the Green Knight*, with its Green Knight, play with these half-tree, half-human images.

It is surprising, given the number and geographical range of the faces, that their origin and identity remain a mystery. Folklorist Lady Raglan coined the name Green

Man, citing a similarity with folk traditions of Jack-in-the-Green, Robin Hood, the King of May, and the Garland, all of which perform in leafy dress costumes.

Later studies question Raglan's association of the leafy folk characters with the leafy faces; nevertheless the name has stuck. Some of the folk traditions she cites are recent creations failing to explain the ancient history of the faces.

The overwhelming historical record of Green Man is the hundreds of foliate heads sculpted into stone or wood in European Christian architecture. None are named, except one leaf face on a fountain made in 1200 for the Abby of Saint-Denis, Paris, France. The face is named Silvanus, Roman god of the woods. However, nowhere is Silvanus depicted with the same leaf face in antiquity, and the portrait is considered mistakenly titled.

French stonemason, Villard de Honnecourt, drew up a book of architectural notes and drawings in 1236. He includes two leafy human faces that he simply labels Têtes de Feuilles, with no further indication as to any related tradition.

Foliate faces similar to those in European cathedrals are traced to Roman times, such as those found in friezes on the arches of Septimius Severus and Aurelian's Temple of the Sun, both in Rome. The faces are found throughout the Roman empire, many in the context of Dionysian mysteries, and may represent the use of ivy leaf masks in Dionysian initiation ceremonies.

The earliest face found in a Christian setting is the Green Man face carved into the tomb of Sainte Abre, in the church of St-Hilaire-le-Grand, Poitiers, France. Usually dated to 400, the face disgorges vegetation, possibly representing a transitional stage from the leaf masks of earlier art. Pictures of dolphins on the tomb suggest a connection with Dionysus who is said to have disgorged ivy, thereby fouling the plans of pirates whom he turned into dolphins.

In Germany, when Bishop Nicetius rebuilt Trier's cathedral in the mid-sixth century, he reused columns containing Green Men carvings on the capitals from a nearby Hadrianic temple, Am Herrenbrünchen. He set the columns up around the crossing of his cathedral, which may have housed Christ's robe and nails from the crucifixion.

The important role of Trier's cathedral in the spread of Christianity and the central display of its Green Man-topped capitals surrounding such sacred relics did more to integrate Green Man into Christian architecture than any other event. Green Man proliferated to such an extent in subsequent years that he may outnumber portrayals of Christ in some locations.

Gothic architecture's use of a line of columns on either side of the nave to imitate a walk of trees leading up to the altar may have been inspired by Green Man topped capitals. Architectural details branch off from gothic column capitals to form treetops over the heads of worshippers recreating sacred patriarchal groves.

Many tie Green Man to various Mediterranean fertility deities, depicted with green skin or spouting leaves and responsible for renewing life each spring. Green-skinned goddesses like Neith and Isis, both mother gods, were responsible for creation and restoring life.

Male gods like Dionysus, Tammuz (Dumuzi) and Cernunnos, and others depicted like Green Man, use their vegetative virility to renew life. Dionysus is often entwined in ivy or grapevines, sometimes stealthily peering through the leaves. The Celtic god Cernunnos, usually portrayed with antlers springing from his brow or head, occasionally sprouts vegetation for hair or a beard.

These vegetative gods and goddesses share power over death: Isis pieces together her lover's severed body; Osiris and Dionysus go into the underworld to rescue life. Their fertility and self-sacrifice for others is a strong parallel with Christian tradition.

Vegetative attributes of the Hebrew God are found throughout biblical books, most frequently in the prophets. God brings rain and wine as well as new life in spring. Prophets Elijah and Elisha call God down to bring the dead to life, and Ezekiel witnesses revivification of thousands of skeletons in the valley of dry bones.

The strongest biblical connection mixing vegetation with divinity comes from the prophet Ezekiel. He not only tells of trees that nurse famished Jews returning from Babylonian exile (Ezek. 34:25–27), but in his vision, God's rebuilt temple is constructed increasingly of wood until one enters into the holy place – the heart of the sacred tree – a wood-paneled room containing a wooden box bearing the presence of God. From this tree/temple/god, water springs forth, bringing life to the land (Ezek. 41:15–26).

Revelation 22 picks up Ezekiel's tree images, putting the Tree of Life – with a spring at its base – back in place, nourishing and sustaining God's loyal followers. Christian imagery of Christ as the vine or Tree of Life builds on these images of a vegetative deity nourishing humanity.

To balance Green Man's regenerative aspect, Kathleen Basford points out the pained and demonic look of many of the carvings. Like the leaves covering the sin of Adam and Eve, many faces grimace in pain or look to be wasting away their mortal existence. She also documents Green Man's portrayal as a Satan figure, one opposed to life, and points to depictions of Satan disgorging leaves like Green Man in many cathedrals. For Basford, Green Man's pain warns us of the fragileness of nature, both human and vegetative.

Matt Wiebe

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See also: Christianity (5) – Medieval Period; Men's Movement.

Green Politics

As Green Politics has emerged around the world it has often been intertwined with religion and spirituality. This has been especially true in the United States where discussion and debate over spiritual matters played a central role.

In many countries, proportional voting systems granted fledgling Green Parties early access to seats in parliament, focusing internal discussions on the details of party-building, legislation, and policy. But in the U.S., where electoral margins of twenty-five and even forty percent can yield little in the way of tangible results, Greens spent the better part of the 1980s debating values and principles, including the role of spirituality in the development of the movement. This was not entirely unprecedented; for example, after several years as a political prisoner in East Germany the Green Party pioneer Rudolph Bahro arrived in West Germany in the early 1980s, and soon became a prominent voice for an ecological, cultural, and spiritual revolution. His writing decried the degradation of personality and ethics under industrial capitalism, and heralded what he viewed as an inevitable, ecologically-driven economic contraction as a grand opportunity to assert spiritual values over mere "necessity." During the mid-1980s, as his disillusionment with the increasing pragmatism of the German Greens grew, Bahro advocated the development of rural communes that would offer a spiritual foundation for a new biophilic culture and sustain progressive cultural values in the midst of declining empires. His primary inspiration was the role of the Benedictines in preserving culture following the collapse of the Roman Empire.

From the outset, U.S. Greens distinguished themselves by placing discussions of values at the center of their work, articulating "Ten Key Values" of Ecological Wisdom: Grassroots Democracy, Personal and Social Responsibility, Nonviolence, Decentralization, Community-based Economics, Postpatriarchal Values, Respect for Diversity, Global Responsibility and Future Focus. With immediate electoral success a distant prospect, most early U.S. Greens embraced a movement-building and culture-transforming role, highlighting local and bioregional campaigns and focusing on ecological and social issues rather than

pursuing electoral success. Thoughtful and idealistic people from many walks of life embraced the idea of an American Green movement as a symbol of hope and renewal, and the focus of a new kind of political community, even as the conservative trend epitomized by the Presidency of Ronald Reagan dominated politics in Washington.

Charlene Spretnak's popular booklet, *The Spiritual Dimension of Green Politics* (1986), sought to place a distinctly Christian spirituality at the center of the emerging Green political movement in the U.S. Other early U.S. Greens advocated a wider-ranging spiritual diversity, inviting speakers such as Anishinabe (Chippewa) elder Walt Bressette to keynote numerous local, regional, and national Green gatherings. Ecofeminist-inspired rituals – both the neo-pagan and more eclectic varieties – were a feature of many Green events. Meanwhile, more secular Greens voiced an increasing discomfort with all the talk about spirituality in the movement, viewing it as exclusionary and, at worst, coercive. Spirituality is a personal matter, they suggested, asserting that neither overt religiosity or quasi-religious ritualizing should be brought into the public sphere. The contemporaneous rise of the Christian Right was cited by both camps: for some as a mandate for the Greens to contribute to filling the spiritual void in American life; for others a harbinger of the inherent authoritarianism of any overtly spiritual politics.

The first national gathering of the U.S. Greens, in Amherst, Massachusetts in 1987, brought a heated debate around these issues. Social ecologist Murray Bookchin presented a strong polemic, widely reprinted as "Social Ecology vs. Deep Ecology," in which he denounced the increasingly misanthropic outlook of several leading Earth Firsters as well as the "New Age" spiritual leanings of many Greens. Charlene Spretnak and other spiritual Greens voiced dismay over the stridency of Bookchin's attack. In the years that followed, social ecologists in the Greens became the main voice for a radically decentralist political strategy, in which emerging Green locals would seek to become an incipient counter-power to the centralized nation-state, while sustaining their involvement in a wide array of local eco-political struggles.

When the Greens in the United States adopted their first national program in 1991, both outlooks on Green spirituality were represented. The Spirituality statement in the Green Program advocated freedom of worship and the removal of religious practices from governance – the classic separation of church and state – but also affirmed spirituality as "a way of being in the world that acknowledges and celebrates our connectedness to the Earth, to each other, and to all life." Within a few years, as U.S. Greens aimed to follow their European counterparts into the electoral realm, both spiritual and social-ecological Greens tended to drift away. As the particulars of policy,

ballot access, fundraising and voter turnout took center stage, these early debates conjured memories of a much more idealistic time in U.S. Green history.

Brian Tokar

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- See also: Anishinabeg Culture; Bioregionalism; Earth First! and the Earth Liberation Front; Ecofeminism (various); New Age; Radical Environmentalism; Social Ecology; Spretnak, Charlene.

Green Sisters Movement

Historically, when orphanages were needed in North America, Roman Catholic religious sisters' communities built orphanages. When hospitals were needed, sisters built hospitals and staffed them. When schools were needed, sisters built schools and taught in them. When peace and social justice concerns intensified, especially in the context of the Vietnam War, the Civil Rights Movement, the violence in Central and South America, and the widening economic disparities between wealthier countries and the world's poor, sisters formed ministries to respond, including commissions on peace and justice that took sisters' lobbying efforts to Congress and to the United Nations. Now, in today's times, an increasing number of religious sisters are hearing and answering a call from the Earth, and it is to these needs that they are directing their efforts. Founding numerous ecological learning centers, community-supported farms, and other Earth ministries on their lands has been one such response.

Popularly referred to as "green nuns," "green sisters," or even "eco-nuns," Catholic religious sisters are building new "Earth ministries" and are reinhabiting their traditional community lands in "greener" (that is, more ecologically conscious) ways. Some sisters (the term "nuns" technically refers only to monastics) are sod-busting the neatly manicured lawns surrounding their motherhouses to create community-supported organic gardens where they engage in "sacred agriculture." Others are building alternative housing structures from renewable materials,

using straw bale, rammed Earth, and cobbing materials instead of forest products. They are building composting toilets, heating their buildings with solar panels, cooking with solar ovens, and opting for new "hybrid" vehicles when replacing older cars. They are putting their community lands into land trusts and creating wildlife sanctuaries on their properties. They are disrupting shareholder meetings of corporate polluters, contesting the construction of garbage incinerators, and combating suburban sprawl. They are developing "green" liturgies that honor the whole life community, and they are adopting environmentally sustainable lifestyles both as daily spiritual practice and as a model to others.

In 1993, Sister Mary Southard (CSJ) and a handful of women religious concerned about ecological devastation to the planet founded a loose, decentralized network called "Sisters of Earth." Sisters of Earth co-founders stress the "informal nature" of the network and their aim to provide support and informational resources for ecologically concerned sisters (and some lay women) without becoming a centralized hierarchical institution. There is no headquarters for Sisters of Earth, no president, and no central leader. Although there is a rotating conference planning committee, this committee issues no policy statements and does not require that members adhere to any tenets. Although many Sisters of Earth have been inspired into Earth activism by their encounter with the work of Passionist priest and "geologian" Thomas Berry, members are affiliated with a wide variety of women's religious congregations and espouse a diversity of thought. Sisters of Earth's biennial conferences serve, in particular, as gathering sites for sisters involved in many different forms of Earth activism – organic farming, land trusts, anti-toxics work, eco-justice, farmland renewal, food safety, heritage seed conservation, Earth literacy education, ecospirituality, and so forth.

Not all "green sisters" are members of Sisters of Earth, but many of them are, and the network itself is one of the more visible manifestations of the larger movement of ecologically active religious sisters. Green sisters – many of them athletic, Levi-clad, sun-tanned, out digging vegetable beds, pruning fruit trees, building "eco-villages," launching clean-water campaigns, and celebrating planetary seasons and cycles – defy popular media stereotypes of the pinched, priggish, and passive nun. In the process of finding new ways to "reinhabit" their community lands, sisters are also creating more sustainable ways to "reinhabit" the spiritual landscapes of Catholic tradition and vowed religious life. For centuries, religious women have periodically created movements to reinvent and reinvigorate religious life; the culture of green sisters is arguably one of these movements.

Sarah McFarland Taylor

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- See also: Bioregionalism (various); Community Supported Agriculture; Genesis Farm; Roman Catholic Religious Orders.

Greenpeace

Greenpeace is an international, non-profit organization dedicated to protecting the global environment and promoting peace worldwide. Founded in 1972 by a small group of peace activists in Vancouver, Canada, it has since grown to become one of the most recognized activist organizations throughout the world. In 2003, Greenpeace drew members from 101 nations and maintained an active presence in over 40 countries. It is known for, among other things, its confrontational style of nonviolent, direct-action campaigning, built on the Quaker tradition of bearing witness and the Gandhian and King traditions of resistance.

Greenpeace grew out of the Don't Make a Wave Committee (DMWC), a group of peace-oriented journalists and media people, committed to stopping the United States from testing nuclear weapons under the Aleutian Islands in Alaska. The group feared that the tests would create great tidal waves or an earthquake since the Islands sit near a fault line that runs from Vancouver and emerges as the San Andreas Fault in California. After failing to dissuade the U.S. through traditional forms of protest, the group decided to sail a ship to the testing zone in an attempt to disrupt the detonations or, failing this, draw widespread attention to the environmental, health and security dangers involved. This strategy was not an entirely novel one: it had been used twice before by Quaker groups but, because the operators of the two previous ships were Americans, the ships were vulnerable to arrests by U.S. officials. DMWC sent a Canadian-registered ship staffed by mostly Canadians and this allowed it to proceed as long as it stayed in international

waters. The ship, *Phyllis Cormack*, never made it to the site and neither did a second, *Edgewater Fortune*, but the actions enjoyed so much media attention that they galvanized citizens in both Canada and United States against nuclear weapons testing and created enough public pressure to convince the U.S. to cancel future, previously planned tests. Aiming to expand their activities, DMWC formally dissolved in 1972 and became Greenpeace.

This initial victory prompted Greenpeace to undertake similar protests throughout the 1970s against French nuclear testing in the Pacific and, in time, against a range of threats to the planetary ecosystem. The hallmark of Greenpeace is its dramatic exploits: Greenpeace has become expert at grabbing media attention through the use of creative, nonviolent, visually spectacular campaigning. Greenpeace action teams have, for example, scaled buildings and smokestacks to drape accusatory banners, sailed hot-air balloons into nuclear test sites, plugged-up industrial discharge pipes, and situated themselves in small craft between whaling ships and their targets. The media attention afforded to these daring displays has been central to Greenpeace's success in mobilizing public opinion against environmentally harmful activities and raising awareness about threats to peace.

While Greenpeace has no explicit religious affiliations, three of its founding members were Quakers and its style of protest drew inspiration from the Quaker philosophy of "bearing witness." Bearing witness requires that, when someone observes a morally objectionable act, he or she cannot turn away in ignorance but must take action to prevent further injustice or stand by to attest to its occurrence. Greenpeace bears witness by trying nonviolently to disrupt environmentally unjust behavior and by broadcasting its actions worldwide through various forms of media. Greenpeace ships, for instance, have satellite hook-ups that allow video footage to be sent instantaneously to media outlets throughout the world and almost all its actions take place in front of photo-journalists. A guiding intention of Greenpeace's actions is to bring previously hidden activities into public view and enable as many people as possible to know about and become outraged at environmentally unjust activities.

A central principle behind Greenpeace's work is a commitment to nonviolence. Drawing on the traditions of Mahatma Gandhi and Martin Luther King, Jr. as well as the Quakers, Greenpeace seeks to prevent wrongs without harming the perpetrators. Greenpeace acts in ways that prefigure the more peaceful world it works to bring about. This unwavering commitment to nonviolence has at times created rifts within the organization. Most notably, Paul Watson, an early Greenpeace member, advocated and at times practiced aggressive tactics considered violent by some – most notably against baby harp seal hunters.

After being voted off Greenpeace's Board of Directors for various reasons and intent on fostering a more radical type of environmental activism, Watson broke with the group and founded the Sea Shepherd Conservation Society. Over the years, the society quarreled with Greenpeace over how aggressive tactics should be and what counts as violence. This led them to take different approaches to similar issues. In the 1980s, for example, Greenpeace organized a boycott of fish products from Iceland to protest Icelandic whaling policies. In contrast, the Society sank half of the Icelandic whaling fleet.

Greenpeace's executive board is based in Amsterdam, the Netherlands, and oversees an extensive network of members and offices. Greenpeace has an international membership of some 2.8 million people and an annual budget of close to US\$160 million. A notable feature of Greenpeace is that its entire international budget comes from voluntary donations (rather than funding from governments or industry), with over 90 percent of total funds coming as contributions from individuals. From its original focus on nuclear disarmament, Greenpeace has gradually expanded its areas of concern. Greenpeace's activities are presently organized around six, primary issues or campaign areas: 1) global warming; 2) ancient forests; 3) oceans; 4) global production of persistent organic pollutants (POPS) and other toxic chemicals; 5) nuclear materials and other dangers of the nuclear age; and 6) genetic engineering of food.

Many of Greenpeace's international protest activities in these areas are supported by one of the four ships in its "eco-navy." The flagship of the Greenpeace fleet is the *Rainbow Warrior II*. This ship was commissioned to replace the original *Rainbow Warrior* after the French government bombed and sunk the vessel in 1985 in an attempt to prevent Greenpeace actions against its nuclear tests in the South Pacific. The name of Greenpeace's flagship vessel, and a fair amount of the inspiration for Greenpeace, comes from a 200-year-old Native American prophecy. A Cree grandmother, named Eyes of Fire, foretold that the greed of the white man would lead to a time when birds would fall from the sky, fish would die in the streams, and the seas and forest would become blackened. The legend suggests that such destruction could only be reversed by a rediscovery of a widespread reverence for the Earth. With a renewed Earth-based spirituality, the various peoples of the Earth could unite under one banner, becoming "Warriors of the Rainbow."

At a general level, Greenpeace is concerned with changing the way people around the world think about and act in relationship to the environment. Greenpeace, through its literature and activities, promotes the idea that every person on the planet must bear some personal responsibility for the environment's well-being. By promoting this "ecological sensibility" – the heightening of a worldwide concern for the environment – Greenpeace works to alter

the social practices that support environmental harm. Greenpeace is in the business of consciousness-shaping: by changing people's attitudes, Greenpeace hopes to affect their actions.

Greenpeace is also concerned with changing the behavior of governments. When Greenpeace participates in meetings involving world governments or otherwise lobbies government officials, the organization's wide constituency base, knowledgeable experts and a history of effective action lend its views significant legitimacy. Greenpeace has played a central role in securing international legal agreements concerning such issues as whaling and ocean fishing, burning and dumping hazardous substances at sea, international trade in toxic waste and POPS. In recent times its campaigns have been credited with bringing about a moratorium on the planting of genetically engineered crops in Europe, promoting an international ban on the trade in so-called "conflict-timber" from West Africa, and encouraging a European phase-out of soft PVC.

While not a religiously based organization, Greenpeace draws direct inspiration from various spiritual traditions. Its Quaker roots and ongoing commitment to Quaker principles like bearing witness, its unwavering dedication to nonviolence in the Gandhian and King traditions and its connection to Native American religiosity make it a curious blend of spirituality and progressive politics. It recognizes that, while science and reason can provide invaluable information about the world we live in, deeper principles, orientations and values must frame our understanding of such information and require us to act in the service of human and ecological well-being.

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- See also: Biocentric Religion – A Call for; Earth First! and the Earth Liberation Front; Friends-Religious Society of (Quakers); Gandhi, Mohandas; Green Politics; Radical Environmentalism; Watson, Paul – and the Sea Shepherd Conservation Society.

Griffin, Susan (1943–)

With her imaginative prose and poetry, Susan Griffin characterizes the dominant mythos of Western civilization as separation from and control over the Earth. This dominant mythos is informed by Judeo-Christian theology and creation narratives. She attempts to disrupt this mythos, by articulating a different vision of embeddedness in the Earth.

Griffin's work links ecological destruction and gender oppression. Her observation that the burdens of "cleaning up" the ecological crisis have been unduly placed upon women inspired her most influential work, *Women and Nature: The Roaring Inside Her* (1978). In this book, she experiments with two voices: one the "objective, detached, and bodiless" voice of Western patriarchal logic, and the other an embodied and impassioned voice of women (1978: xv). The dialogue of these two voices traces the historical association of men with eternal reason and divine soul and women with earthly sin, corruption, and death. Out of this dialogue emerges a perspective that Griffin describes as a women's "consciousness" of earthly connection (1978: xvi). It is this consciousness that we are "made from this Earth," which Griffin's later essays and poems affirm (1987: 223).

In *The Eros of Everyday Life: Essays on Ecology, Gender, and Society* (1995), Griffin suggests that a consciousness of earthly connection has implications for epistemology and psychology as well as gender and ecological relations. She refers to a "commingling" of the abstract and concrete in thought and claims that identity is an experience of interdependence rather than an assertion of independence (1995: 81, 91). In contrast to the distorted knowledge and divided self of the dominant Western mythos of separation from nature, Griffin insists that "[e]very movement, every breath, every response, the least thought" depends on the Earth (1995: 75).

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See also: Daly, Mary; Ecofeminism (various); Feminist Spirituality Movement; Gimbutas, Marija; Merchant, Carolyn; Paganism – Contemporary; Sexuality and Green Consciousness.

Grim, John – See Religious Studies and Environmental Concern.

Grof, Christina and Stanislov – See Breathwork; Re-earthing.

Gulen, Fethullah (1938–)

Fethullah Gulen was born in 1938 in Erzurum, in eastern Anatolia. In the region of his birth, near the mountains of Ararat and the Aras River, Gulen was surrounded by the beauty of nature. He completed his formal education in Erzurum in his early twenties, and then began to educate himself in the Islamic sciences and in Eastern and Western classics, from Sa'di of Persia to Dante of Italy. Today he is considered a prominent intellectual, religious, and spiritual leader in Turkey and is known worldwide. He is the author of dozens of books and articles and writes editorials for several journals. In 2001, he went to the United States for medical treatment for his heart problem. He has remained there since then.

Gulen's view of nature developed during the course of his education. In his early life, Gulen tried to instill in his students an appreciation of nature. He took his pupils on lengthy camping trips in which he encouraged them to be in harmony with nature by exposing themselves to the natural world and removing themselves from the conveniences of the modern world for a time.

Gulen's ethic of nature is different from both anthropocentric and biocentric views. Gulen once wrote,

This miraculous art of nature shows something more subtle, something beyond its own beauty, something that points to the One who created it so beautifully, who wants to be felt through His art, yet not felt thoroughly because of His majesty (Gulen 1991: 110–14).

Here Gulen focuses on the two aspects of nature: nature as a veil and nature as a revelation. It is a veil, because it veils the majesty of God. We do not see God himself, but only the natural world of cause and effect, which he has created. However, nature is also revealing, as it reveals the art of God in the most beautiful manner, reflecting the majesty of God.

In Gulen's understanding there is a triangle, composed of God, the Creator; nature, the book; and humans, the contemplators. Gulen once wrote, "We read [nature] as a book, we feel it, and we watch it, alive with its color and beauty" (1991: 110). Gulen refers to al-Ghazzali's (d. 1111) statement: "In the realm of possibility there is no better form than that which God has created," saying that "it is as if every form of nature is competing to demonstrate its beauty" (1991: 112).

Gulen writes not only of the amazing beauty of nature, but also of "pure-hearts," those who are capable of contemplating nature. The result of this contemplation is an understanding of God. This view is derived from a Qur'anic verse: "Lo! In the creation of the heavens and the Earth and (in) the difference of night and day are signs (of His sovereignty) for men of understanding . . ." (3:190). The "men of understanding" referred to in this verse are the "pure-hearts" of which Gulen writes. According to Gulen, humans finally realize that the beauty of nature is not the eternal beauty, but an indication of the eternal beauty of God. The life of a human is not long enough to experience all the beauty that nature holds. Therefore, the "awakened hearts" turn to the eternal beauty of God. In Gulen's understanding, "The spirits who are aware of this beauty see the creation in a deeper manner, listen to the music of every creature, a music beyond imagination . . ." (1991: 112). To Gulen, in the sight of these "awakened hearts," "all trees say 'Hu!' [The Qur'anic pronoun used for God, which means 'He'] Roses, flowers, in their own languages declare the Most Holy Creator" (1991: 112). Similarly, Gulen writes, "The rivers run, saying, 'Wahdet, Wahdet' ['You are the One'; can also be translated as 'Oneness']" (1991: 111). Thus, as the rivers run they express the oneness of God.

Gulen expresses his regret toward today's civilized society's behavior toward nature, writing,

Nature which is given to humanity by the Most Merciful One, for contemplation, as a mighty book, how it is painful that it is not cared for as much as a can of trash . . . Not only is nature not cared for, it is attacked on all sides, by deserting, and by trashing. Therefore, it is battered and bruised (1991: 113).

Gulen believes that because of humanity's behavior, air is polluted, water is contaminated and alarming, and the soil is losing its fertility. If the appropriate steps are not taken soon, the ecological balance will collapse and the Earth will become "the land of death." Gulen, then calls upon humanity, Muslims in particular, to be more responsible, saying, "the protection of nature is among the duties of every Muslim" (Gulen 1997: 239). Gulen refers to the Prophet of Islam's declaration, after his immigration from Mecca, that Medina was to be a "Haram," which in modern terms can be translated as a National Park, in which "grass

is not to be taken, animals are not to be killed, and trees are not to be cut." Gulen warns again, saying, "If we do not take lessons from what we have done, our beautiful world will be an amount of debris after disasters as destructive as the floods of Noah" (1991: 113).

Zeki Saritoprak

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See also: Gardens in Islam; Islam.

Gurdjieff, Georges Ivanovitch (1866?–1949)

The notion of the "biosphere" – the thin organic film that covers the surface of our planet not only as a single integrated unit but also as one that has been the greatest force shaping our planet – coined by the Russian geochemist V.I. Vernadsky in 1926, is arguably the most significant idea that modern Russian thought has contributed to the ongoing interpenetration of the ecological and the religious.

Vernadsky's intellectual ambition, though, ranged wider. As a "cosmicist" within the historical ambit of Russian mystical philosophy, like that of many of his scientific and artistic contemporaries, far from being simply a precursor to James Lovelock's Gaia hypothesis or an influence upon the likes of Lynn Margulis, Vernadsky was at pains to emphasize that the "biosphere" was in some important way involved in the transformation of cosmic energy pouring forth from the Sun, which was also in some way its source.

It is unlikely to be simply a coincidence that in 1916, a decade before Vernadsky published his revolutionary work, G.I. Gurdjieff, a Russian who began his mystical career in the West as a refugee from the Bolshevik revolution formulation, also saw organic life, nature as a whole, as forming "something like a sensitive film which covers the whole of the Earth's globe" which serves as a "transmitting station of forces" (Ouspensky 1949: 138) and which also "began in the sun" (Ouspensky 1949: 139).

Despite little verifiable information about Gurdjieff until his arrival in Moscow in 1911, at the very least this similarity suggests the ubiquity of "cosmicism" in the Russia of the time. As a "key ancestor" (Heelas 1996: 48) to the New Age, Gurdjieff's "cosmicism" has achieved a widespread if diffuse influence. For example, the author of the environmental classic *Small is Beautiful*,

E.F. Schumacher, was a friend of one of Gurdjieff's English disciples, John G. Bennett, and many of Gurdjieff's ideas came to influence him deeply.

Emigrating to Western Europe via Istanbul in 1920, in 1922 Gurdjieff and his followers moved to Fontainebleau, south of Paris, where he operated the Institute for the Harmonious Development of Man into the late 1930s. He visited the United States in 1924, where he also found followers, and again in 1930. From the early 1930s until his death in 1949 Gurdjieff lived in Paris with occasional trips to America. The Work, as the spiritual movement initiated by Gurdjieff has come to be known, continues to this day.

It is Gurdjieff's compatriot P.D. Ouspensky, one of his most dedicated but wayward followers, to whom we owe almost our entire knowledge of Gurdjieff's teaching in Russia. It is in Ouspensky's record of this form of the teaching, *In Search of the Miraculous* (1949), that we find Gurdjieff's earliest formulation of his ideas about the function and source of organic life as a planetary whole. While on the one hand superficially resembling a "proto-ecological" stance in arguing that humanity "like the rest of organic life, exists on Earth for the needs and purposes of the Earth" (Ouspensky 1949: 57–8) which is itself a "living being" (Ouspensky 1949: 25), Gurdjieff makes it clear that soteriologically his teaching is also "against nature, against God" (Ouspensky 1949: 47).

Gurdjieff's seemingly contradictory positions are reconciled in his idea of the "Ray of Creation," the backbone of his early cosmology which later became a staple of the Work. Like many exemplars of Western mysticism before him, Gurdjieff held a broadly post-Neoplatonic emanationist schema in which the manifold emerges and descends hierarchically from a unitary source and through to which it can once again ascend – which he termed "involution" and "evolution" respectively. This process unfolds through the actions of two fundamental principles: the "Law of Three," which determines all manifest relationship, and the "Law of Seven," which determines all manifest transformations, which Gurdjieff at this time also referred to as the "Law of Octaves."

The "Ray of Creation" is our own particular "involutionary" octave or "cosmological *sofeggio*" "in which Do is God or the Absolute, Si is the universe, La is our own constellation, Sol is our Sun, Fa the sun's planets, Mi the Earth and Re the moon" (Moore 1991: 45). As "there is nothing dead or inanimate in nature" (Ouspensky 1949: 317) that meant that, like a branch from a tree-trunk, the Ray of Creation was also alive and growing. The Earth for example, is growing "not in the sense of size but in the sense of greater consciousness, greater receptivity" (Ouspensky 1949: 305). This growth was a direct effect of organic life which Gurdjieff described as "the Earth's organ of perception" (Ouspensky 1949: 138).

However, unlike the classical emanationist pattern, the

transition from unitary source to the manifold and back is not a smooth one. Rather, the "Ray of Creation," like all processes under the Law of Octaves and also like the musical scale after which it is named, is discontinuous between the notes Do (in this instance, God) and Si (the universe), and the notes Fa (the planets) and Mi (the Earth) (Ouspensky 1949: 137).

It is at these points that the development of processes can be retarded. To overcome these junctures, a "shock" or additional force must be applied. The juncture between God and the universe was filled by the will of the Absolute (Ouspensky 1949: 132). In order to fill the juncture between the planets and the Earth, continuing the descent of energies along our Ray of Creation to the Moon undeflected, "a special apparatus" – i.e. Life – "is created for receiving and transmitting" (Ouspensky 1949: 132). This lead to one of Gurdjieff's more startling claims that the "moon is a huge living being feeding upon all that lives and grows on the Earth" (Ouspensky 1949: 85), receiving a particular energy or "soul" stored in every plant, animal and person upon its death.

While the deterministic effects of descending energies is indeed pessimistic for the majority, life's higher origins in the Sun also constitute the beginning of the evolutionary ascension back toward the Absolute for the few. Here Gurdjieff's cosmology dovetails into his soteriology, for liberation "from the mechanical part of our life" is "liberation from the moon" (Ouspensky 1949: 85). Involutionary processes, conscious in their origins in the Absolute, become more mechanical the further they travel from the Absolute. As the "evolving part of organic life" (Ouspensky 1949: 306), only human beings can struggle against the general downward flow. As a microcosm of the universe, having "in us the matter of all other worlds" (Ouspensky 1949: 88) which "undergo the same transformation . . . on the same plan and in accordance to the same laws" (Ouspensky 1949: 191), we have the possibility, only with the expenditure of constant self-initiated effort, of increasing the production of the more refined matters within us, which Gurdjieff associated with greater consciousness and a conditional immortality.

Nature or organic life as a whole "transmits to us through our impressions the energy by which we live and move and have our being" (Ouspensky 1949: 181). While it is all for her own involutionary purposes, we could also use that energy to participate in the evolutionary flow back to the Absolute.

Gurdjieff later mitigated this severity somewhat in his own posthumous opus *Beelzebub's Tales to His Grandson*. Though it recontextualized the core of his earlier cosmological ideas, more importantly it introduced a complex cosmogonical theodicy entirely absent from his previous formulations. He ended this book with the image of life as a river dividing in two: one stream terminates in the

crevices of the Earth and is lost forever, while the other stream empties into the boundless ocean. Here Gurdjieff argued that so

long as we remain passive, not only shall we have inevitably to serve solely as a means for Nature's "involutionary construction," but for the rest of our lives we shall have to submit slavishly to every caprice of all sorts of blind events . . . [but] even for you, it is not too late . . . The foresight of Just Mother Nature consists . . . in this, that the possibility is given us, in certain inner and outer conditions, to cross over from one stream into the other (Gurdjieff 1950: 1231–2).

For Gurdjieff this could only be achieved by "honorably fulfilling my duty to Great Nature" (1950: 39). This obligation to nature is carried out within a complex mythological narrative in which the chains of worlds were created to provide God with a means whereby he could escape the action of time through "the exchange of substances or the Reciprocal-feeding of everything that exists" (1950: 136–7). For Gurdjieff, everything is "eating" something lower and "feeding" something higher in the circulation of an open living system.

Moreover, only in a certain class of beings, humans among them, can the necessary "transmutation of cosmic substances" (1950: 140) take place. This effort not only will "pay for their arising" (1950: 386) but also allows them to absorb some of these substances themselves to create "higher-being-bodies" which survive the death of the "planetary body" we are born with (1950: 775). Such beings become "free to lighten as much as possible the sorrow of our COMMON FATHER" (1950: 386) in his struggle against time and to be his "helpers in the ruling of the enlarged World" (1950: 792) which continues to grow and "feed" him.

In Gurdjieff's estimation, it is only because we do not conform to this cosmic purpose that Mother Nature, the consciousness of our planet, is then further constrained to implement the process of "reciprocal destruction" of human beings in the forms of epidemics and more terrifyingly through war in order to make up for the energetic imbalance in the context of universal interdependence (1950: 959–60).

More recently, this obligation, coupled with his notion that if "by a certain time, what ought to be done has not been done, the Earth may perish without having attained what it could have attained" (Ouspensky 1949: 25), which ties into contemporary ecological concerns, has led some in "the Work," such as James George in *Asking for the Earth* (1995), to see the evolution of humankind, as a road whereby the Earth might be saved.

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- See also: Bennett, John G.; Gaia; Lovelock, James; New Age; Ouspensky, Pyotr Demianovich; Russian Mystical Philosophy; Schumacher, Ernest Friedrich.

Gush Emunim

Gush Emunim, "the Bloc of the Faithful," led the pioneering Jewish movement to settle the West Bank in the wake of the Israeli victory in the Six Day War in 1967. The organization was not in fact named until a meeting in February 1974 at Kfar Etzion, although settlement undertaken by founding Gush personalities Rabbi Moshe Levinger and Hanan Porat began in 1967 when Levinger and Porat "settled" the Park Hotel in Hebron by checking in disguised as intrepid Swiss tourists who oddly spoke only Hebrew shortly after the conclusion of the War.

For Gush Emunim, the Land of Israel (*Eretz Yisrael*) occupies the central concern of the movement, and in the view of its adherents, the Land is the key to messianic redemption, not only for the Jewish people, but for the entire world. Gush Emunim's "religion of nature" should therefore be understood through two facets of the organization's teaching. First, the Land itself is sensible, ensouled, and capable of feeling pain when hurt or joy when united as God intended with the Jewish people. The Land in this sense is numinous and imbued with inherent sacrality. Second, and of greater importance, Gush theology proposes an almost mathematical formula by which the unfolding process of messianic redemption can be

measured, centimeter by centimeter, as the Jewish people slowly reacquire control of the full biblical patrimony of *Eretz Israel* as promised to them by God in the Hebrew Bible.

The Sacrality of the Land

The numinous character of *Eretz Yisrael* is perhaps best expressed by Rabbi Yochanan Fried, a senior Gush personality:

[T]he significance of the holiness of the Land is indeed the concept of sanctity in the Jewish world . . . the Land cannot suffer bad deeds, since its very essence is holy. Therefore, whoever does not adjust to its (the Land's) character, is pushed away from before it (Y. Shilhav in Newman 1985: 122).

The basis for Gush Emunim's focus on the Land is a reductionist or fundamentalist application of the complex theology of Rabbi Abraham Isaac Kook (1865–1935), the first rabbi of Mandatory Palestine, as filtered through the fundamentalist teachings of his son, Zvi Yehuda Kook (1891–1982), who from his yeshiva, Mercaz Harav, would become the spiritual mentor – and indeed, a prophetic figure – to the founding members of Gush Emunim, many of whom were Mercaz Harav graduates.

For the elder Kook – a man learned in Kabbalah as well as Talmud – every Jew, however secular, has within himself “the sacred spark,” a link with God as one of God's covenanted people. Rabbi Kook explicitly linked this teaching with the view that the bond between the Jewish people and the Land was uniquely different from what binds all of the other world's peoples to their lands. The holiness of the Land of Israel calls out to the holiness of the Jewish people, linking them forever as one. Zvi Yehuda, carried on the elder Kook's teaching, but with a particular focus on the Land as the key to messianic redemption. The 1967 war, giving Israel control of vast tracks of the biblical patrimony which had been under the control of Egypt, Jordan and Syria, created the conditions under which the Land could be reunited with its people, thus paving the way for the emergence of the settlement movement.

The Full Biblical Patrimony

In 1967, only weeks before the outbreak of hostilities, at the annual reunion of Mercaz Harav graduates held on Israel's national day, R. Zvi Yehuda Kook rose to give a speech on the topic of Psalm 19. Suddenly, in the midst of his oration, the rabbi began loudly to lament the loss of the biblical patrimony of Israel, torn from the “living body” of *Eretz Yisrael*:

“They divided up my land.” Yes – this is true. Where is our Hebron? Do we let it be forgotten? And where

are our Shechem [Nablus] and our Jericho? Can we ever forsake them? All of Transjordan – it is ours. Every single inch, every square foot . . . belongs to the Land of Israel. Do we have the right to give up one millimeter? (Aran 1988: 265)

The unexpected onset, and surprising success, of the Six Day War was interpreted by Rabbi Kook's students as nothing less than miraculous, and the words of Rabbi Kook quoted above were thus rendered prophetic.

The first, and still most important, Gush Emunim settlement is Kiryat Arba in Hebron, which grew out of an Israeli government compromise with Levinger and Porat aimed at getting them to leave the Park Hotel, where they had long outstayed their welcome (and never actually paid their bills). It remains at this writing (2003) the focus of the most militant settlement activities in the West Bank, and Rabbi Levinger remains there as the settlement's most important rabbinical authority.

The “earthquake” was the term many Israelis use to describe the elections of 1977 when the Labor Party – the party of government since independence in 1948 – was swept aside and the right-wing Likud coalition led by Menachem Begin came to power. Under Begin, settlement was for the first time encouraged. Under government sponsorship, a ring of settlements – in reality vast apartment blocks – were created around Jerusalem on formerly Palestinian-owned land. Financial incentives brought Israelis of every religious and political hue to live in these suburban “settlements,” while Begin in private urged Gush Emunim to continue its settlement activities in the West Bank and the Sinai. Gush Emunim sources quote Begin as saying, following a lecture on the sort of domestic and international pressure he was under with regard to the Occupied Territories:

Do it [found settlements] clandestinely, and get organized once you're there. Then, after the fact, it will be easy for me to say “They got the better of me!” After all, nobody would imagine that I, Menachem Begin, would drive Jews off of Jewish land (Segal 1988: 37).

The theological dilemma which would grow with the passing years was starkly illustrated on 7 September 1978 when the same Prime Minister Begin who had encouraged Gush Emunim settlement signed the Camp David Accords. The agreement returned the Sinai to Egypt, and necessitated the dismantling of the settlements which had sprung up there after 1967. Gush activists made a symbolic stand against the Israeli Army at the Sinai settlement of Yamit, but this was soon abandoned and, from the perspective of Gush Emunim's theology of the Land as the measure of messianic redemption, the redemptive process had for the first time in a generation suffered a dramatic reversal. The

disastrous 1982 Israeli invasion of Lebanon further demoralized the Gush faithful, as did two waves of the Intifada, the uprising against Israeli occupation (in 1987 and 2003). The Israeli withdrawal from its self-imposed Security Zone in southern Lebanon on 24 May 2000 made the sound of the footsteps of the messiah yet more faint to ears of the Gush faithful.

These reverses have served to obscure an ongoing, but vitally important, internal hermeneutical debate among senior Gush personalities. The question that had to be answered if Gush Emunim's theology of the Land was ever to be realized was this: what exactly constitutes the full biblical patrimony of *Eretz Yisrael*? The key text upon which the imagined map of *Eretz Yisrael* is drawn is far from clear. According to Exodus 23:31, "I will establish your borders from the Red Sea to the Sea of the Philistines, and from the desert to the River." The Red Sea is clear enough, and archeological evidence could be marshaled to make a case for locating "the sea of the Philistines," but which desert (the Sinai in present-day Egypt, the Empty Quarter in contemporary Saudi Arabia, the Mojave in present-day New Mexico?), and what river (the Nile, the Tigris, the Euphrates, the Mississippi?) is far from clear.

The argument however, is becoming increasingly irrelevant in the face of events in the Middle East. The idealistic young founders of Gush Emunim are, today, neither idealistic nor young. The organization has declined considerably in recent years, supplanted by a more militant generation of settlers for whom the teachings of the Rabbis Kook hold little allure. These sons and daughters of the original wave of settlement have come to be known as the "Hilltop Youth" in the Israeli press, and are famed for their zeal at establishing illegal and military indefensible settlements, as well as for their physical violence directed at Palestinians and their property, secular Israelis, the Israeli press, and most strikingly, their fellow settlers who voice disapproval of their behavior. The Hilltop Youth retain the original Gush Emunim's messianic zeal, but have little interest in the Kookist ideology of the sacred spark as being inherent in even the most secular of Jews. In ecological terms, the violence associated with these young settlers has resulted in significant damage to the Land through the uprooting of olive branches and orchards belonging to Palestinian families – actions that the first generation of Gush adherents would never have countenanced.

In terms of Gush Emunim's theology of redemption through reconstituting *Eretz Yisrael*, however, all this means little. Israel's borders show little sign of again expanding, so for the remaining adherents of Gush

Emunim's unique "theology of the Land," the messiah yet tarries.

Jeffrey Kaplan

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H

Haeckel, Ernst (1834–1919)

A physician, zoologist, and evolutionary biologist known during his lifetime as “the German Darwin,” Ernst Haeckel was born on 16 February 1834 in Potsdam, Prussia, and died in Jena, Germany, on 9 August 1919. Haeckel died in his beloved home, Villa Medusa, after having lived in Jena for the last 58 years of his life. For most of that time he was Professor of Zoology at the University of Jena. His scientific perspective on the origins and development of organisms was based on an uneasy syncretism of the archetypal Romantic biology of Goethe and the evolutionary theories of Lamarck and Darwin. Haeckel was one of the earliest proponents of Darwinian theory in Germany. The two men met three times during their lives and corresponded. Haeckel is credited for being the first explicitly to state in print, in his *Generelle Morphologie der Organismen* (*General Morphology of Organisms*, 1866), that “Man has evolved from apes just as these have evolved from lower animals” – an explosive admission that Darwin deliberately avoided in his *On the Origin of Species* (1859). It is also in his *Generelle Morphologie der Organismen* that Haeckel introduced the idea – now considered incorrect – for which he is most famous, the “Biogenetic Law”: ontogeny (biological development of the individual following conception) recapitulates phylogeny (the evolution of species and lineages from the first appearance of life on Earth). His famous illustrations of a developing human embryo replicating the analogous sequence of stages of the evolution of life on Earth still appear in college textbooks (although there is a lingering controversy over whether they were falsified by Haeckel). Haeckel is also the first, in 1874, to use the drawing of the “phylogenetic tree” visually to represent the Darwinian view of advanced forms of life emerging from more primitive species. As an accomplished visual artist who celebrated the truth and beauty of nature in drawings, watercolors and oil paintings, Haeckel reproduced his throbbing, almost psychedelic, vision of sea microorganisms as eccentrically observed through his microscope in an influential volume of illustrations, *Kunstformen der Natur* (*Art Forms in Nature*, 1899). The spiny, mandala-like images in his book were borrowed by many Art Nouveau (*Jugendstil*) artists, including the Parisian architect Rene Binet (1826–1911), who used the form of one of these microbes as the inspiration for a pavilion built for the 1900 Universal Exhibition in Paris. The “Barefoot Dancer” Isadora Duncan (1877–1927) was an ardent admirer of Haeckel, and during her

tour of Germany in 1903–1904 she based some variations of her “dance of the future” on Haeckel’s evolutionary ideals. In science, art, and culture, Haeckel was unquestionably one of the most famous and influential men of the nineteenth century.

By 1904, the year of his seventieth birthday, Haeckel had achieved enormous international acclaim as a popularizer of science, rivaled, perhaps, only by recent scientists such as Carl Sagan and E.O. Wilson. His rapid rise to fame followed the publication in Germany in 1899 of *Die Weltraetsel* and its English translation in 1900 as *The Riddle of the Universe*. Within five years of publication each of those editions had sold more than 100,000 copies. The unprecedented success of this book was due to its vivid and apparently convincing philosophy of life based on Haeckel’s concept of Monism, “the connecting link between religion and science.” Although Haeckel had first proposed his scientific religion of Monism in a lecture he gave in Altenburg, Germany, on 9 October 1892, other than Roman Catholic priests enraged by his anti-Christian (and especially anti-papist) polemics, these ideas did not catch fire in the general public. *The Riddle of the Universe* changed all that. Monism was to replace dualisms in science (vitalism, a form of materialistic dualism) and religion (distinctions between psyche and body, natural and supernatural, nature and God). More importantly, an explicitly pantheistic and atheistic “Monistic Religion” based on “the good, the true, and the beautiful” in nature would replace Christianity. There would be no chapels or cathedrals in this new science-based faith, for nature itself would be worshipped through a new aesthetic vision in science. All scientists would develop the skills and sensitivities of artists, and artists would sing, paint and dance the eternal flame of life as reflected through the prismatic truth of evolution.

Due to the overwhelming popularity of Monism among “free-thinkers,” artists, scientists, and pantheists – particularly those in the German youth movement who were already practicing sun worship, nudism, vegetarianism and Aryan mysticism – in January 1906 disciples of Haeckel in Jena formed an organization to promote the scientific religion of Monism. The German Monistenbund, as it was called, grew by 1915 to 6000 members in 45 cities. Membership fell during the First World War and again after Haeckel’s death in 1919. As they did with many other competing organizations and political parties, the Nazis banned the Monistenbund in 1933.

Perhaps Haeckel's most detailed statement of his pantheism and his contempt for Christianity can be found in his short 1914 book, *Gott-Natur (Theophysis): Studien ueber monistische Religion (God-Nature [Theophysics]: Studies in Monistic Religion)*. In it, he proposed his universal God be named the "All-God" (*Allgott*), "Pantheos," or "Deus intramundanus" (God Within-the World). The revered prophets of the new Monistic religion are to be Giordano Bruno, Spinoza and Goethe instead of Jehovah, Christ and Allah. According to the seven principles of Theophysics: 1) God is nature itself, eternal and imperishable; 2) God is the laws of nature itself, impersonal, unconscious, unyielding; 3) God possesses no free will; 4) God does not perform supernatural miracles or wonders; 5) God as a universal substance is a Trinity of Attributes (Mater, Energy, and the Psychom – a word Haeckel coined for the unity of psyche and body); 6) God is blind fate; 7) God is no judge and knows no difference between good and evil.

Haeckel's last major work was *Kristallseelen: Studien ueber des anorganischen Leben (The Souls of Crystals: Studies of Inorganic Life)*, 1917. In it Haeckel argued that life sprang from non-life, and the fact that crystals grow, move, transform, and have a symmetric internal structure like biological beings suggests that they, too, have a soul or psyche and are probably the inorganic source of life on this planet. This was an extension of an idea Haeckel had proposed as early as 1877 about living cells and microbes known as protozoa, that each cell or protozoa had its own psyche and that the totality of organic matter was "ensouled" (*beseelt*). Haeckel may have been prescient when he speculated about the origins of life from non-life, for current scientific speculation also points to crystals as the form of inorganic matter from which life sprang almost four billion years ago.

Richard Noll

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See also: Conservation Biology; Darwin, Charles; Fascism; Holism; Nietzsche, Friedrich; Pantheism; Philosophy of

Nature; Restoration Ecology and Ritual; Sagan Carl; Wilson, Edward O.

Hardy, Thomas (1840–1928)

Thomas Hardy, an English novelist and poet, was a major Victorian novelist of rural life, hugely influential upon nature writing and the rural novel to this day. He was one of the famous Victorian cases of loss of religious faith, but his relationship with Christianity remained ambivalent. From his mid-twenties onwards his attitude was a mixture of rationalist disbelief in the existence of an external God, anger at the cruelty perpetrated by Christian morality taken in the letter rather than the spirit, and a lingering and sometimes wistful sympathy with Christian rituals and aspirations.

Nature, in his writing, is a surface on which these different attitudes meet each other. There is occasion for hope, or revived hope, as in the chapters of *Tess of the d'Urbervilles* where Tess begins work at Talbothays dairy, or the section of *The Return of the Native* (1878) in which Clym Yeobright begins working as a furze-cutter on Egdon Heath. In both of these cases a character who has been wounded finds a rebirth of innocence through absorption in primitive rural labour in a pastoral setting. To identify nature as Eden entails the idea of a coming Fall, however, and this registers its presence almost from the outset. Clym finds his unexpected peace working on the heath after damaged eyesight has forced him to give up his studies. To the external observer, traveller or reader, Clym becomes "a brown spot in the midst of an expanse of olive-green gorse, and nothing more" (Hardy 1975a: 262). He discovers nature as a paradise temporarily and inadvertently regained: a release from self-consciousness and alienation. The perspective afforded by reading, which he has lost, is tacitly compared to the knowledge Adam and Eve gained from the forbidden fruit. Renouncing it, Clym gains an unfallen world where the animals no longer fear him. Yet Hardy is insistent about the cost of this return to innocence. Closeness to nature means vulnerability (as a brown spot on the heath he is as defenceless as an insect) and loss of vision – loss, for example, of the longer scientific perspectives so new and troublesome to the Victorians. Edenic optimism in Hardy's nature writing repeatedly reasserts itself, to be crushed by circumstances suggestive of a Darwinist or Malthusian view of nature, yet to come springing up again in its season. None of these positions stabilizes as the belief system of the writing. In *The Woodlanders* (1887), a tragically inflected Darwinism informs the nature writing. The "lichen ate the vigour of the stalk, and the ivy slowly strangled to death the promising sapling" (Hardy 1975c: 82). Yet even in this drama of thwarted purpose and "Unfulfilled Intention" the idea of nature as symbol of persistent hope and vitality remains.

Early in *The Return of the Native* is Hardy's famous description of the music made by the wind blowing through the tiny dry heather-bells of Egdon Heath. In this mournfully elegiac reworking of the Romantic trope of the Eolian harp, he evokes not only "the ruins of human song" but the delicate ghost of an omniscient God, able to see and touch each tiny thing but only faintly and purposelessly. The heather-bells are reminiscent of Dante-esque lost souls and of the innumerable perishing individuals and species revealed by Darwin's vision of evolution: "One inwardly saw the infinity of those combined multitudes; and perceived that each of the tiny trumpets was seized on, entered, scoured and emerged from by the wind as thoroughly as if it were as vast as a crater" (Hardy 1975a: 78).

Hardy sometimes argued sardonically that the evolution of sensibility and intelligence in human beings had done little more than increase their capacity to suffer: "This planet does not supply the materials for happiness to higher existences" (in Florence Hardy 1975: 218). Prolonged contentedness, in his fiction, tends to be attributed to characters of stolid or subdued intelligence. Later he developed, as part of his philosophy of "evolutionary meliorism," the fanciful hope that what he called the Immanent Will – the unconscious drive and causality of life – might one day evolve a form of consciousness. Another hope was that there might be an alliance between religion and rationality, "by means of the interfusing effect of poetry" (1976: 562).

Richard Kerridge

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- See also: Memoir and Nature Writing.

Harjo, Joy (1951–)

Joy Harjo, a member of the Muscogee (Creek) nation of Oklahoma in the central United States, has always seen the world in multifaceted ways. Beginning her college studies in painting, she has made a name for herself as a poet, and later took up the saxophone and combined

music and poetry into performance art. She has also written film scripts, and in her most recent book, *A Map to the Next World*, has mixed together poems and "tales." Her interest in the multisensory dimensions of art reflects her stated perception that human beings possess far more than five senses and that if we were to open ourselves to these additional senses they would allow us to experience not only the material aspects of the world more tangibly but also the supernatural aspects as well. Perhaps that perspective helps to explain the genres found in a book she recently co-edited, *Reinventing the Enemy's Language: Contemporary Native Women's Writing of North America*, which contains, as she notes, "poetry, fiction, personal narrative, prayer, and testimonials." The titles of some of her books, such as *A Map to the Next World* and *The Woman Who Fell From the Sky* reflect the centrality of Native American spirituality in her understanding of the world that is repeatedly expressed in her writing through attention to the need of all people, and the attempts particularly of native people, to live in balance with the rest of the world in the face of "the destruction" wrought by modern civilization. This vision is perhaps nowhere more strongly expressed than in the series of prose poems she has written to accompany Stephen Strom's photographs of Navajo country in *Secrets from the Center of the World*. Adjacent to one photo she writes of an "old man" who "has already been outside to pray, recognized the morning star and his relationship to it, as he stands at the center of miracles" (1989: 14).

Harjo's efforts to promote readers' recognition of such relationship can be found in her first two poetry collections, *The Last Song* and *What Moon Drove Me to This?* In the former she introduces a recurring motif of native people trying to "find a way back" from the current crisis of culture-nature separation, while in the latter she introduces ritual into her poems, as with the opening one, "Early Morning Woman," where she notes that "the sun / the child / are the moving circle / beginning with the woman / in the early morning" (1979: 3). Over twenty years later, she opens *A Map* with "Songline of Dawn," which begins with "We are ascending through the dawn" and ends with "We are closer to the gods than we ever thought possible" (2000: 13). The accompanying prose tale, "The Psychology of Earth and Sky," clarifies these lines emphasizing the need for community and ceremony in order to build a world that is "more than a contract between buyer and seller" (2000: 15). Harjo's work, then, from first book to current writing, reflects a belief in a spiritual ecology that can heal the world through community-building rituals that both grieve over the destruction that has occurred and celebrate the beauty and balance that can yet be achieved.

Patrick D. Murphy

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- See also: Memoir and Nature Writing.

Harmonic Convergence

If not one of the largest, as its organizers claimed, the Harmonic Convergence was probably one of the most widely dispersed religious (or spiritual) events of recent decades. Organized primarily through word of mouth and through New Age, holistic-health, art, and alternative media channels, this coordinated day of prayer, meditation, and ritual was instigated by art historian and New Age philosopher José Argüelles. According to his calendrical calculations and idiosyncratic decodings of ancient texts, the dates 16–17 August 1987 marked the synchronous occurrence of several significant events: the beginning of the final 26-year period of the Mayan calendar's 5200-year Great Cycle, the return of Quetzalcoatl, the Mayan god of peace, and the culmination of the Aztec calendar; the "dancing awake" of 144,000 Sun Dance enlightened teachers (according to the Rainbow People of the Intertribal Medicine Societies); the return of the Hopi Indians' lost white brother Poha'na; a Grand Trine in the astrological fire signs and the first time since the early 1940s that the seven planets have been so closely aligned; an anchoring of divine energy into the power points of the planet for their subsequent transmission through the "planetary grid system," and a "calibration point in a galactic and planetary harmonic scale."

To mark this convergence, Argüelles called for 144,000 people to meditate, pray, chant and visualize at sacred sites and power spots throughout the world in order to create a "complete field of trust" by "surrendering to the planet and to the higher galactic intelligences which guide and monitor" it. Humanity would thereby launch the final 25-year transition into a new age of peace, harmony, solar energy, spiritual enlightenment, and galactic convergence with other civilizations, all to begin in the year 2012. Argüelles' vision combines a Gaian ecological sensibility with a cosmic New Age eschatology: humanity's role as planetary stewards – a role we have allegedly abdicated through the misguided application of technology and

inaccurate sciences (to which Argüelles counterposes new ones) – is subsumed within a larger community of benevolent overseeing galactic intelligences.

According to media reports, by 17 August 1987, some 6000 people had gathered at Mount Shasta, California, more than 1500 came together at a site in New York's Central Park, and analogous numbers converged at sites including Chaco Canyon, New Mexico, the Cahokia Mounds outside St. Louis, England's Glastonbury and Stonehenge, Machu Picchu in Peru, the Great Pyramid in Egypt, and Mount Olympus in Greece. New Age celebrities, including Shirley MacLaine, John Denver, and Timothy Leary, were among the convergers, and the mainstream media took note, albeit with a gentle sense of humor. Though total numbers only reached a fraction of Argüelles' projected 144,000, the event was generally proclaimed a success within New Age media. Actual numbers, of course, are impossible to know, since participation could have included simply meditating or linking thoughts in the privacy of one's home or backyard.

A second Harmonic Convergence was organized in August 1992, with minor follow-up attempts since then, but these have only managed to rally much smaller numbers of participants. In recent years Argüelles has been vigorously advocating that global institutions (such as the United Nations) replace the current Gregorian calendar with a 13-moon, 28-day calendar. "The religion of truth is the religion of the Earth," he has argued, and the latter requires, as a moral imperative, to be based on a "natural" and galactically calibrated method of measuring time. Though Argüelles' ideas have not galvanized the mass movement he has hoped for, any final judgment regarding the success of the 1987 convergence remains premature until the 25-year transition period comes to its prophesied end.

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- See also: Celestine Prophecy; Earth Mysteries; Harmonic Convergence and the Spiritualization of the Biosphere; Maya Religion (Central America); Maya Spirituality (Guatemala Highlands).

[P] Harmonic Convergence and the Spiritualization of the Biosphere

The Harmonic Convergence Global Peace Meditation occurred on the dates 16–17 August 1987. Widely publicized in the world media, especially in the United States, the event called for a massing of a minimum of 144,000 people at dawn of August 16. An emphasis was placed on

gatherings to be held at sacred sites around the world. These sites included the Great Pyramid, Egypt; Lake Baikal, Siberia; Ayres Rock, Australia; Glastonbury, England; Macchu Picchu, Peru, Mt. Haleakala, Hawai'i; and Mt. Shasta, USA. By all reports the event attracted many times the 144,000 called for and made it the most unique global event of its kind. Subsequent events such as the stock market crash of 19 October 1987, and the end of the Cold War, early 1990, were ascribed in part as being due to the effects of the Harmonic Convergence. According to one of its principle organizers, Jim Berenholtz, never before did people from so many different cultures and religious persuasions gather to pray for peace . . . it was the largest pan-spiritual event in history.

While many people believed that the Harmonic Convergence heralded the New Age and it certainly helped create the New Age as a popular cultural phenomenon, the roots of the Harmonic Convergence lay in an ancient Mexican prophecy, that of the Thirteen Heavens and Nine Hells. This prophecy was first popularized in a book by Tony Shearer (1926–2002), *Lord of the Dawn* (1971). It was directly from Tony Shearer in 1969 that the originator of the Harmonic Convergence, José Argüelles, learned of the prophecy and of the prophetic dates, 16–17 August 1987. The Thirteen Heavens and Nine Hells refer specifically to 22, 52-year cycles based on the Mayan calendar. The first of the Thirteen 52-year Heaven cycles of decreasing choice began in 843, and ended in 1519, with the arrival of the conquistador, Hernan Cortes on Mexican soil. The Nine Hell cycles of increasing doom spanned the time between Good Friday, 1519 and 16 August 1987, with the final cycle beginning in 1935. The prophecy itself was associated with the Toltec sage and prophet Ce Acatl Topiltzin Quetzalcoatl, Our Lord One Reed, Quetzalcoatl (947–999).

Late in 1983, Argüelles had a vision of the end-date of this prophecy in which he saw circles of people gathered at sacred sites around the world, reestablishing a connection with the natural order of reality. Then in 1984, Argüelles coined the term for the event, the Harmonic Convergence. As he began to announce the event, he encountered several others who were also aware of the prophetic nature of the 1987 dates, including musician Jim Berenholtz and Native American medicine man, Harley Swiftdeer. By late spring 1987, with the publication of Argüelles' book *The Mayan Factor*, the Harmonic Convergence attracted major media attention, including the breaking story on the front page of the *Wall Street Journal*, 23 June 1987. As such, the Harmonic Convergence exemplified a popular participatory eschatology where one's very actions make a difference to the planet's future.

Through all of the mass media attention, the actual meaning of the event was generally overlooked. While signaling the end of the Thirteen Heaven and Nine Hell prophecy cycle, the Harmonic Convergence actually initi-

ated the final 25-year countdown to the conclusion of the Mayan calendar Great Cycle. This defines a cycle of 5125 years between 13 August 3113 B.C.E. and 21 December 2012. Consisting of thirteen sub-cycles called baktuns, of 144,000 days each, the entire cycle spans the history of civilization from Uruk and the First Dynasty of Egypt, ca. 3100 B.C.E., to the present moment. For this reason, what the ending of the Great Cycle portends is the ending of history itself and the beginning of a genuine post-history. To successfully conclude the cycle in 2012, according to the Harmonic Convergence prophecy, the human race must return to living again in the natural cycles of the universe, and abandon the materialist civilization that dominates the present era. If the human race cannot transcend or go beyond the materialism of the present world order by 2012, then it can only expect the worst – the collapse of civilization or even worse, the collapse of the biosphere.

At the heart of this prophecy is a recognition of the human deviation from nature and its effects on the environment, or properly speaking, the biosphere. In this regard the Harmonic Convergence prophecy coincides with the theory of the biosphere-noosphere transition. The biosphere is defined as the region on the surface of the Earth for the transformation of cosmic energies. By definition, the biosphere includes all of life as a single unity inclusive of its support system, solar and cosmic energy, the soil, hydrospheric cycles, and the convection currents of the atmosphere. As a fragile membrane encompassing the Earth's surface, the biosphere is dependent upon the pressure that the different species exert upon each other to maintain the balance of its laws, principles and cycles that govern. As Vladimir Vernadsky (1864–1945) saw it, humanity, through its extension, the machine, was upsetting the balance of the biosphere. Vernadsky himself was uncertain as to whether humans were crippling or destroying the biosphere.

In the theory of the biosphere as presented by Vernadsky and Pierre Teilhard de Chardin (1881–1955), the biosphere is an evolutive whole which is tending toward a major culminating transmutation known as the noosphere, Earth's mental envelope, discontinuous with and above the biosphere, a planetary thinking network of consciousness and information. For Teilhard de Chardin the noosphere is like a new organ of consciousness, analogous on a planetary level to the evolution of the cerebral cortex in humans. Teilhard de Chardin spoke of the moment of noospheric mutation as the Omega point, and of the convergence of the person with the Omega point as defining a new hyper-spiritualized state not only of the human but of the Earth itself. Similarly, Vernadsky (with whom Teilhard de Chardin coined the term noosphere in 1925) saw that following a peak crisis of the biosphere heralding the biosphere-noosphere transition, a new geological era would appear, the *psychozoic* era. This new era dominated by the

noosphere would represent a spiritualization of life, the meaning of the word, psychozoic.

What neither Teilhard de Chardin nor Vernadsky foresaw was the intermediate stage between the biosphere and the noosphere, and that is the technosphere. The present stage of human civilization is defined as the technosphere: the sum of technology and the civilization which maintains it as an artificial envelope coextensive but discontinuous with the biosphere, affecting all of its aspects and functions. In this regard, the technosphere represents a singular but necessary deviation from the natural order. As the agent effecting the disruption of the biosphere while alienating the human species from nature, the technosphere is the mechanism allowing both for the global communication system to hook up the species as a single organism, and for the release of free energy into the biosphere accounting for global warming, ozone depletion, species extinction and the general crisis of the biosphere as a whole. Seen from the perspective of the biosphere–noosphere transition, the technosphere is like the cocoon of the new emergent evolutionary stage, the noosphere. Since the technosphere is dependent on the very biosphere which it is disrupting, it must inevitably either destroy itself and the biosphere or transform into its opposite condition, the noosphere, a purely non-technological spiritual state.

As the fulfillment of the prophecy of the Thirteen Heavens and the Nine Hells, Harmonic Convergence actually defines and describes the entire 25-year period between 1987 and 2012. From the Harmonic Convergence viewpoint, the great Cycle end-point, winter solstice 2012 corresponds to Teilhard de Chardin's Omega point, while the entire 25-year period defines the biosphere–noosphere transition. The crisis of the biosphere is seen as the direct result of the technospheric civilization, while the technosphere itself is defined as a function of operating on timing cycles that are artificial and mechanistic. The call of the Harmonic Convergence to return to living in the natural cycles of the universe represents an evolutionary signal to the species that its dependence on artificial civilization and mechanistic time must be abandoned if it is to survive. The real meaning of the Harmonic Convergence is the capacity of the human species to respond to this signal and to harmoniously synchronize itself with the natural order by 2012, thus attaining to Teilhard de Chardin's Omega point.

As the focal event of the *Mayan Factor*, the Harmonic Convergence must be understood within the context of the meaning of the Mayan calendar system. The *Mayan Factor* is the overlooked factor in any analysis or consideration of human history. What is overlooked is the Mayan contribution to human thought and culture, and that is the correct understanding of time. The complex and rich system of thought embodied in the Mayan calendar system is based on a radical perception of time that is not a linear

construct as the Western paradigm has it, but is a frequency. As a frequency, time is the universal factor of synchronization which, in turn, defines a whole other domain of reality, the synchronic order. The nature and purpose of time is to synchronize, and therefore, the purpose of human timekeeping should be evaluated on the degree to which it promotes synchronization with the universe. The Harmonic Convergence prophecy worked because the Mayan prophecies are synchronized to the universal timing frequency. Since the Harmonic Convergence prophecy proved to be so effective, then one must anticipate that there is something to the prophecy regarding the end of the cycle in 2012. If history is meant to be concluded by that point in time, how can the transition of the human race from mechanistic to natural synchronic time be attained? That is the question left open by the Harmonic Convergence.

Obviously, if the technosphere is a function of artificial and mechanistic time, then the release from the technosphere must be by a replacement of artificial and mechanistic timing standards with naturally synchronic timing standards. The fulfillment of the Harmonic Convergence prophecy can then be realized as the change in the time of civilization. The technosphere, the final stage of civilization, is governed by two timing standards, the Gregorian calendar and the mechanical clock. The irregular measure of the Gregorian calendar combined with the mechanization of time produced by the clock are the direct causes of the alienated and fast-paced mental condition of modern humans. To change the time by replacing the current calendar with one that is genuinely synchronic would be an apocalyptic act, for it would portend the removal of the macro-organizing basis of the present world order, thus altering the operating basis of society altogether.

In this way the Harmonic Convergence is a supreme eschatology representing a grand convergence of prophecy. For to replace the standard by which civilization has governed itself for over 2000 years with a perpetual and harmonic standard in which there is no irregularity whatsoever would be to remove the very foundation of history and the technosphere as a deviation from nature. The most harmonic standard conceivable is a solar-lunar calendar of 13 months of 28 days each, 52 perfect weeks a year, with one extra day for the forgiveness of debts. In history as it has devolved there is no harmony. In harmony there is no history. Accepting a perfectly harmonic standard, therefore, would be to enter into post-history.

According to the Harmonic Convergence prophecy, the biosphere can only be spiritualized if man is synchronized with the cycles of nature. The only way to achieve this goal is through the rejection of the irregular timing standard and the adoption of a harmonic one. Only by operating in a harmonic timing standard will the human species be able to return to living in the natural cycles of the universe.

This would augur the fulfillment of the Harmonic Convergence. But to attain to this condition by 2012 means that a calendar change must be enacted. This is the purpose of the Great Calendar Change of 2004, the natural sequel to the Harmonic Convergence Global Peace Meditation of 1987. Should such an eventuality succeed, it would also signal the successful conclusion of the biosphere–noosphere transition and the imminent advent of the psychozoic era, the era of the spiritualization of the biosphere.

Jose Argüelles

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SP Harmony in Native North American Spiritual Traditions

Few who witnessed the first Earth Day in 1971 have forgotten its most memorable symbolic moment: a television commercial in which an American Indian warrior paddled his canoe to the bank of a river and walked to a nearby highway, congested with traffic. As he watched this desecration, a single tear rolled down his cheek and the voice-over narration intoned: "People start pollution; people can stop it." While this public service ad – recently named one of the top fifty commercials of all time – communicated an admirable message, it also disseminated a stereotype of American Indians as romantic ecologists or, according to some scholars, "ecologically noble savages" (Redford 1991: 46–8). This positive stereotype has generated endless discussion about whether indigen-

ous peoples have actually lived in *harmony* with nature or whether they, too, have irresponsibly destroyed their own environments. Framing the debate in these terms perpetuates an insidiously false dichotomy, however: either American Indians must embrace "harmony," which connotes a mystical bond with nature and the absence of conflict, or they fall prey to an extractive colonialism similar to that practiced by Euro-Americans. What this binary opposition erases is how American Indians themselves have perceived their relationship to the land, and how it has been articulated in native intellectual and spiritual traditions.

Many stories in these traditions suggest that the complex act of treaty-making more accurately portrays the connection of American Indians to the Earth. Legally, a treaty conjures such synonyms as "covenant," "contract," as well as "commitment." It denotes an agreement that two or more parties enter into entailing mutual responsibilities and obligations. A construct for understanding the relationship between American Indians and the land, the treaty describes a process undertaken by native peoples to understand our ethical and ceremonial commitments to the world in which we live. Precisely what these commitments are and how they have been broken will become clearer in the light of oral traditions about them. If, as Tlingit scholar Nora Marks Dauenhauer has observed, origin stories are by nature theoretical, then stories about the origins of covenant provide a starting point for elucidating this concept.

An old Cherokee story, for example, tells of the time when animals, fishes, insects, plants and humans lived with each other in peace and friendship. The human population increased beyond sustainable numbers, however, and they began to crowd and crush their other-than-human partners out of carelessness and contempt. Even worse, humans invented weapons such as the blowgun and the spear that allowed them to kill animals indiscriminately. In response, every species of animal called a council of their own kind and each decided that they would invent a disease inflicting pain and death upon their victimizers. The deer sent rheumatism to every hunter who killed one of them unless he respectfully asked forgiveness for this offense. The fish sent humans nightmares about eating decayed food. Eventually, the animals and insects devised so many new afflictions that if their inventiveness had not faltered, not one human would have survived. When the plants, who were friendly to humans, heard what had happened they determined to help by furnishing a cure for each human disease. Although this story concerns the origins of Cherokee medicine, it also thematizes the struggle to achieve a precarious balance (one might even say "harmony") among many forms of life with diverse needs. It addresses the responsibilities that we all must assume toward each other, and presents the complicated negotiations of covenant as a model for

the relationship between humans and the rest of creation. It is a story about harmony that is filled with conflict.

Or consider a tale from the other side of the continent: that of Moldy Head, a young Tlingit boy, who rejects the dried salmon his mother gives him because it is moldy. This behavior offends the salmon people, who capture him one day when he drowns in the Klukshu River. During the time that he spends in their watery world, the young boy learns about salmon culture and even participates in their annual spawning migration – presented in more than one version as “going to break that war house – that’s people’s fishtrap” (Kitty Smith in Cruikshank 1990: 209). His mother recognizes a necklace worn by one of the migrating salmon as the one belonging to her son, and she has “Moldy Head” restored to human form. Because of his learned empathy with the salmon, the boy becomes a medicine person specializing in maintaining a respectful relationship between his people and the salmon. As Tlingit elder Mrs. Angela Sidney notes: “That’s how they know about fish. That’s why kids are told not to insult fish” (Sidney in Cruikshank 1990: 78). Once again, the term harmony seems a reductive way of talking about the multifaceted and often agonistic forging of respectful relationships between humans and other forms of life. The story of Moldy Head teaches listeners that learning to see life from other angles – as well as making mistakes – constitutes a crucial component of living in harmony with nature.

Narratives whose theme is the intermarriage between humans and animals also bear directly upon what constitutes a proper “marriage” or covenant between American Indians and Mother Earth. In the Anishnabe story of “Clothed-in-Fur,” a human by the same name sits in the wigwam of his beaver wife and fantasizes about eating his sister-in-law. His father-in-law, Old Beaver, allows him to eat her. When the man disposes of her remains in a proper and respectful way, his sister-in-law returns alive to her family. Some other humans who desire to hunt and “eat” offer the beaver a pipe through the door of their wigwam. They smoke it and then return it to the humans. In the morning, the people came to hunt “and all [the beavers] gave themselves up to be killed . . . And in the evening they all returned alive” (Overholt and Callicott 1982: 71). Yet another would-be hunter boasts about his capacity to take beaver without any help – a human arrogance that deeply angers Old Beaver. Not surprisingly, this hunter’s quest fails. The Anishnabe story of Clothed-in-Fur depicts further elements of the covenant between humans, animals and the Earth. In exchange for humans fulfilling their obligations toward their furred companions, the beavers willingly sacrifice themselves for the good of humans. Respectful attitudes and reciprocal obligations not only exist as necessary conditions of this covenant, but also embody a sustainable ethics allowing both beavers and humans to “return alive,” that is, to survive.

Generalizations about the diverse native cultures inhabiting North America should always be made with caution. However, these Cherokee, Tlingit and Anishnabe stories articulate an insight central to most native spiritual traditions: the connection between humans and Mother Earth resembles the protracted and often contentious negotiations of treaty-making rather than the static symbiosis of harmony. Perhaps in this sense, transforming harmony into harmonizing would more accurately represent the teachings of our stories. According to Santa Clara Pueblo scholar Gregory Cajete,

harmonizing involves the integration of mind, body, and spirit through a dynamic and complex set of activities. For Native people, living in harmonious and sustainable relationship with the land was a sacred responsibility, tempered with the realization that the neglect of this responsibility would bring dire results and retribution from the Earth . . . These people considered ahead of time the possibility that resources might fail and worked out practical and spiritual ways to ensure life (Cajete in Overholt and Callicott 1982: 212–13).

If humans and all our relations are to meet the environmental challenges facing the twenty-first century, we must develop more nurturing models for maintaining the bond among all life forms and the Earth. Native storytelling traditions distill experience gained over hundreds, if not thousands, of years and offer crucial perspectives on this process. They tell us that “harmony” is fragile and can only be achieved by making a daily commitment on its behalf. They tell us that, unless we honor the treaties among humans, animals, and the land, no environmental or spiritual transformation of our world is possible. They tell us that unless we manifest the proper respect and an ethic of reciprocity in all aspects of our lives, it will be Mother Earth – and not the first warrior of Earth Day – who weeps.

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Harner, Michael – and the Foundation for Shamanic Studies

Michael (James) Harner is among the most prominent authorities in the neo-shamanic field. He became involved in the debate about the authenticity of the works of his friend, Carlos Castaneda. In 1963, Harner earned his Ph.D. in anthropology (University of California, Berkeley) and worked as professor at Columbia, Yale, Berkeley, and at the New School for Social Research in New York. In 1959, he led a research project on behalf of the American Museum of Natural History to study the Conibo Indians of the Peruvian Amazon basin. During this – and later – fieldwork, Harner was introduced to shamanic rituals involving the "entheogenic" vine *ayahuasca*. These experiences changed his attitude toward shamanism. According to his account, Harner was not only an academic authority, but also succeeded in being considered a prospective "master shaman" by native specialists.

After extensive research both "in the field" and through literature, Harner elaborated what he felt to be the cross-cultural common denominators of shamanism. These he referred to as *core shamanism*, which he describes as a spiritual technique instead of a religious concept. Employing rhythmic instruments – mostly a large frame drum or rattle – a slightly altered state of consciousness is induced (not necessarily a "trance"), which allows the practitioner to focus his or her attention to non-ordinary realities. In this state the shaman journeys into the lower or upper worlds in order to meet spiritual entities like power animals and spirit helpers. Submitting as an apprentice to the spirits, the shaman can then ask for help or advice in order to heal herself/himself, other people, animals, plants, or places. The relationship between shaman and spirits is further strengthened by ritual activities like dancing and singing, or through power objects that bring immaterial power into visible form.

In 1979 a kind of social formation took place when Harner and others founded the "Center for Shamanic Studies." Having resigned his professorship, Harner renamed this non-profit organization in 1987 as the "Foundation for Shamanic Studies." Subsequently, a

global network was established in order to secure the quality of the core shamanism techniques, to facilitate grassroots networking, and to distribute literature, music, and shamanic paraphernalia. The constitutional aims of the "Foundation" are threefold: preservation of shamanic cultures and wisdom around the world; study of the original shamanic peoples and their traditions; and teaching shamanic knowledge for the benefit of our planet. This last objective has been especially controversial because the Foundation offers scholarships to natives to regain their own shamanic heritage ("Urgent Tribal Assistance"). Critics regard this as a sincere act of colonial suppression, whereas natives who work as certified "counselors" for the "Harner method" – like the Lakota Carol Proudfoot Edgar – embrace the Foundation's techniques as a crosscultural shamanic tradition.

With branches on most continents, the "Foundation for Shamanic Studies" can be described as an institutionalization of the Harner method. Several other groups have adopted it as a model. The foundation organizes workshops, and it also encourages participants to gather into drumming groups, where the skills learned through the workshops are practiced and shared. With the growth of Harner's workshops – seventy participants or more is not exceptional – fierce debates arose concerning the commercial aspect of his work. Critics from outside charge Harner with having appropriated native traditions for personal profit, while participants frequently express their disappointment about the workshops' sterile or impersonal atmosphere. This might have to do with Harner's description of shamanism as a mere "technique"; others (particularly Harner's former colleague Jonathan Horwitz) stress the animistic aspect and talk of shamanism as "sacred work."

There are two kinds of courses. In the basic courses (mostly three days), participants learn the fundamental techniques of shamanism, especially shamanic journeying and how to contact spiritual helpers and power animals for problem-solving advice. The entities found are then blown into the client's chest or forehead. Although these basic techniques are essential for any kind of shamanic work, training in their application and the chance to increase one's own spiritual abilities are only possible in the various advanced courses. Here, participants learn to retrieve soul-parts that are considered to have been lost through trauma, etc. (in fact, those techniques closely resemble certain psychotherapies [e.g., working with the "Inner Child"]). On other occasions bodily, mental, or spiritual illnesses are "sucked out" of the client.

The accompaniment of dying persons before and after death (i.e., helping the soul traveling into the realm of the dead and communicating with the departed) also is an important field of neo-shamanic practice. In addition, affinities with deep ecology have been increasingly drawn since the early 1990s. This work, which is often called

“spiritual ecology,” not only includes communication with plants, stones, or other entities that the animistic worldview considers to be alive, but also involves healing work for energetically disturbed places or even the whole planet. Furthermore, some groups practice Native American traditions like the vision quest; others – especially in Europe – integrate or (re)construct Celtic or Nordic elements, like the *seidr* tradition.

The neo-shamanic scene shares a lot with neo-pagan and environmental groups ritualizing their relationship to nature. Both the soul retrieval and the spiritual ecology workshops are grounded in an esoteric concept of wholeness and sacredness. In an interview, Sandra Ingerman said that mankind has reached a crucial point in the history of the planet, having the ability to destroy life as we know it. Consequently, we are in need of as many “whole” people to appear on the planet as quickly as possible, and if a weekend workshop can foster people’s abilities to heal themselves and experience the sacredness of nature, that will help us to save the planet.

Michael Harner’s influence has led to a standardization of shamanic practice in the modern world. This has entailed processes of inclusion and exclusion, as well as questions of legitimization and valuing. At the same time, an inevitable counteraction has questioned Harner’s authority in matters shamanic. One recent example of this is seen in Harner’s devaluation of the “middle world” of visible, material nature. Whereas Harner strongly warns his participants not to perform “middle world” journeys (e.g., to walk through a wood in a state of shamanic consciousness) others argue that this is a precarious disregard of nature’s material power and a flight into “other-worldly” realms. Annette Høst from the “Scandinavian Center for Shamanic Studies” even describes this doctrine as a prolongation of the Christian attitude that depicts nature and its spirits as bad, dangerous, and impure.

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Indigenous Religions and Cultural Borrowing; Shamanism – Neo (Eastern Europe); Snyder, Gary.

Harris, Marvin (1927–2001)

In the 1960s, the conventional anthropological view of religion, established by figures such as Frazer, Malinowski and Radcliffe-Brown, began to be challenged by a small number of scholars in the United States. Many taught or were trained at the Columbia University Department of Anthropology, where a materialist and evolutionary anthropology was established in the years after the Second World War. By the early 1970s, this was being elaborated at several academic centers – chiefly Columbia and the University of Michigan (Ann Arbor) – by practitioners of the interrelated paradigms of cultural or human ecology and cultural materialism. The latter was principally identified with Marvin Harris, who received his Ph.D. from Columbia in 1953 and taught there until 1981, when he moved to the University of Florida (Gainesville). Harris’ perspective was characterized by a critical departure from the synchronic functionalism to which cultural ecology, with a greater resistance to comparative generalizations, remained attached, as in Roy Rappaport’s classic work on religious ritual cycles in the New Guinea highlands.

While sharing with Rappaport the explicit aim of illuminating the functional role of religious practices in concrete settings, with emphasis on their role in the management of environmental resources, Harris’ approach to religious phenomena was more notable for its evolutionary and comparative perspective, which was as much interested in patterns of causality as of function. Where scholars such as Rappaport, who emphasized the “self-regulating” function of human ecological systems, in time drifted toward an increasing preoccupation with symbolic meaning (Rappaport 1979), Harris’ interest continued to explore how, beyond their apparent ideological unity, such systems were composed of contradictory material interests. Hence, his analytical strategy had far greater political implications. For that reason, Harris’ materialist approach to religious beliefs and practices was intended to demonstrate the merits of his more general analytical framework – cultural materialism – which accorded priority to the influence of material relations, especially those between the environment and human economy, over symbolic structures.

Harris’ perspective, in regard to religion, can be summed up in his own words:

Beliefs and rituals that appear to the nonanthropological observer as wholly irrational, whimsical, and even maladaptive have been shown to possess important positive functions and to be the dependent variable of recurrent adaptive processes (1971: 556).

Although he had not abandoned the tendency of anthropology to emphasize the *functional* interrelationships between religious practices and beliefs, it was also of prime importance to Harris to comprehend such phenomena as *processes* that did not have an independent existence in people's minds or depend on a set of *a priori* cultural or symbolic norms, which was the prevailing anthropological view. On the contrary, for Harris they reflected and, even more, were part of, a community's overall mode of production, emerging out of the practical experience of people challenged to secure their livelihoods within a particular set of environmental conditions. As such, they could be shown to play an important role in organizing or reinforcing behavior patterns that were crucial, often counterintuitively, to the ongoing dynamic of a given social formation. But, to that extent, religious phenomena, in Harris' overall research strategy, were really treated no differently than any other cultural traits that initially seemed to have an incomprehensible relationship to the way people met basic needs.

Harris first elaborated this position in two papers on the "cultural ecology" of the sacred cattle of India (1966), in which he forcefully argued that the apparently counter-productive Hindu taboos on cow slaughter and beef consumption were intelligible if examined both in terms of other material advantages – such as the use of cow dung for fuel and fertilizer and of oxen for traction – for individual poor farmers and, in the aggregate, in terms of their cumulative positive effects for the carrying capacity of the Indian ecosystem.

Over time, Harris elaborated his arguments to meet the views of his many critics, while his general method of analysis was extended by some of his students and colleagues to other cases. Collectively, they have made a powerful argument that patterns of religious meaning and practice need to be seen within wider patterns of survival and livelihood strategies of individuals, communities and societies.

Harris' work is not beyond criticism. There is a tendency in his approach, especially where he has examined religious beliefs related to dietary practices (including not only the cow in India, but the pork taboo in ancient Israel and cannibalism among the Aztecs) to place inordinate emphasis on endogenous variables such as population pressure and to minimize the influence of political-economic structures and processes, especially those of a global nature. In his accounts of the emergence of the India cow taboo, for example, Harris' environmental history of the sub-continent makes virtually no reference to British colonialism. While this does not negate the merit of a materialist analysis of religion, it does raise theoretical questions about Harris' work that will engage future scholars for years to come.

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Hasidism and Nature Mysticism

Hasidism is a mystical revival movement within Judaism that began in southeastern Poland in the last decades of the eighteenth century. It spread quickly through the areas of Jewish population in Eastern Europe and was a major force in Jewish religious life until the Holocaust. In the post-war era, Hasidism has reestablished itself in Israel, North America, and Western Europe.

Hasidism originates in a call for spiritual renewal, one that did not shy away from radical and daring forms of expression. These include a challenge to Judaism's typically bookish, intellectualized form of religiosity and a call to seek out the radiance of divine presence to be found throughout the created world. "The power of the Maker is in the made," proclaimed many a Hasidic author, and therefore (quoting the biblical prophet Isaiah [6:3]) "the whole Earth is filled with God's glory."

The discovery of God's presence within the created world was often couched in the language of a quest for "sparks" and their "uplifting." This religious discourse was derived from the sixteenth-century Lurianic Kabbalah, named for its originator, Rabbi Isaac Luria of Safed.

A ritual task of the Jew, taught the Hasidic masters, was to find these sparks even in the most unlikely places, recognize their divine origin, and thus restore them to God. This quest often took masters and disciples to the fields and forests surrounding the shtetls or towns in which they lived. It was there that the true devotee could best celebrate the pure joy of living in God's presence.

"Nature" is a concept not found in the ancient sources of Judaism. Indeed the Hebrew term for nature, *teva*, is a coinage created for the translation of Greco-Arabic

scientific works into Hebrew during the Middle Ages. Hasidism follows a school of Jewish thought that insists on the absolutely supernatural character of all events; “nature” is but a cloak that hides the constant stream of divine energy that ever flows into the world, sustaining it anew in each moment as an assertion of willful divine grace. An acceptance of the “naturalness” of such events as the daily sunrise or even the continuation of one’s life from one moment to the next is seen in the Hasidic perspective as implying a lack of true faith. Here the natural is identified with the ordinary, that which is not appreciated for the true miracle that it is.

This insight that God’s presence underlies all of nature is expressed by frequent mention that the word *hateva* (“nature,” preceded by the definite article) is numerically equal to Elohim or “God.” Some Hasidic authors depict the creative word of God (identified with the divine “Let there be” in the first chapter of Genesis) as the true object of creation the entire natural universe serving as a mere cover for that divine essence.

The celebration of nature within Hasidism is most often associated with the movement’s first key figure, Rabbi Israel Ba’al Shem Tov (1700–1760) and his great-grandson, Rabbi Nahman of Bratslav (1772–1810). The legends of the Ba’al Shem Tov’s life tell that as a schoolboy he often disappeared from the classroom, only to be found later, alone in the deep forest, calling out to God. This motif of the woods as a place to find God is carried through in many tales and melodies associated with Hasidic life. Rabbi Nahman of Bratslav, perhaps the greatest poetic spirit among the Hasidic masters, spoke of melodies that rise up from the “corners of the Earth,” of each field’s grasses bearing a unique note in the symphony of divine music, and of prayer as an act of gathering beautiful blossoms in a field, drawing them together to be offered as a gift to God.

Scholars have debated whether the Hasidic quest for the divine essence of being is one that truly affirms the natural world as a locus of divinity or merely seeks to cast the varied masks of nature aside in order to reach the single, undifferentiated goal of the mystic quest. While the key mystical authors within Hasidism (Rabbi Dov Baer of Mezritch and his circle) do indeed waver on this question, popular Hasidism in its early days surely glorified the natural world as a setting for the encounter with God’s glory.

In later years, especially as Hasidism moved from rural to urban settings, much of this devotion to the outdoors as a place to seek God was set aside. As Hasidism became an ever more ultra-conservative force within Jewry, the image of the early Hasidic masters came to be colored more by their devotion to tradition than by their attraction to a mystical appreciation of the natural world. This element was recovered, however, in the twentieth-century phenomenon known as Neo-Hasidism, and is prominent

in the writings of such key figures as the young Martin Buber (1878–1965) and Hillel Zeitlin (1871–1942).

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Haudenosaunee Confederacy

The term Iroquois refers to a confederation of five Native American nations (Seneca, Cayuga, Onondaga, Oneida, and Mohawk) who joined together under the Great Law of Peace. In the early eighteenth century the Tuscarora joined the Confederacy, becoming the sixth nation. Iroquois was a name assigned to this Confederacy by the French but the indigenous term for this confederation is the *Haudenosaunee*, which means “People of the Longhouse.” Previous to European invasion the Longhouse was a building in which resided several, perhaps hundreds, of people related through a clan connected through the women’s lineage. The leader of the clan, called the Clan-mother, undergoes a selection process by the entire clan. Among the Clan-mother’s many duties are naming children, selecting and nominating leaders of the clan, and observing and overseeing the conduct of the leaders. All of her nominations for leaders are subject to the consensus of clan. Clan-mothers have the responsibility and authority to remove leaders who have violated their roles as clan leaders. Today the Longhouse is not a residence but continues to be the center of traditional communities organized by clans.

Offices associated with each clan are the Clan-Mother, a male clan “chief” (which in Iroquoian languages usually translates to “good mind”), a sub-chief, and a male and

female Faithkeeper. Where the Longhouse system has not been weakened by U.S. and Canadian intervention, it is also where political and economic decisions are made. The Haudenosaunee have no word for "religion" but understand Longhouse as the way one lives one's life everyday. Ceremonial activities, as well as political and economic decisions, of the Haudenosaunee all take place in the Longhouse. The Haudenosaunee Longhouse system of governance is the last remaining traditional indigenous government that is still in charge of land in North America that is recognized by the United States Government. All other governments on Native American lands have been forced to adopt an elective style government mandated and funded through the Bureau of Indian Affairs (BIA). Among the Haudenosaunee territories only Onondaga, Tuscarora, and the Seneca at Tonowanda maintain traditional Longhouse governments that are the center of ceremonial, economic and political life. Onondaga is the Central Fire where the Grand Council meets to debate matters pertaining to the entire Confederacy.

The geographical arrangement of the Haudenosaunee, depicted in the Confederacy Belt, is understood to be an enormous Longhouse that extends over upstate New York. From right to left, or East to West there are the Mohawks called the "Keepers of the Eastern Door"; the Oneida called the "Younger Brothers"; represented by a central tree are the Onondaga called the "Central Fire"; the Cayuga called the "Younger Brothers"; and at the far left are the Seneca, which are called the "Keepers of the Western Door." Along with the Tuscarora, these groups form the Haudenosaunee. The Confederacy Belt, made of wampum shell beads, is the symbolic expression of this confederation of the original five nations. Lines extending to the East and West acknowledge that the Confederacy is unfinished and will include other people in the future.

Haudenosaunee ceremonies and life-ways originate from their relationship with the Creator. Three specific messages were received by the Haudenosaunee from the Creator at important points in their history. The first message was how the Haudenosaunee should live in a respectful manner. Their ceremonial cycle is based on the yearly cycle of seasons. Ceremonies are referred to as the Thanksgivings. At various moments throughout each year thanks are given to food, to the land, to water and to life in the Longhouse. This is not regarded as a sentimental activity but a practical one. But the intention is not to control some other-worldly power. As one elder put it, the Thanksgivings are not worship, not an attempt to manipulate the cosmos, nor are they attempts to seek salvation of some kind (and therefore not "religion" in the conventional sense). Rather they are events to fervently give thanks for gifts that have already been received. These insights highlight the difference between "religion" as it is understood in common and scholarly settings and a "way of living" for the Haudenosaunee, as well as for other

indigenous people. The Thanksgiving Ceremonies are the spiritual center of the Haudenosaunee.

Another gift given by the Creator is the Thanksgiving Address. Before every significant gathering of the Haudenosaunee the Thanksgiving Address is recited. This is a formal acknowledgement of different beings and forces in the cosmos, which are intimately involved in all life and should be at the forefront of all human deliberations. There is a set form for the Thanksgiving Address. Salutations and respectful words are given to Visitors, Mother Earth, Water, Grasses, Animals, Birds, Foods, Medicinal Herbs, Trees, Sun, Moon, Ancestors, Spirit Protectors, and the Creator. Depending on the occasion the Thanksgiving Address can last between thirty minutes to a few days. The Thanksgiving Address unifies the minds of the human group so that they can make appropriate decisions on behalf of creation. The nature of the Thanksgiving Address is to engage all of creation in human decisions and to unify and align the human community in work that supports and promotes creation.

The second message to the Haudenosaunee is the Great Law of Peace. This is a system of governance that is based on what Oren Lyons has called "natural law," which is the unchanging laws of the natural world. The Great Law of Peace is based on perpetuating a relationship to natural world powers, such as the Grandfathers of Thunder and Lightening, Elder Brother Sun, Grandmother Moon, and Mother Earth. These life-giving forces are well known to the *Haudenosaunee* and yet are well beyond their control. Fostering a thankful and respectful attitude toward these powerful forces results in their having a deep knowledge of the intricacies of the workings of the natural world. Haudenosaunee leaders are mandated to make decisions on behalf of seven generations into the future and take comfort in the fact that wise decisions of their ancestors made seven generations ago are why they have survived until today. The effect of being mindful of the seventh generation in the past and future on the individual is that one thinks of the long-term consequences of one's actions. It is of practical importance to think outside of the human temporal framework and in larger cycles of time.

The third message is the *Gaiwiyo*, or "Code of Handsome Lake." In a series of symbolic images the *Gaiwiyo* warns how accepting certain things from European Americans will erode the Haudenosaunee relationship with the Creator. Specifically the acceptance of alcohol, things of a foreign culture, gambling, and the Bible are mentioned. Even though they have undergone tremendous hardships, the promise of the *Gaiwiyo* is that the Haudenosaunee will remain strong as long as they hold to their relationship with creation as revealed in their three messages. Without the *Gaiwiyo* the Haudenosaunee traditions would not have survived until the present day. Of urgent contemporary interest are the *Gaiwiyo*

warnings against gambling and the Bible. At its core gambling fosters an un-thankful attitude of insatiable need, desire and want that is directly contrary to the Haudenosaunee focus on ceremonies as Thanksgivings. Part of the Haudenosaunee resistance to categorizing their ceremonies as "religion" also has to do with the open-ended nature of their practices. Unlike other world religions, Haudenosaunee laws, rituals, and decisions are based in a tradition but are not written or canonized, and are therefore unfinished. Revelations from the Creator are an ongoing reality and not, as with Christianity and Islam, something that happened in the past and is finished. Because creation persists there is always the possibility of new and urgent messages coming from the Creator.

The Great Law of Peace and the Thanksgiving Address have had substantial impact on American culture and the world. All Longhouse activities, whether they are ceremonies, economic meetings, or meetings of the clans, have a concern for creation at their core. Moreover their survival as the last traditional government (i.e., not having allowed the Federal Government through the Bureau of Indian Affairs [BIA] on their lands) is directly attributable to the strength of the Longhouse system. Many have been interested in the history of the Haudenosaunee. In 1992 the U.S. Senate passed resolution #76, which formally acknowledged the "contribution of the Iroquois Confederacy of Nations to the development of the United States Constitution." Founding Fathers Thomas Jefferson, George Washington and Benjamin Franklin counceled with Haudenosaunee leaders to discuss effective governmental structure. The resolution went on to reaffirm the continuing government-to-government relationship between Indian tribes and the U.S. Additionally, the prominent role of women in the Clan system influenced the development of women's rights in the United States and the Haudenosaunee were formally recognized at Seneca Falls, where the woman's movement began in 1848. Today Haudenosaunee leaders like Oren Lyons and Audrey Shenandoah are bringing the concerns of indigenous people from around the world into the United Nations. Jake Swamp, who directs the Tree of Peace Society, has spread the message of the Great Law of Peace by planting trees around the world.

As a result many indigenous people and others all over the world continue to be interested in the genius of the Haudenosaunee. At the 1992 World Summit on the Environment of over 181 world leaders in Rio de Janeiro, the Secretary General of UNCED, Maurice Strong, concluded his opening remarks with a quote from the Peacemaker on the importance of making decisions on behalf of the Seventh Generation. At a meeting of Native American leaders in 1994, President Clinton likewise quoted the Peacemaker on the importance of being ever-mindful of the Seventh Generation. Both of these examples are testi-

mony to the wisdom and strength of the Haudenosaunee Confederacy.

Philip P. Arnold

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- See also: Indigenous Environmental Network; Lyons, Oren.

Hawai'i

Na Hawai'i, the Native Hawaiian people, are descendants of the original inhabitants of the island archipelago, Hawai'i. Oral traditions passed on through chants, legends, myths and *mo'oku'auhau* or family genealogies, trace the origins of the Native Hawaiian people to early Polynesian ancestors and beyond them to the life-forces of nature itself.

According to these genealogies, Native Hawaiians are the living descendants of Papa, the Earth mother, and Wakea, the sky father. Ancestral deities include Kane of the living freshwater sources such as streams and springs; and Lono of the winter rains and the life-force for agricultural crops; as well as Kanaloa of the deep foundation of the Earth, the ocean and its currents and winds; Ku of the thunder, war, fishing and planting; and Pele of the volcano. Thousands of deities of the forest, the ocean, the winds, the rains and other elements of nature are acknowledged as ancestors by Native Hawaiian families.

Located midway between the American and Asian land masses, the islands of Hawai'i are the most isolated land mass in the world. They are home to diverse and unique endemic species of plant and animal life. Initial human settlement, their introduction of new animals such as the Polynesian rat and pig, and the clearing of land for the

cultivation of new edible plants resulted in ecological disruption and the extinction of certain species of birds and plants. Native Hawaiian spiritual beliefs and stewardship practices ultimately evolved to honor and protect the fragile island resources.

Aloha 'aina or love the land; *aloha i na akua* or love the gods; *aloha kekahi i kekahi* or love one another; express three central values which form the core of the traditional Native Hawaiian philosophy, worldview and belief system. These values prescribe that Native Hawaiians sustain supportive, nurturing and harmonious relations with the land and natural resources, the gods, and each other, particularly within their *'ohana* or extended family. This philosophy of the unity and harmony of humans, nature and deities is called *lokahi*.

Native Hawaiian ancestors honored and worshipped the life-forces of nature as gods. They did not possess or own the land or its abundant resources. Instead, they maintained stewardship over it – planting and fishing according to the moon phases and the changes from rainy to dry seasons. The traditional land system evolved to provide Native Hawaiians access to the resources they would need for subsistence. It also reflected their stewardship responsibility over the land.

Following contact with the Western world in the late eighteenth century, the Hawaiian island landscapes were seriously degraded throughout the nineteenth and early twentieth centuries, progressively by sandalwood harvesting and deforestation for cash crop cultivation, ranching, and large-scale sugar and pineapple plantations. Twentieth-century economic development centered around the military, and tourism combined with exponential population growth degraded Hawai'i's fragile ecosystems at an unprecedented rate. By the end of the twentieth century, Hawai'i had the largest number of extinct and endangered endemic species of flora and fauna of any place in the world.

The Native Hawaiian people, themselves, succumbed to introduced continental diseases which, due to the absence of genetic immunity, grew to epidemic proportions. Such diseases included cholera, measles, whooping cough, influenza, leprosy, and tuberculosis. From an estimated population of between 400,000 to 800,000 inhabitants in 1778, the pure Native Hawaiian population had declined to 29,800 by 1900, with another 7800 Hawaiians of mixed ancestry. Native Hawaiian cultural and spiritual beliefs, customs, and practices declined in the face of such dramatic changes, and under the pressure of Christian missionary activity, except in certain isolated rural areas and the smaller islands.

In 1959, Hawai'i became the fiftieth state of the United States of America. Surprisingly, rather than leading to fuller assimilation into the American culture, statehood sparked a reassertion of Native Hawaiian rights and a revitalization of Native Hawaiian language, culture, and

spirituality. The island of Kaho'olawe served as the unexpected catalyst for this dynamic native rights movement.

Kaho'olawe was traditionally honored as a sacred manifestation of the Hawaiian deity of the ocean, Kanaloa. It had served as a center for the training of navigators in celestial navigation and was home to Hawaiian farmers and fishermen. With Western contact, its natural resources, like the other islands, were degraded by ranching. At the outbreak of World War II the island was taken over by the U.S. military for live-fire training exercises. In 1976, the island became the focal point of a Native Hawaiian movement to reclaim sacred land and revive the cultural and spiritual practices of *aloha 'aina*. This included a consciousness about the importance of protecting Hawai'i's unique and exquisite endemic and native flora and fauna. The movement spread throughout the islands and sparked a Native Hawaiian cultural and political renaissance to revive the Native Hawaiian language, navigational arts, cultural practices and political sovereignty. The military use of Kaho'olawe stopped in 1990 and the island was returned to the State of Hawai'i in 1994. The U.S. Congress appropriated \$400 million to clean the island of unexploded ordnance and restore the island as a cultural reserve. Under law, the island is to be managed as a trust by the State of Hawai'i for eventual transfer to a sovereign Native Hawaiian entity, when it is reestablished and recognized by the U.S. federal government and the State of Hawai'i. Similar to Native American nations, such a sovereign entity would be comprised of indigenous Hawaiians.

The movement to reclaim Kaho'olawe was initiated by Native Hawaiians from the island of Moloka'i. Called, the "Last Hawaiian Island," Moloka'i was one of the rural Hawaiian communities bypassed by the mainstream of economic, political, and social development. Native Hawaiians living in these communities continued, as their ancestors before them, to practice subsistence cultivation, gathering, fishing and hunting to supplement their wage income. To be successful gatherers, fishers, or hunters, they applied traditional knowledge about the resources passed down to them from one generation to the next. This included the acknowledgement and honoring of the forces of nature as *'aumakua* and *akua* and involved the practice of *aloha 'aina* and *lokahi*.

Rural communities, such as Moloka'i, where Hawaiians have maintained a close relationship to the land through their subsistence livelihoods, have played a crucial role in the survival of Hawaiian cultural and spiritual beliefs, customs and practices. These rural communities are at the center of contemporary efforts to protect Hawai'i's ecological resources.

Rural Hawaiian communities were traditional centers of spiritual power. In traditional Hawaiian chants and mythology, major *akua* (gods) and Hawaiian deities were

associated with the areas. The districts were isolated and difficult to access over land and by sea. Due to the lack of good anchorage and harbors, early traders often bypassed these districts in favor of more accessible areas. The missionaries entered these areas and established permanent stations during a later period than in other parts of Hawai'i. Thus, traditional Hawaiian spiritual beliefs and practices persisted there, without competition, for a longer period of time. As Christian influences entered these areas, they coexisted with traditional Native Hawaiian beliefs and practices.

The geography of these districts discouraged the widespread or long-term development of sugar plantations. Where neither plantations nor ranches were established, traditional subsistence activities continued to be pursued, side by side with smaller agricultural enterprises. In the wetland areas, taro continued to be farmed, often in conjunction with rice. In the arid areas, sweet potatoes, dryland taro, and other traditional and introduced food crops suited to the dry soil and climate were cultivated.

Thus, the natural features and resources of these districts which rendered them unsuitable for plantation agriculture played a role in the survival and eventual revitalization of Native Hawaiian cultural, spiritual, and subsistence customs and practices. Concurrently, the quality and abundance of the natural resources of these rural communities can be attributed to the persistence of Native Hawaiian cultural and spiritual values and practices in the conduct of subsistence activities. An inherent aspect of these values is the practice of conservation to ensure availability of natural resources for present and future generations. Ancestral cultural and spiritual knowledge about the land and its resource has been reinforced through continued subsistence practices. While traveling to the various *'ili* (sections) of the traditional cultural practices region, through dirt roads and trails, along spring-fed streams, and the shoreline, practitioners continuously renew their cultural knowledge and understanding of the landscape, the place names, names of the winds and the rains, traditional legends, *wahi pana* (sacred places), historical cultural sites, and the location of various native plants and animals. The practitioners stay alert to the condition of the landscape and the resources and their changes due to seasonal and life-cycle transformations. These lands are treated with love and respect like a *kupuna* or elder member of the *'ohana*.

Through the Moloka'i families who got involved with Kaho'olawe and the movement that they initiated, the values of *aloha 'aina* and *lokahi* were revived and reborn into the hearts and minds of a new generation of Native Hawaiians. This is reflected in the formation and flourishing of many schools of Hawaiian language immersion education and of Hawaiian cultural practices such as *Hula*, chant, navigational arts and skills, *lua* or fighting arts

and Hawaiian herbal healing arts. It is also evident in the rebuilding of traditional fishponds and the numbers of young farmers reopening ancestral taro growing lands. In addition, annual religious *makahiki* or harvest ceremonies in honor of the Hawaiian god of agriculture, Lono, have been revived on most of the islands.

Among the important traditional concepts that have regained preeminence is that of *wahi pana* or sacred place. The thoughts of the late Edward Kanahele on "Wahi Pana" or Hawaiian Sacred Places describes the renewed significance and meaning of such places to Native Hawaiians and provides an appropriate summation for this overview of religion and nature in Hawai'i:

The sacred places of Hawai'i, or *wahi pana* of Hawai'i, were treated with great reverence and respect. These are places believed to have mana or spiritual power. For native Hawaiians, a place tells us who we are and who is our extended family. A place gives us our history . . . and the history of our ancestors . . . a place gives us a sense of well being.

A *wahi pana* is a place of spiritual power, which links Hawaiians to our past and our future.

Our ancestors honored the earth and life as divine gifts of the gods. In fishing and farming *wahi pana* were respected. Their activities never encouraged or allowed overuse of the resources of the land or the sea. To do so would dishonor the gods. "The earth must not be desecrated," is a native Hawaiian value.

The inventory of sacred places in Hawai'i includes the dwelling places of the gods, the dwelling places of their legendary kahuna, temples, and shrines, as well as selected observation points, cliffs, mounds, mountains, weather phenomena, forests, volcanoes, [lava tubes, *pu'uhonua* or places of refuge and burial sites] . . .

All *wahi pana* need our protection and our respect – not only for their historical significance, but also for their human significance (Kanahele in James 1992: ix–xiii).

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- See also: Kapu in Early Hawaiian Society; Melanesian Traditions; Pacific Islands; Polynesian Traditional Religions; Surfing; Volcanoes.

Heathenry – Ásatrú

Heathenry, also known as Heathenism or Ásatrú, is a polytheistic spiritual practice and theology based in the mythologies of Northern Europe. People practicing Heathenry today draw on a number of sources for both mythology and custom. These primarily include Icelandic mediaeval literature (especially the *Poetic Edda*, and Snorri Sturluson's *Prose Edda* and *Heimskringla*); and other sources such as Saxo Grammaticus' *History of the Danes* (Tacitus' accounts of Germanic custom and religion), Old English poetry such as *Beowulf*, and folklore and folk-magic, including medieval healing charms, from Scandinavia, Britain, and Iceland, and European countries including Germany and the Netherlands. Heathens may describe their religion as a "reconstructed" North European paganism: reconstruction does not mean an attempt to duplicate earlier practices, but usually refers to creating spiritual practice for today that draws on the earlier descriptions and on archeological evidence.

Pre-Christian practices of Northern Europe varied considerably across time and place: however many groups use the Icelandic material as the basis for reconstruction because there is so much of it relative to other sources. "Ásatrú" – the Icelandic form of a word coined during the nineteenth-century romantic period – means literally "faith in the Æsir," whereas "Heathenry" is a more general term.

Heathen beliefs and cosmology focus on the tree Yggdrasill (variously seen as an ash or a yew, on which

Seidr

"Seidr" (pronounced "say-thur" or "say-th," with "th" as in "then"), described in the Icelandic sagas, seems to relate to practices involving altered consciousness whereby a seeress or seer works on behalf of their (human and nonhuman) communities – it is being reconstructed as such today.

The Saga of Eirik the Red describes the visit of a seeress to a famine-struck Greenland farm, one thousand years ago. She wears a blue-black cloak, shoes of calf-skin, a hood of black lambskin lined with white cat-skin, and her gloves are of cat-skin, shaggy inside. Her staff, topped with a knob, is ornamented with metal and stones, and she wears a pouch containing magical or sacred items. She eats a meal of the hearts of the farm animals, and the next day a "high seat" or platform is made ready for her. Women circle around her, and one sings a special song to call the spirits. The seeress, Thorbjörg little-völva, then speaks from the high seat, prophesying a good future for the farm and individuals present, including the woman who sang her song.

Seeresses and seers, and others who are "much-knowing," are common in the sagas. Some use *seidr* to call spirits to aid in predicting, protecting, bringing their community into balance, or seeking the downfall of their enemies. Today's seid-folk work with the shamanistic cosmology of the north, the World Tree Yggdrasill and Nine Worlds, using chant, drumming, or entheogens to achieve altered states of consciousness. In trance, they may speak from a raised platform in group rituals of Oracular *Seidr*, looking along the strands of Wyrð – the weaving of individual or community events and futures – (such prophecy may also be called "spae"), or work to bring healing or create balance between communities of people and other beings (landwights, animal and plant communities, ancestors and so on). This may include doing magic to protect areas of the Earth, or sacred sites, and is likely actively to involve the spirits of those places, working with them (and prompted by them) rather than "for" them.

Seidworkers draw on concepts of "a person" not merely as dualism of "body and soul," but having many

Continued next page

dimensions to spirit or soul and to the ways these link with physical body – thus enabling the seer to act for the human community. One such dimension, the *fylgja* or “follower,” present from birth and usually seen in animal form, may act as an animal ally during *seidr*. Other helpers include *kinfylgja* or family spirit guardian, *Dísir* or ancestral women, and various others in animal or plant forms. With such allies, the seidworker negotiates between communities of human-people and spirit-people, especially ancestors (spiritual, cultural or physical), at times “faring forth” (*hamfarir*) in altered shape.

In the literature, Freyja first brought seid-magic to the Aesir, the “family” of gods of which Óðhinn, Thor, Frigg, etc. are members. As Heidr, the Bright One, she goes to houses to bring help. The magician-god Óðhinn learned *seidr* and travels through the nine worlds (including Midgard, the world of people) that have their being on the World Tree Yggdrasill, often in altered shape, in search of knowledge. Loki, Óðhin’s blood-brother, often seen as a “trickster” god, also flies as a falcon (borrowing Freyja’s cloak) to seek what is needed. All bring change to what they touch: ecstasy, inspiration, poetry, and – often – disruption.

In the past, *seidr* appears to have been shamanistic practice specific to time, place, and community. There may have been commonalities with Sámi shamanism. (The Sámi are indigenous reindeer-herding people of the North of Scandinavia and Russia, previously called Lapps by others.) However, not everybody in Heathen

society approved of *seidr*, and by “saga times,” seidworkers – particularly if male – were often distrusted for reasons that may be more to do with politics than with religion.

Today *seidr* is a process of change – for the community, the seidworker, and relations between communities of people and other wights (beings with whom we share Midgard). In transformation lies beauty, ecstasy and discovery, but the process is not easy.

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Óðhinn hanged himself in quest of wisdom and the runes), the Nine Worlds, and the deities and other spirits described in Norse and Germanic mythology. There are parallels with the World Trees of various northern Eurasian shamanisms. The Norns spin or craft Wyrð below the tree, and this wyrð applies to all beings (or “wights”) including the Aesir and Vanir (thought of as deities) together with *jotnar* or giants, *álfar* or elves, and landwights, ancestral spirits, and living people. Literary sources identify two groups of divinities, Aesir and Vanir. Today the Aesir are sometimes described as deities of culture or society, the Vanir as deities of fertility and vitality, but these distinctions are not clear. In the past, particular deities were important in different areas of Northern Europe – Freyr in Sweden, Thor in Iceland, possibly Woden in parts of Britain. The world of people, Midgard (Miðgarðr – from which Tolkien took the name “Middle-Earth”) is described as one of nine worlds, each with its own denizens which in Midgard include people, ancestral spirits, and wights associated with animals, plants, land and sea, etc.

Heathens relate to this cosmology in numerous ways including *seidr* (community shamanistic practice), rune-use, and formal (non-ecstatic) ritual. The main

rituals of Heathenry are blót (an offering ritual, which may be simple or elaborate) and sumbl (a ritual involving toasting and honoring people, goddesses, gods or other beings, which may involve poetry or storytelling). Heathens speak about their religion and their relationships with gods, goddesses and wights in ways distinct from prevailing neo-pagan or Christian discourses. The following public narratives are indexed in the discourse of practitioners:

1) References to myths and stories of the Aesir and Vanir (e.g., to explain characteristics or personalities of the gods). Followers of Ásatrú index specific pieces of what is referred to as “the lore.” Knowledge of this material forms a backdrop to ritual and discussion. Many Heathens consider that people do experience the deities in their own ways, and personal revelations (point 4), which have become known within several communities as Unusual Personal Gnoses (UPGs), are to be checked against “the lore.”

2) A concept of polytheism (as distinct from monotheism or duotheism). Deities are spoken of as

real entities, separate and distinct, with rounded personalities and *different* from, for instance, Celtic or Greek or Native American beings or deities. Wights are similar but usually restricted to smaller areas, for instance associated with particular houses, trees, or stones.

3) A sense of *specificity of cultural practice*. Blót and Sumbel, the ritual forms of Ásatrú, are spoken of as distinct in kind from, for example, a Wiccan circle. Again, they are drawn from “the lore.”

4) The possibility of direct communication with these deities or wights, to speak with them and gain various forms of knowledge. In speaking with Heathen practitioners and theologians, this narrative of communication appears as an explanation of how they “know” about their deities and why these deities appear so “real” to them. Direct communication is a means of achieving personal gnosis (UPG).

5) The manipulation of consciousness or “reality” by deities and wights, or through magic inspired by them or in association with them: including *galdr* (chanted magic), runic magic, and spae-working or *seidr*. Not all Heathens practice *seidr* or attend sessions. More, probably the majority, engage in rune-divination (casting runes to gain a sense of their wyrd) or rune-magic (often making talismans including several carved runes, to effect some form of change in the natural or social worlds), often including *galdr*. However not all practitioners of Ásatrú engage in the performance of magic.

6) A sense that spirituality is not separate from everyday life, but informs it. Many Heathens place a high value on skills of daily living known from “lore,” archeology or later folk-practices – wood-craft, fiber-crafts, smith-crafts, brewing, etc.

7) A sense of individual merit and responsibility, combined with community worth. Some Heathens list “Nine Noble Virtues,” moral values or strictures; others talk about individual responsibility and “being true” in more general terms: people have a choice in what they do on a daily basis, and need to accept responsibility for their choice. This includes responsibility to local (Earth, plant, tree or animal) nature-spirits for their actions.

8) An elaborate concept of “soul” and “self,” which is currently being explored by some Heathen researchers, particularly workers of *seidr* – with reference, once again, to “the lore.” With this goes a concept of personal or family fate or *ørlög*, and overall Wyrd, which people, and the Norns, weave.

9) The Elder Kin (deities) and other wights also are subject to the workings of Wyrd.

Therefore, Heathens see themselves, along with other beings, as bound up with the Wyrd of the worlds. This has a bearing on Heathen concepts of “nature.”

Heathens are divided on whether their religion is a “nature religion.” They do not focus on the Earth as “The Goddess.” Rather, they honor Earth, by various names such as Fjörgyn and Jörð, as “a goddess,” and celebrate Earth’s bounty when appropriate to do so. Nor do they see all goddesses as one. Some Heathens therefore consider that Heathenry is “not a Nature Religion” or “not Nature-based,” but is “deity-based,” looking first to the Æsir and Vanir. Others point out that a central concept in Heathenry is that the Earth is alive – this religion has a strong relation to animism in that rocks, plants, and trees all have their spirits. These spirits have their own agendas and purposes. Icelandic folklore is replete with references to land spirits, and “Wight” is the modern English form of the Old Icelandic “vættir.” Various Heathens, including Jörmundur Ingi Hansen, Allsherjargoði in Iceland, have commented that practices and offerings in the past would have focused more on land spirits, rather than on the deities of Æsir and Vanir. Everyday rituals would have honored local wights, whereas on special occasions the deities would have been greeted. However, because the poets of the Edda told stories of the deities, today’s reconstructions have focused first on deities. Yet, while a blót (ritual of offering) is based around honoring one or more deities, it is common to begin by asking the local land or house spirits for their permission, blessing, and assistance in conducting the rite. Two items from the old literature mentioning “Earth” are favorites for ritual use with Heathens today. One of these is based on the Old English “charm” for field-remedy or field and plough blessing (*Æcerbot* from an eleventh-century manuscript), a later ceremony that may hold traces of earlier heathen ritual. It makes reference to Earth as *Folde*, and possibly *Erce*, addressing her directly (*hal wes thu, folde, fira modor! – be in health, Folde, mother of the people*). The second is part of the Eddic poem “Sigdrífumál,” where the newly awakened Sigdrífa, after greeting Day and Night, praises the deities:

Hail Æsir, Hail Ásynjur,
Hail Earth who gives to all
Goodly wit and speech grant unto us renowned pair,
And healing hands in this life (author’s translation
from Sigdrífumál 3–4; Icelandic in Sigurðsson
1998).

In various areas Heathens have been involved with ecological activities, including road protests and (particularly in Britain) protecting “sacred sites.” Most Heathens attempt to live their spirituality on a daily basis – talking to wights and honoring them (for instance, by picking up litter, clearing up an area) is part of everyday life.

Today, there are many different ways in which people construct their Heathenry. Some focus in general on the deities of the Æsir and Vanir, others have particular associations with one or several deities. For all, the concept of *wyrd* is important. Those who work shamanistically, engaging in *seidr*, deal with the tree Yggdrasill and with various wights, including ancestors, plant and animal spirits, land spirits, and their own *fylgja* (follower), a helper-spirit often seen in animal form. Most Heathens recognize some parallels between their (reconstructed) practices and those of shamanic Eurasian peoples. In particular, Heathens are coming to recognize similarities with Sámi religion.

In general, Heathen practitioners see their religion as reconstructed, and increasingly as shamanic or shamanistic. While some practitioners make common cause with adherents of Western Pagan religions (Druidry or Wicca), others do not. For models to “fill out the gaps,” practitioners are likely to look to indigenous, particularly Sámi, religion, or to Shinto or Hinduism to indicate how Heathenry might have developed in the absence of “conversion.” The basis of practice however remains the mythological stories from the Eddas, and from these Heathens draw ways of relating to their living landscapes.

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- See also: Druids and Druidry; Elves and Land Spirits in Pagan Norse Religion; Odinism; Saami Culture; Trees (Northern and Middle Europe).

Hebrew Bible

Scattered through the normative, narrative and wisdom texts of the Hebrew Bible are many motifs now considered “environmental.” Numerous laws refer to key categories of modern environmental concern, including protection of nature. The biblical laws should not be confused with Jewish law as it is interpreted in the rabbinic tradition. From Moses onwards, tradition believes that oral laws were passed down through the generations which accompanied and explained the written Torah. In the Jewish tradition, the written and the oral law are regarded as one, even though the latter was written down in the Mishnah early in the third century by Rabbi Judah the Prince. Since then, Jewish law has continued to develop through rabbinical interpretation.

Among these biblical laws is the prohibition against destruction of fruit trees when laying siege to a city (Deut. 20:19–20). Jewish tradition derives from this verse a prohibition against the destruction or waste of any resource. Another commandment refers to maintaining the constancy of species by forbidding the mating of two different types of animals, or sowing one’s field with two different kinds of seeds (Lev. 19:19; Deut. 22:9).

Several laws are concerned with animal welfare. In the Decalogue, man is commanded not to work on the seventh day; one’s ox and ass must also rest (Ex. 23:12; Deut. 5:13–14). Farmers are forbidden to plough with an ox and an ass yoked together, as this would impose hardship upon the weaker animal (Deut. 22:10).

The Jewish tradition relates a prohibition against eating a limb from a living animal to Gen. 9:4 and Deut. 12:23, which say one should not consume an animal’s life, equated with blood, with its flesh. No animal should be slaughtered on the same day as its young (Lev. 22:28). When taking eggs from a nest, one must let the mother bird go free (Deut. 22:6–7). On the other hand, animals bear responsibility: an ox that kills a human must be stoned to death (Ex. 21:28).

Other biblical commandments refer to the preservation of natural resources. These include the laws of the sabbatical year: every seven years, the land must rest and lie fallow (Ex. 23:10–11). In the Jubilee year, which marked the end of seven sabbatical cycles, the same prohibitions apply (Lev. 25:23).

The Hebrew Bible also addresses land use: the Levite cities had to be surrounded by open space on which building and growing crops was forbidden (Num. 35:2–5). Several texts deal with the prevention of nuisance and pollution. After the exodus from Egypt there had to be an area outside the camp where one could relieve oneself; one’s gear was supposed to include a spike for digging a hole and covering excrement (Deut. 23:13–14). After the priest had dealt with certain offerings in the Tabernacle, he

had to change his vestments and carry the ashes beyond the camp (Lev. 6:4).

The precautionary principle is expressed by the commandment to make a parapet on the roof of a house, to prevent people falling from it (Deut. 22:8).

These rules should be seen within the hierarchical order of a theocentric worldview. The laws show coherent concern for the environment which translates into a normative program of action. When elements of nature become objects of idolatry, however (i.e., in pagan cults) the Israelites are told to demolish them:

You must destroy all the sites at which the nations you are to dispossess worshiped their gods, whether on lofty mountains and on hills or under any luxuriant tree. Tear down their altars, smash their pillars, put their Asherahs to the fire, and cut down the images of their gods, obliterating their name from that site (Deut. 12:2–3).

Some claim that the Asherah may have been a sacred grove, but it is more likely to have been a manmade wooden cultic object. This law is one of several which define aspects of the hierarchical position of nature protection in biblical law as compared to other biblical priorities.

This theocentric vision is also expressed in many ways in the Hebrew Bible's narrative and wisdom texts. The first chapters of Genesis relate how God creates nature and humankind (Gen. 1–2). As its Creator, He is above nature and can do with it whatever He deems fit. Nature is not sacrosanct: on the one hand, it expresses divine majesty; on the other, God may use or change it in order to teach humans a lesson, punish or reward them.

In Genesis one finds several narratives recounting the destruction of ecosystems, or humans' removal from them, as a punishment for disobedience of God's commandments. Adam and Eve are expelled from Paradise (Gen. 3); Cain is punished for murdering his brother Abel, and becomes a permanent wanderer over the Earth (Gen. 4); almost all of humankind, birds and land animals are destroyed by the Flood (Gen. 6–7); verbal communication between the builders of the Tower of Babel becomes confused, and they are scattered over the face of the Earth (Gen. 11); and Sodom and Gomorrah are destroyed by sulfur and fire because of their inhabitants behavior so that even ten righteous men cannot be found there (Gen. 18–19).

On the other hand, in order to be blessed and father a great nation, Abram – later Abraham – must leave his native land of Ur of the Chaldeans for the Land of Canaan (Gen. 11: 31–12:6).

After the Flood, God promises that the Earth will not be destroyed again due to human misbehavior and that there will be some elements of constancy in nature (Gen.

8:21–22). The rainbow symbolizes this covenant (Gen. 9:12–17). With regard to specific situations, however, the prophet Isaiah forecasts that what happened to Sodom will happen also to Babylon: it will never be settled again (Isa. 13:19–22).

The motif of divine punishment and reward through changes in nature frequently recurs in later narratives. The Israelites' crossing of the Red Sea and the subsequent drowning of the Egyptians pursuing them are examples (Ex. 14). Another is the story of Korah and his fellow mutineers being swallowed by the Earth (Num. 16:30–33).

The narrative of the Ten Plagues is a paradigm of the relationship between God, humans and nature. It describes a series of modifications of nature as tools of punishment (Ex. 7–12). A number of disasters kill part of the Egyptian population, their slaves, animals and crops, but these plagues do not affect the Israelites living nearby in Goshen.

When the Nile waters turn into blood, there is so much pollution that the Egyptians cannot drink its water and all the fish die (Ex. 7:21). When Moses and Aaron throw handfuls of furnace soot into the air, the resultant air pollution from the fine dust causes inflammations of boils on human and beast alike (Ex. 9:10–11).

Such "environmental" punishments may take many forms. When the Israelites complain, a fire from God breaks out in the desert and ravages the outskirts of the camp (Num. 11:1). The Israelites are warned that idolatry will lead to starvation because no rain will fall and the ground will yield no produce (Deut. 11:16–17). The prophet Ahijah warns that the descendants of Israel's King Jeroboam who die in the cities will not be buried but be devoured by dogs, and those perishing in the country will be eaten by birds (1 Kgs. 14:11). Similar prophecies are made about the Israelite Kings Baasha and Ahab (1 Kgs. 16:4; 21:24). Jeremiah forecasts that God will use nature to punish the idolatrous Israelites (Jer. 15:3). The Psalms state that He wrecks ships with the wind (Ps. 48:8).

A major example of nature's modification for the Israelites' benefit is the Manna narrative, with its many environmental aspects (Ex. 16:16ff.). This concerns the heavenly food which came down in the wilderness of Sinai close to the Israelite camp every morning except the Sabbath. The Hebrew Bible also ascribes spiritual characteristics to the Manna: a fixed quantity of this one food provides all the Israelites' requirements. This embodies the antithesis of conspicuous consumption (Deut. 8:3). It is white, a color that according to Isaiah symbolizes cleanliness (Isa. 1:18). Moses tells the Israelites to collect only what they require; leftovers become infested with maggots and stink, which is likely to prevent repetition. The uncollected manna melts in the sun.

However, the Israelites become dissatisfied with their exclusive dependence on this divine food, craving the meat, fish and vegetables of Egypt. While God then

supplies them with quail, they are subsequently punished for their gluttony by a severe pestilence (Num. 11:4–6, 33–34).

The miraculous provision of water is another example of beneficial modification of nature. Upon God's command, Moses throws a piece of wood into the bitter water at Marah, which becomes sweet (Ex. 16:23–25). Another time, Moses strikes a rock to provide water (Ex. 17:5–6). Moses later repeats this action to cause the same miracle, although he is instructed by God only to speak to the rock (Num. 20:8–11). Isaiah prophesies that God will respond to the Israelites' demands, and make large quantities of water available in unusual places (Isa. 41:18; 43:20).

Changes in nature's ways also occur with respect to individuals. Moses sees a bush burning in the desert, which is not consumed; there God gives him his mission to free the Israelites from Egypt (Ex. 3–4). His rod is turned into a snake, then becomes a rod again. When Moses puts his hand in his bosom and takes it out, it is encrusted with snowy scales; upon putting it back and taking it out once more, it becomes normal again. Later, Aaron's staff is turned into a serpent before Pharaoh (Ex. 7:8–9).

The prophet Balaam rides off to curse the Israelites; when an angel blocks his ass' path and the prophet strikes it, the animal starts speaking to him (Num. 22:23–30). Abraham sends his second wife Hagar away together with her son Ishmael. In the desert, when they are thirsty, she sees a well, because God opens her eyes (Gen. 21:19). After slaying the Philistines, Samson calls out to God for water. His prayer is granted by water's gushing out of a hole (Judg. 15:18–19). The prophet Elisha tells Na'aman, the commander of the King of Aram's army, to bathe seven times in the waters of the Jordan in order to be cured of his leprosy (2 Kgs. 5:10–14).

The prophet Jonah flees from God by ship, but a storm arises to prevent his flight. When the crew throws him into the water he is swallowed and saved by a huge fish (Jon. 2:1); later, near Nineveh, God saves him from discomfort by providing a rapidly growing plant to shade his head. The next day, the plant is attacked by a worm, and withers (Jon. 4:6–8).

The prescribed relation of humans to nature is one important element when analyzing the Hebrew Bible's attitude toward the environment. Much – often misguided – attention has been given to Gen. 1:28, wherein God says that humans should multiply, master the Earth and rule the animals. In the Bible's normative context, this rather imprecise verse is secondary to the array of specific commandments defining humans' relationship with the environment. In another text, God tells man to "till and tend" the Garden of Eden (Gen. 2:15). Defining the human role toward nature only as one of stewardship based on this verse – as is frequently done – also incompletely reflects the complex role that the Bible ascribes to humans in the framework of creation.

The Bible sees an expanding population as a blessing for humankind in general (Gen. 1:28; 9:1). The blessing of multiple descendants is later also bestowed on the Patriarch Abraham (Gen. 18:18). References to this motif appear, in various forms, elsewhere in the Hebrew Bible (Gen. 32:12–13; 1 Kgs. 4:20; Isa. 10:22, 48:19; Jer. 29:4–6; Hos. 2:1).

Nature as a manifestation of God's majesty is a frequently recurring theme. Humans should thank God who provides through nature (Ps. 147:7–9). The heavens are also told to praise their Creator (Ps. 148:4–5).

The Garden of Eden is described as an environmental Paradise, a lush ecosystem with abundant water and many trees. There is no need to use non-renewable resources, artifacts or tools. Apparently no fertilizers are required for food plants to grow. In the absence of production, there is no permanent pollution. Carrying out an environmental impact study would show the Garden of Eden to represent an ideal sustainable society (Gen. 2:8–17). Several prophesies foretell that elements of such a society will return in the Latter Days, when humans and animals will no longer harm each other (Isa. 11:6–8, 65:25; Hos. 2:20).

The Hebrew Bible provides many perspectives on animals and their position in society. The offering of animals as a substitute for humans is recounted in the story of Abraham's near-sacrifice of Isaac (Gen. 22). Hosea forecasts that animal sacrifices will be replaced by offerings "from lips," which the later Jewish tradition interpreted as prayer (Hos. 14:3).

Animals are also used as a tool of divine punishment. This is also the case with several of the Ten Plagues: the frogs (Ex. 8:1–10), the dust turning into lice (Ex. 8:12–13) and locusts eating the grass and the trees until no greenery remains (Ex. 10:15). It is prophesied that hornets will be instrumental in driving the Canaanites out of the Land of Israel (Ex. 23:28).

Animals can also save people; upon God's command, ravens bring food to the prophet Elijah who is fleeing from the Israelite king Ahab (1 Kgs. 17:4–6). Animals may also have an informative role: the pagan prophet Balaam is scolded by his ass (Num. 22:30). Another example of this motif can be found in the book of Job (Job 12:7–8).

Many narratives indicate that animals are held responsible for their deeds, however, and are punished either separately or jointly with humankind. In the Paradise story, the snake tempts Eve to eat from the Tree of Knowledge; thereupon it is doomed to crawl on its belly and eat dirt all of its days (Gen. 3). In the days of Noah, the animals are corrupt and are punished alongside humankind (Gen. 6:12–13). The narrative of the Ten Plagues relates how humans and beasts are punished alike with vermin, boils and hail (Ex. 8:13–14; 9:10, 25). Animals can also die in order to punish humans (Ex. 9:3).

Several narratives indicate that animals should be properly treated. Abraham's servant chooses Rebecca for

Isaac's wife because, unsolicited, she offers to water his camels (Gen. 24:12–20). On his deathbed, Jacob speaks negatively of his sons Simon and Levi, and mentions the murder of humans and the killing of animals in one breath (Gen. 49:6–7). Similarly, an angel reprimands Balaam for beating his ass (Num. 22:32–33).

The difference between humans and animals pales beside the difference between God and humans (Eccl. 3:19; Job: 25:5–6). The metaphors that relate to nature are another indication of the Hebrew Bible's attitude toward the environment. Animals are often described in terms of human personality or vice versa (Gen. 49). Jeremiah compares the believer to an evergreen tree (Jer. 17:7–8).

Issues concerning resource policies, a core element of the modern sustainability discourse, are addressed in several instances. Joseph advises the Pharaoh to hoard surplus grain in the years of plenty (Gen. 41). Scarcity of water leads to conflicts in the days of the Patriarchs (Gen. 21:25–26, 30; 26:19–21).

The Bible indicates specifically that humans may use natural resources for their benefit. When the Israelites come into their land, they mine copper from its hills (Deut. 8:9). When Joseph's descendants complain to Joshua upon entering Canaan that they have not been given enough land for their numbers, he tells them to clear forest land in the hill country (Josh. 17:15–18).

A few narratives recount destruction of elements of the ecosystem by biblical figures. The judge Samson considers fighting the enemy a higher priority than protection of animals and natural resources; he binds the tails of two foxes together, fixes torches between them and lets the animals loose among the Philistines' standing grain (Judg. 15:4–5). Before the battle against the Amalekites, the prophet Samuel tells King Saul to kill not only all their people but also all their animals (1 Sam. 15:2). The prophet Elisha orders the kings of Israel, Judah and Edom in their battle with Moab to fell all good trees, stop up all wells and ruin all fertile fields with stones (2 Kgs. 3:19ff.).

When King Sennacherib of Assyria invades Judea and marches on Jerusalem, the religiously faithful King Hezekiah stops up all the springs outside the city in order to stop water supplies to the enemy (2 Chron. 32:2–4). The Bible's wisdom texts indicate that *some* destruction is part of the normal cycle of life: there is a time for planting and a time for uprooting what has been planted (Eccl. 3:2ff.).

The Hebrew Bible also contains detailed perceptions on various elements of nature (e.g., water and trees). It sees in water, *inter alia*, a vitalizing agent of the Earth (Gen. 2:5); a natural resource most essential for the survival of living beings (Neh. 9:20); a tool of destruction (Ex. 14:27–28); having religious functions (Lev. 16:4); a tool for testing people (Gen. 24:13–14); a natural barrier (Ex. 14:29); a means of identity, particularly through the possession of wells (Gen. 26:18); and a carrier for transport (Isa. 18:2). Furthermore, it is a symbol in a great variety of metaphors.

Pollution is mentioned a number of times in the Hebrew Bible. Sometimes the ideas expressed coincide with contemporary environmental concepts, for instance, the above-mentioned example that excrement must be removed from public places. On other occasions this is not the case. After Aaron constructs the Golden Calf in the desert, this spiritually polluting artifact is destroyed by being burned and ground to dust; the gold dust is subsequently thrown into a brook (Deut. 9:21). In modern terminology, this may be considered destruction of resources but not pollution, the dust being inert matter.

The relationship between human wickedness, pollution and destruction is a familiar biblical motif. It often has religious connotations. There is no mention of decay in the story of Paradise (Gen. 2). The Israelite King Jehu tears down the temple of Baal and turns it into latrines (2 Kgs. 10:27). Isaiah speaks of Jerusalem as a sinful city in which "silver has turned to dross" (Isa. 1:22). He also speaks about the reverse process of purification and renewal, with a metaphor from the world of waste management: "God will smelt out your dross as with lye, and remove all your slag" (Isa. 1:25). Similarly, Ezekiel speaks about purifying polluted water with clean water from the Temple (Ezek. 47:8–12).

Noise pollution can play an important role in warfare. After entering Canaan, the Israelites laid siege to Jericho. The city walls collapse as a result of the Israelites' shouting, when the horns are sounded (Josh. 6). The noise motif is also mentioned in connection with the judge Gideon (Judg. 7:15–22).

Many more motifs with environmental connotations appear in the Hebrew Bible. They must be seen in the framework of its central theme: that humans – and the Israelites, in particular – should recognize and serve God, Creator of the world, in the various ways commanded by him.

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See also: Animal Rights in the Jewish Tradition; Creation Myths of the Ancient World; Creation Story in the Hebrew Bible; Creation's Fate in the New Testament; Hasidism and Nature Mysticism; Israel and Environmentalism; Jewish Environmentalism in North America; Judaism; Kabbalah and Eco-theology; Paganism and Judaism; Tikkun Olam – A Jewish Imperative; Vegetarianism and Judaism; Waskow, Rabbi Arthur.

Hegel, G.W. Friedrich (1770–1831)

Georg Wilhelm Friedrich Hegel was born in Stuttgart and spent most of his academic career at Jena (1800–1808), as a headmaster in Nuremberg (1808–1816), and after two years in Heidelberg, was made Professor of Philosophy at the University of Berlin in 1818. His major works include *Phenomenology of Spirit* (1807), *Science of Logic* (published in two volumes in 1812 and 1816), *Encyclopedia of the Philosophical Sciences* (first published in 1817 and revised in 1827 and 1830), and the *Philosophy of Right* (1821). After his death in 1831 friends and former students compiled his lectures and unpublished material, the best known of which are, perhaps, his *Lectures on the Philosophy of Religion* (in 1832), and *Philosophy of History* (in 1837).

To say anything briefly about Hegel's philosophy is as big a challenge as describing it clearly – this is particularly true when it comes to his writing about nature, his most complex and impenetrable work. Nature and religion serve dynamic, ontological processes in Hegel's systematic treatment of existence, revelation, and knowledge. Nature fills this role as the second part of his *Encyclopedia of the Philosophical Sciences*. Religion appears in a number of places in Hegel's philosophical thought but primarily in his lectures on *The Philosophy of Religion* and in the *Phenomenology of Spirit* where it fills an entire, and dense, chapter.

Nature, in Hegel's philosophy, is the world external to human thought: epistemologically, metaphysically, and empirically. It is the source of experience and radical contingency that our understanding attempts to grasp in theory but which we grasp in practice as the unmediated and unshakeable Given of the world-immediately-before-us. While its subject matter is the external world, nature also requires a kind of knowing in which the object known is presupposed to exist as external to a knowing subject.

The content of nature thus includes everything from the most abstract concepts like Space and Time to increasingly concrete experiences like chemical reactions, pollen, mollusks, and bird's building their nests – the subject-

matter we routinely consider to exist as independent from and external to our knowledge.

In the course of dialectically unpacking these concepts, these implicit presuppositions are made explicit. So while, metaphysically and epistemologically speaking, nature is the world around us, it is more than this. It is the ground that makes our philosophical speculations possible in the first place. The knower is a product of and is implicated in the very thing she knows.

The profound philosophical implications of this statement – as a way to reconnect humans to the rest of nature, not just ethically, but ontologically (based not only on what we can *know* about the world, but on notions of the essential and fundamental nature of reality) – is generally missed in the flood of seventeenth- and eighteenth-century scientific material included as Remarks and Additions from his lecture notes. While this additional material demonstrates the astonishing breadth of Hegel's scientific background, it equally seems to anchor his treatment to a set of scientific observations that are now 300 years out of date.

In the context of contemporary analyses of race, gender, and class – all of which employ the originally Hegelian category of otherness as an essential tool – nature could safely be called *The Big Other*. It is *ganz Andersein und Äußerlichkeit*; everything posited and comprehended as external to our thought. His *Brobdingnagian* mapping of nature, *The Philosophy of Nature*, dialectically unpacks 1) this primordial externality, 2) our relation to it and 3) simultaneously, our understanding of both of these. This is the typically recursive Hegelian approach to dialectic: it takes its own activity into account by providing a recursive treatment both of its subject-matter and of itself treating its subject-matter. From a more practical point of view, it is fascinating to note that the marginalization of people on the basis of race, class, and gender is often based on the degree to which such people are associated with nature – the more they are characterized as "natural" the more likely they will be marginalized and repressed.

Nature, for Hegel, is not merely the world around us, but plays a developmental role in the larger context of Hegel's system. There, nature mediates Logic and Spirit, the other two parts of his *Encyclopedia*.

For Hegel, nature is understood as a moment in a syllogism of Logic-Nature-Spirit. Logic, Nature, and Spirit are three parts of a trilogy that constitutes the whole of reality and makes our knowledge and participation in reality possible. Unlinked from its companion moments, nature remains the fallen detritus of Christian paradigm, the illegitimate offspring of Spirit, yet it is equally that through which Spirit enters the world. If Christianity, and therefore Western philosophy in general, reinforces the view of nature as fallen and sinful, to be abandoned for a new heaven and a new Earth (as suggested in the

Revelation of St. John) or corrected and renovated by the divine light of human reason in order to restore an original Eden (as suggested in the work of Francis Bacon), nature remains for Hegel the ground by which and from which Spirit arises. Without nature, Spirit is impossible; without Spirit, nature is merely mechanical and physical process – but nature is alive and is thus the portal, and substrate, of Spirit. This begins to suggest the links between nature and Spirit as moments within the larger development of Hegel's system.

This three-part mediation of Logic, Nature, and Spirit, as the overlapping spheres of reality, resonates with the Christian Trinity. Nature (the incarnation of thought comprehended in and through the external forms of the created world) takes the role of God the Son mediating God the Father (here in the guise of the archetypal categories of thought, Logic) with God the Holy Spirit (manifested most evidently, at least in terms of Hegel's notion of the history of consciousness, as the consciousness of humankind reflecting on its own nature) – and in this way satisfying the Aristotelian legacy of thought thinking itself: human consciousness as a finite and imperfect manifestation of divine consciousness thinking itself, as it does in Book *Lambda* of Aristotle's *Metaphysics*.

"Thus, the consciousness of God on the part of finite Spirit is mediated by nature. Man sees God by means of nature; nature is thus far only a veiling and an untrue configuration" (Hegel in Hodgson 1979: 120).

This strikes a rather different chord from contemporary work that attempts to reseat human beings into a natural world from which they have been alienated. In what may be the starkest expression of Hegel's view of humans as distinct from nature, he wrote, "If man exists as immediate, natural man, he ought to consider himself to be existing in an inappropriate way" (Hegel in Hodgson 1979: 133–4). "Natural" is not the appropriate way for humans to exist. Humans are, for Hegel, beings of reason and spirit and while nature is the place where spirit first breaks forth, it does not remain there. It leads us away from the mere externality of the sphere of nature toward the more adequate universe of spirit.

If nature is the external content of time and space through which God can be made known to humans, what is the role of religion?

Religion appears in Hegel's *Encyclopedia, Philosophy of Religion*, and *Phenomenology of Spirit* as an inadequate mode of knowledge; as the narthex to a more adequate, philosophical, understanding. It plays the developmental role in Hegel's system of a threshold to philosophy. What religion does with faith and belief, philosophy will undertake with thought.

The *Phenomenology* provides a schematic of religion cast into a hierarchy of conceptual adequacy, explicating how religion, with increasing adequacy, reveals the absolute; beginning with the least adequate forms (natural

religions; Hinduism; religion in Egypt and Greece) and culminating in the revealed religion of Christianity. From here, consciousness moves dialectically beyond the inadequate kind of knowing (and subject-matter) provided in religion to culminate in knowledge of the absolute and absolute knowing. In other words, even human spiritual life can only be adequately comprehended, for Hegel, not by religion but by philosophy. Even the religious dimension of human experience is only adequately comprehended by thought.

If his interpretation of nature is suspect from the scientific point of view, his Christianity is equally suspect. Marx and Kierkegaard both found Hegel problematic: Marx because of the presence of Spirit in dialectic and Kierkegaard because of Hegel's assumptions that, finally, everything can be thought – including the infinite God which, Kierkegaard insisted, collapsed thought at the ethical stage of life and requires that famous leap of faith as the starting point of theistic relation. To Kierkegaard, Hegel's dialectic was a Tower of Babel; to Marx it was a mystic's sacristy. To us, Hegel's works should suggest the lucid, if Byzantine, insights of a philosopher with a remarkable background in both theology and empirical science at the dawn of the modern scientific era.

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- See also: Book of Nature; Descartes, René; Holism; Philosophy of Nature.

Heidegger, Martin (1889–1976)

Because the noted German philosopher Martin Heidegger offered such an influential critique of the technological domination of nature, he has been read as a forerunner of contemporary environmentalism. Despite important areas

of agreement with environmentalism, however, Heidegger disagreed with one of its major assumptions, namely, that human beings are animals. In asserting that humans are ontologically different from animals, Heidegger continues the traditional idea that humans stand outside of nature, even while being somehow part of it. Another factor impeding easy assimilation of Heidegger's thought to contemporary environmentalism is his notorious affiliation with National Socialism.

Heidegger's major work, *Being and Time* (1927), maintains that human existence opens up the temporal-historical "clearing" or "world" in which entities can manifest themselves, and in this sense "be." By asserting an integral relation between being and time, Heidegger emphasized the *historical* dimension of being and thus challenged the traditional assumption of the link between being and eternity. Moreover, he contended that "being" names not an eternal ground, foundation, or source – such as Platonic forms or the biblical God – but instead the capacity for entities to present themselves in their intelligibility.

Concern for nature is not much evidenced in Heidegger's earlier writings. In *Being and Time*, for instance, we are told that entities reveal themselves primarily as instruments, and secondarily as objects for scientific cognition. During the 1930s, however, Heidegger began to develop his critique of Western humanism. He maintained that Nietzsche's conception of humans as "clever animals" was consistent with the Darwinism that allegedly animates modern political ideologies. If humans are merely animals, human existence is reduced to the struggle for survival and power, while nature becomes a gigantic storehouse of raw materials. As an alternative to the technological will to power, Heidegger recommended the attitude of "releasement" (*Gelassenheit*) in which people may "let things be," that is, allow things to manifest themselves according to their own properties, rather than in accordance with the demands placed upon them by the technological subject.

In Friedrich Hölderlin's poetic notion of nature as "holy wildness," Heidegger discerned hints of an encounter with nature, *physis*, the ontological primal that eludes human mastery. The relation between such "holy wildness" and what some environmentalists have in mind by "sacred wilderness" is not clear. Heidegger defined nature in terms of his ambiguous interpretation of *physis*. At times, he viewed *physis* as almost identical with being, that is, the self-manifesting of entities that occurs within the temporal-historical clearing. This sense of *physis* means nature insofar as it manifests itself and to that extent is said "to be." Nature defined in this manner is what Heidegger meant by "wild" nature, that is, the overpowering manifesting with which humankind must struggle mightily in order to make entities intelligible, appreciable, or useful to humankind. By emphasizing the interpretative

activity involved in disclosing the being of entities, Heidegger indicated that the historical world – the clearing needed to encounter *physis* or being – is constituted not only by temporality, but also by the articulating power of language. Instead of viewing language as a human possession or tool, however, Heidegger said that language is a dimension of cosmic intelligibility or *logos*. Language as *logos* possesses *us*.

Elsewhere, Heidegger interpreted *physis* not as the self-manifesting of entities, but rather as their self-emergence, as when an animal gives birth to its young or unfolds into maturity. Nature in this sense does not refer to the intelligibility of beings revealed in the historical-linguistic clearing. Instead, we experience natural phenomena as occurring independently from us, and as having taken place long before human existence began. In places, Heidegger indicates that humankind itself is an aspect of *physis*, understood now as the complex natural processes that take place independently of human existence. In other places, he states that such processes can "be" only insofar as they show themselves within the clearing opened up through human existence. These incompatible conceptions of nature or *physis* reveal Heidegger's own struggle to reconcile or at least to address two central aspects of humankind: that we are beings, and that we are disclosers of beings in their intelligibility. Heidegger never deviated from his conviction that humans transcend nature even while somehow being part of it.

Starting in 1933, Heidegger infamously used his own philosophy to support National Socialism, which condemned enlightenment modernity. During this same period, the German Reich – inspired by Nazi rhetoric of "pure land and pure blood" (*Blut und Boden*) – passed what was at the time the world's most far-reaching environmental legislation. These disturbing facts should give pause to environmentalists who engage in totalizing condemnations of modernity, while failing to appreciate the positive contributions of modernity. Thomas J. Sheehan offers another reason for not conceiving of Heidegger as a proto-environmentalist. Sheehan argues that Heidegger's conservative views – his anti-urbanism, his preference for the countryside, and his critique of modern science and technology – conceal that the *real* thrust of his thought is consistent with the modern view that humankind is destined to make all entities completely present for study and exploitation. If Sheehan is right, then, Heidegger's thought is consistent with the titanic project of world domination that Nietzsche allegedly foretold and celebrated. Still, his criticism of the excesses of anthropocentric humanism, including mistreatment of animals and heedless destruction of the natural world, retains its force, even if one affirms modernity's achievements of renouncing political repression, freeing science from religious dogmatism, and providing a far better material living standard for countless millions of people. Moreover, even if modernity

cannot adequately be understood in terms of the clever animal seeking power, by taking this approach, Heidegger points to the dangers involved in reading humankind in reductionistic terms that ignore its remarkable capacity for understanding itself and other phenomena.

During the 1950s, apparently decentering humankind's role in constituting the clearing in which things can be manifest, Heidegger suggested that beings are disclosed in connection with the dynamic interplay of the "fourfold" of Earth and world, gods and mortals. In 1966, he stated that "only a god can save us" from the dire consequences of modern technology's mobilization of humankind and nature. Nevertheless, he usually affirmed that only humankind is endowed with the linguistic capacity that holds open the clearing for beings. Far from being a biocentric egalitarian, then, he held that humans are dramatically different from other entities. He once wrote that the loss of the clearing opened up through humankind would be even worse than the destruction of the natural world by nuclear war. Many environmentalists would disagree with this opinion.

Heidegger's thought that things can "be" only in the world opened up through human language and history, enormously influenced postmodern theory, including deconstruction, which now challenges the very idea of a pristine "nature" that exists independently of human language, culture, and social practices. Many environmentalists, of course, prefer the good old days, when the reality and identity of "nature" were uncontested. Radical constructivism, according to which nature is reduced to a virtual product of human imagination and practices, may go too far. Nevertheless, in order to understand our obligations to nature, and even whether we have any such obligations, we must understand as well our role in conceiving and defining it.

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- See also: Deep Ecology; Descartes, René; Fascism; Holism; Nietzsche, Friedrich; Philosophy of Nature; Radical Environmentalism.

Hildegard of Bingen (1098–1179)

Hildegard of Bingen was a twelfth-century Benedictine nun whose synthetic vision of nature, [female] fertility, and spirituality represented a radical departure from the dualistic thinking of her time. Some believe she offers a model for a contemporary environmental consciousness that is centered on wholeness, mutuality, sensuality and respect for the sacrality of nature. As a theological writer, healer and composer, Hildegard occupied a role that transcended the boundaries set for women in her society by writing books on theology and medicine, undertaking preaching journeys and composing music. Adopting the

stance of a “poor little woman” whose voice was not her own but that of God’s prophet, she devised a unique spirituality in which the natural order was fused with the essence of God, and the divine was restored to the feminine through the body of Mary.

Hildegard’s worldview derived in part from the medieval aesthetic which conceptualized the universe as a harmonious whole, with all things ordered, yet interdependent, and most importantly, suffused with the presence of God. Her writing was characterized by exuberant natural imagery of fertility, light and life, and reflected her sense of oneness with the living, breathing material world. At the center of her cosmology is the notion of *viriditas*, the sunlight-filled greenness, the essence of the life-force which emanates from the divine and permeates the natural world. In the *Liber operum divinorum*, she recorded what she believed was the voice of the Living Light (or God), revealed to her in a vision:

I, the fiery life of divine essence, am aflame beyond the beauty of the meadows, I gleam in the waters, and I burn in the sun, moon and stars. With every breeze, as with invisible life, that contains everything, I awaken everything to life. The air lives by turning green and being in bloom. The waters flow as if they were alive. The sun lives in its light (1987: 8–9).

For Hildegard, *Viriditas* was the ultimate expression of sacred fertility, and it abrogates the dualism between the spiritual and the natural/fecund Earth/feminine. *Viriditas* is most clearly manifested through the divine motherhood of Mary, whom Hildegard positioned as the *salvatrix*, the “author of life,” whose “holy vitals” redeemed human nature from the effects of the Fall. In the song cycle, *Symphonia armonie celestium revelationem*, which Hildegard composed for performance by her nuns, she intentionally arranged the pieces in hierarchical order. The sixteen songs to Mary, though titled, “For Mother and Son,” are clearly addressed to Mary, and they are placed in the second position of the traditional Trinity – the place of the Son. Barbara Newman refers to this as a “pointed theological statement” that celebrates Mary’s divine child-bearing and indicates that Mary, like Christ, belongs in the very heart of God (Newman 1988: 59). Thus, the feminine, through the fertile/female body of Mary, metaphorically recovers its space in the divine order, which it now shares with the crucified male body of the Son.

In these songs, the natural imagery with which Mary’s body is inscribed fuse the fertile greenness and flowering of her Earth/womb with those of celestial light and radiance, in this way recognizing the divinity of the female generative force. While it is not possible to know what Hildegard’s awareness might have been of those ancient religious traditions that predated the belief in a

celibate male god, and in which there was a virtually universal recognition of a cosmic Earth mother/nature whose fruitful energy/desire was the animating force of the universe, her treatment of Mary embodied this goddess ideal. As the leafy branch whose womb blossomed with wheat, and whose flesh held joy, Mary represented the divine sensuality that Hildegard saw in the natural world. Through the body of the Mother of God, that “luminous matter,” (“shining white lily”) and “resplendent jewel,” the feminine was exalted as the incarnation of divine *viriditas* [translations of the Marian Songs are Barbara Newman’s]. Always cognizant of the gender boundaries of her age, in her songs to Mary, Hildegard nevertheless comes as close to resurrecting the Earth/nature goddess as she dared.

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See also: Apocalypticism in Medieval Christianity; Christianity (5) – Medieval Period; Ecofeminism (various); Dualist Heresies.

Hinduism

Hinduism is the major religious tradition in India and the faith of more than eight hundred million people around the world. It has no single founder or beginning date. There are many philosophical, ritual, narrative, theistic, and non-theistic traditions within Hinduism. Although there are few concepts that all Hindus would believe in or accept, notions of immortality of the soul, a supreme being, and karma would be accepted by most Hindus. Given the diversity of the traditions, it is easy to see why there are pluralistic views toward nature. Hindus value nature, think of the universe as the body of God, pray for peace between all the elements of the universe, urge non-violence to all beings on Earth, and personify nature and the Earth as goddesses. However, some Hindu communities devalue nature by thinking of matter (homologized to women) as ensnaring the spirit which should free itself from its shackles to get liberation. Yet others think of the universe as ultimately without reality. Some Hindus think of the final goal as transcending all dualities of good and evil, spirit and matter, culture and nature.

The terms “Hinduism” and “Nature” have both been contested and problematized and yet both have considerable

currency in scholarly discourses. The meanings of both terms have differed strikingly at various times and in various traditions, cultures, and communities. There are several Indian words in Sanskrit and in vernacular languages which have philosophical and colloquial meanings corresponding with the many meanings of “nature.” In general, the term will be used here to refer to those elements which are considered to be part of the lived or conceptualized environment in the many Hindu traditions. Many Indian religious traditions make a distinction between the sentient – those with consciousness (*chit*) – and the insentient (*achit*). The first category includes the deity and souls; the latter ordinarily, though not always, includes all material substances, their primordial essences, as well as time. The Indian terms for “nature,” especially *prakriti*, may refer to matter as well as the inherent tendencies in material substances.

The terms “Hindu” and “Hinduism” are very flexible. The term includes those who may just be acquainted with some texts and narratives (like the epics), some concepts (like karma and reincarnation), or who practice some of the customs and rituals (such as performing sacraments in front of a sacred fire) associated with the many traditions that consider themselves faithful to the Vedic tradition or which self-consciously depict themselves as “Hindu.” It would also include people in India who may have never heard of some of the Hindu texts by name but who participate in the larger world of the extended family of deities, beings, and/or modes of ritual behavior shared in a loose way by some of those people who do call themselves Hindu. Hindu notions of sacrality also cover what may be considered “secular,” “supernatural,” or even “superstitious” in the Western world. Thus, among other things, to understand the Hindu way of life, it is necessary to understand sacred times, places, omens, architecture, music and dance, trees, plants, and planets in the Hindu tradition.

It is hard to identify many common denominators in the many Hindu traditions. While some texts and some deities are accepted by many, there is no single text, single deity, or single teacher that all Hindus would deem authoritative or supreme. There is a corpus of holy works, and many people hold some of those texts to be revealed and of transhuman or divine origin; but other, non-literate Hindus may not even have heard of these compositions. Similarly, there are many local deities with local names who may or may not be identified with the more recognizable pan-Indian gods and thousands of folk tales and vernacular ballads known only in a few villages or communities. Hundreds of communities and sectarian movements make up the Hindu tradition, and each community has its own hallowed canon, its own sacred place to which its members make a pilgrimage, and its own deity whom it holds to be absolutely supreme.

Notions of *dharma* (duty, righteousness, “religion”) have been communicated through stories from the epics

and Puranas (Sanskrit and vernacular texts glorifying deities and places composed primarily though not completely in the first millennium) and narrated by family or village elders. We should also note that the many Sanskrit texts within Hindu traditions have had a limited role to play in the history of the religion. The many Hindu traditions consider custom and practice to be as important as the texts themselves. Nevertheless, one may say that, with the intellectual colonization by the West and the advent of mass media, Hindus today have started to focus on the sacred texts and many search for answers to the environmental crises both in text and practice. In this entry, therefore, we will consider textual sources as well as eco-practices adopted by Hindus. We will initially consider the phenomena of nature in historical, philosophical, and narrative texts, and then move on to the relevance of some philosophical concepts, and finally discuss the various forms of environmental activism in India which use religio-cultural concepts as sources of inspiration or guidance.

History

The earliest civilization in India, which is said to be a progenitor of latter-day Hinduism, has variously been called the Indus Valley or the Sarasvati culture. One of the most disputed issues in Indian history is the origins of the people who inhabited the banks of the river Sindhu (Indus, from which we derive the words Hindu and India). While colonial scholars and many historians hold that the original inhabitants here were eventually displaced by the Indo-Europeans, recent challengers of the theory argue that the Indus was really the ancient river Sarasvati, spoken of in the Vedas, and that this was the original home of the Indo-Europeans. It is the references to the flora and fauna (the existence of a horse in the early culture) as well as the references to local landscape (descriptions of the river and an ocean) in the Vedic literature that fuel the controversy. The civilization seems to have been urban and the many seals uncovered here have shown the importance of several animals in society. Because of the excavation of a large swimming-pool-like structure, carefully constructed, as well as fire pits, one may speculate a reverence for water and fire. It is possible that the flooding of the Indus River destroyed parts or all of this early civilization.

Early Sanskrit Texts

The earliest compositions we have in India are called Veda or “knowledge” and these were composed by the Indo-European people. There are four Vedic collections, each divided into four sections composed possibly between 1500 and 600 B.C.E. The four collections or Vedas are known as Rig, Sama, Yajur, and Atharva. The sections in each of these collections are *samhitas* or hymnic compositions; *brahmanas* or ritual treatises; *Aranyakas* or

“compositions for the forest”; and Upanishads, “sitting near [the teacher].” The earliest compositions are hymns of the Rig Veda. The hymns were used in sacrificial rituals, and some of the instructions on conducting rituals are contained in the Yajur Veda and the brahmanas. Philosophical speculation is found in the sections called Aranyakas and Upanishads. Although considered to be extremely important by all orthodox philosophers and theological treatises, the Vedas are not books kept in people’s houses. Rather, they are ritual texts understood by many Hindus as eternal sound, eternal words passed on through the generations without change. A few hymns from them are known and recited regularly at temple and home liturgies, and the philosophical sections have been translated and commented upon frequently, but the rest of the Vedas are known only to a handful of ritual specialists.

The earliest hymns of the Vedas are addressed to many gods and many of them are connected with natural phenomena and the environment the people lived in. Agni, the god of fire, is seen as a messenger between human beings and the deities because offerings were placed in the fire to be carried to other worlds. Agni is the fire on Earth, lightning in the atmosphere, and the sun in the sky. Soma, also addressed in the hymns, is identified as the moon and, frequently, is depicted as the presiding deity of a creeper-plant, and also as an elixir that was derived from the plant and used in the ritual sacrifices. Usha, the goddess of dawn, Varuna, who presides over the waters, the oceans and even aquatic animals, and Indra, who is associated with the thunderbolt and rain, are all worshipped.

A goddess known as Sarasvati is also spoken of, sometimes as a river, sometimes as representing learning. In the Rig Veda, Sarasvati is described as the inspirer of noble thoughts, one who gives rise to truthful words, one who is beautiful and fortunate, the best of rivers filled with dynamic vitality. In later literature – the ritualistic sections called the Brahmanas – Sarasvati is identified with the goddess Vac (speech), who has an individual identity in the early verses of the Rig Veda. Vac was perceived to be the consort of the creator Prajapati. The stories and attributes associated with her become superimposed on Sarasvati. As Vac, she was speech incarnate, the power of the word, the mother of the Vedas. When identified with speech in some texts, Sarasvati is also known as Gayatri (the triple song) and Savitri (hymn to the sun) and is associated with the formula that is given to young boys in a ceremony when they are invested with a sacred thread. The formulaic verse (mantra), called the Gayatri, dedicated to the sun, becomes the mantra that marks the initiation of a young boy into his life as a student. The votary, through the mantra, meditates on the brilliance of the sun and asks for that illumination to be in his mind. Although only young men were initiated into this mantra in the last two millennia, in the last two centuries women in some Hindu

traditions also recite it. The important deities of later Hinduism are mentioned a few times in these earliest hymns. It is only in the later Vedic literature that goddesses like Sri (Lakshmi) or gods like Narayana (Vishnu) are addressed directly in hymns.

Some hymns speak of a connection between the rituals and the prevalence of cosmic and earthly order, *rta*. *Rta* is truth and justice, the rightness of things. It makes harmony and peace possible in the Earth and the heavens. Although it is an impersonal cosmic principle, Vedic gods like Varuna were considered its upholders.

In one key hymn, the Hymn to the Supreme Person (Purusha Sukta), the universe itself is said to have come out of a cosmic sacrifice in which the primeval man (Purusha) was offered. The hymn is important even today in domestic and temple ritual for the Hindus and has figured continuously in the tradition for about 3000 years. In it, the composer strains to capture infinity in words and uses the notion of a “thousand” to denote all that cannot be measured or perhaps even conceptualized. In this hymn, the “cosmic man” (purusha) is said to have a thousand heads, eyes, and feet. Covering the Earth, he still extends beyond; that is, he is all space. He is the past, present, and future. He was offered as a sacrifice, and various elements of the universe are said to arise from this ritual. From his mind came the moon; from his eye, the sun; the gods Indra and Agni from his mouth; and the wind came from his breath. From his navel came space; from his head, the sky; from his feet, Earth; from his ears, the four directions. Thus, says the hymn, the worlds were created. It is said that the four classes (varnas) of society also came from this initial cosmic sacrifice. While the origins of what eventually came to be called the caste system are generally seen to lie in these verses from the Rig Veda, it is important to recognize that the social order is connected with the natural order of the origins of the universe.

The sacrificial worldview of the early Vedic age gave way to philosophical inquiry and discussion in the Aranyakas and the Upanishads. The Aranyakas (compositions for the forests) and the Upanishads (“coming near” a teacher) were composed at a time of intellectual ferment and philosophical speculation, possibly between the seventh and sixth centuries. We note from the title of these texts that the forests were places of quietude and hermitages where there were small educational institutions. In yet other verses of the Vedas, we find the forest as wilderness, opposed to the culture of the village.

In retrieving and re-visioning the Vedas, Hindus have emphasized those sections which speak of peace and harmony. Thus, the Song of Peace (shanti path) has become popular in India and in the diaspora. Repeating a hymn composed more than three millennia ago, the Hindu devotee recites: “May there be peace in the skies, peace in the atmosphere, peace on Earth, peace in the waters. May

the healing plants and trees bring peace; may there be peace [on and from] the world, the deity. May there be peace in the world, peace on peace. May that peace come to me!" (Yajur Veda 36.17)

The quest for a unifying truth is a distinctive feature of the Upanishads, and recurs in Hindu philosophical traditions of later centuries. In the Mundaka Upanishad (1.1.3), the one who seeks the truth phrases his question: "What is it that being known, all else becomes known?" Knowledge, both of nature and the spirit, is all swept into a unified category. The dualism between matter and spirit seen in some philosophical schools – both in Indian and Western thought – is not explicit in the Upanishads.

The Vedas, considered absolutely transhuman by the many Hindu traditions, are termed *sruti* (that which was heard). However, the literature that was composed after their period, starting approximately around 500 B.C.E., was acknowledged as human and loosely called *smṛiti* (that which is remembered). Though of human authorship, the material called *smṛiti* was nonetheless considered inspired. And while this literature has been theoretically of lesser authority than the Vedas, it has played a far more important role in the lives of the Hindus for the last 2500 years. Sometimes this category is divided into the epics (*itihāsas*), ancient stories (*purāṇas*), and codes of law and ethics (*dharma śāstras*). The term *smṛiti* can also mean the codes of *dharma* alone.

The two epics, the *Ramayana* (Story of Rama) and the *Mahabharata* (Great Epic of India), have been the best-known works within the Hindu tradition. The narratives, both in the Sanskrit and the many vernacular, and the many folk versions, have been memorized, recited, sung, danced, enjoyed, and experienced emotionally, intellectually, and spiritually for the last 2500 years. These texts have largely been transmitted through the performing arts and through oral tradition. Invariably the narration of the epics is the first and most lasting encounter that Hindus have with their texts. It is in these texts that we find an enormous wealth of materials on the glory of the natural universe, the conservation of resources, as well as the cycles of time.

The *Bhagavadgita* (sometimes rendered *Bhagavadgītā*) was probably written around 200 B.C.E. or during the following centuries and added to the epic *Mahabharata*. It is frequently printed separately, and many people have a copy of this sacred text or know parts of it by heart. In the *Gita*, Krishna instructs his cousin Arjuna (who is generally understood to be any human soul who seeks spiritual guidance) on the nature of the human soul, God, and how one can reach liberation.

In verses that are still recited at a Hindu's funeral, Krishna describes the human soul as being beyond the reach of human senses and thought; it is not affected by the sense organs or physical nature and is removed from it. Just as a human being casts off old clothes and wears

new ones, so too does a soul discard bodies and assume new ones. Thus the soul inhabits bodies that are born and that die. This continues through the ages until the soul is finally liberated from the cycle of births and death. The soul does not die when the body dies; it is never born and never killed. According to some Hindu theologians, the *Gita* clearly demarcates the line between the "physical" part of the human being and the "soul" – a distinction that becomes well discussed in Hindu schools of philosophy. When Arjuna is not quite clear about Krishna's claim to be God incarnate, Krishna reveals his own cosmic form, which is only visible to Arjuna's divine eye. In this vision, the entire universe makes up the body of Krishna and the concept is elucidated several centuries later by the philosopher Ramanuja (1017–1037).

Starting around 300 B.C.E. and continuing until a little after 1000, books known as the *Purāṇas* were composed. The word *purāṇa* means "old" in Sanskrit; the *Purāṇas* dealt with old tales. These devotional books, whose use was not limited to the priestly caste, are well known. The *Purāṇas* praised deities that had become important in the Hindu pantheon. The chief deities of the *Purāṇas* are Vishnu, Shiva, and the goddess Parvati (also known as *Devī*) in their many manifestations.

Vishnu

One of the most important deities in the Hindu tradition, Vishnu ("all pervasive") has been worshipped in various forms since the time of the *Rig Veda*. Considered by his devotees to be always united with the goddess Lakshmi who is portrayed as seated on a full-blown lotus flower, Vishnu is portrayed as the creator, protector and destroyer of the universe.

Iconographically, Vishnu is usually depicted as standing, as sitting majestically on a throne, or as reclining on a serpent called *Ananta* (Infinity). In the last form, Vishnu, who pervades all of creation, is couched in the coils of infinite time, showing his dominion over space and time. Vishnu, like most Hindu deities, has several arms, each holding a specific symbol. They are said to indicate the deity's omnipotence as well as their characteristics, symbolized by the objects they hold in their hands. Vishnu usually holds a conch, a flying wheel, a mace and a lotus flower. As with all other objects connected with deities, some devotees hold that these items have symbolic meaning: the conch is said to depict space and the wheel portrays the cycle of time. Vishnu is portrayed as being dark blue in color, the color of a rain-filled cloud. Just as the cloud drenches the Earth with life-giving rain, Vishnu is said to shower his devotees with grace.

Hindus believe that Vishnu has several incarnations (*avatāra*); he comes down to Earth aeon after aeon in animal and human form to rid it of evil and establish *dharma* or righteousness. One of Vishnu's incarnations is as a fish, to save Manu, the primeval man, from the flood.

This story was originally seen in the Vedic literature, but is expanded now in the Puranas. It focuses on Manu, the progenitor of all human beings. While bathing in a lake, he finds a small fish in his hand. The fish speaks to him and asks him to take it home and put it in a jar. The next day, it has expanded to fill the jar, and Manu is asked to put it in a lake, and eventually when it outgrows it overnight, into a river and then the ocean. The fish, who is really Vishnu, then tells him that he is to build a boat, put his family in it, along with the seven sages and “the seeds of all the animals.” Manu does as he is told. When the floods sweep the Earth, the fish asks him to harness the boat to its horn and they ride the waves. Thus he and those on the ship survive the flood. This story is reminiscent of some of the flood myths in other religions and is set in a frame of periodic destruction and re-creation of life forms.

Some Hindu texts speak of Vishnu having ten incarnations in this cycle of time. Nine of these are said to have already happened. Of them, the fish is the first. The seventh incarnation is as Rama, the hero of the epic. In some versions of the narratives, his eighth incarnation is as the Buddha, who according to some interpreters diverted people from Hindu teachings but according to others gave an important place to nonviolence as an ethic. The tenth incarnation is to come at the end of this cycle of creation of the universe. Some twentieth-century interpreters see in the list of ten incarnations (fish, tortoise, boar, half-man/half-animal, a dwarf, a warrior, and then the full man Rama, followed by Krishna, his older brother and finally the destroyer of evil, Kalki) as illustrating Darwin’s theory of evolution. Vishnu’s incarnations from a water animal to an amphibian, land animal and so on are said to be depict evolution through narratives. It must be remembered, however, that the sequencing of the lists changes in several texts.

The Earth Goddess is prominent in both the Hindu and Buddhist traditions. Known as Bhu-Devi, and sometimes as Prithvi, Dharini, Vasudha, or Vasundhara, she bears all life forms and nourishes them. In the Hindu tradition, she is seen as a beloved consort of Vishnu and is iconographically depicted as being on his left side in many south Indian temples. Lakshmi or Shri, the goddess of good fortune is on Vishnu’s right. In many of the Puranas, it is this goddess, who, unable to bear the grief rendered unto her, appeals to Vishnu for succor. It is these kinds of narratives that usually frame the longer stories of how Vishnu descended to Earth and incarnated himself.

Shiva

Like Vishnu, Shiva emerged as a great god in the post-upanishadic era, but unlike Vishnu, he did not become the important focus of a doctrine of consecutive incarnations.

The icon of the dancing Shiva – the king of dance or Nataraja – is one of the best-known pieces of Hindu art in India and in Southeast Asia. The drum that is sounded

before he dances is like the recitation of Om, the most sacred syllable in the Hindu tradition. The icon of the dancing Shiva is said to embody five functions – creation, preservation, and destruction; concealment of the truth and the granting of salvation. The first verse of the Abhinaya Darpana, a well-known book of dance says: “his limbs are the worlds, his songs are the languages of universe, his clothes are the moon and the stars.” As Nataraja, the lord of the dance, he is depicted with his right hand holding the drum of creation, and his left hand holds the fire of destruction. There are other dances – in sculpture and dance he dances his omnipotence, his immanence, his omniscience; he dances time and eternity. Above all, the devotees implore him to dance in their hearts. The dancing icon simultaneously embodies and articulates one dominant Hindu paradigm of the cosmos and, to the attentive devotee, a lesson in theology.

Although the many deities are well known all over India, in most southern Indian villages and towns, they are known by (and usually, only by) a local name. Thus, Vishnu in Tirumala-Tirupati is known as Venkateswara or the lord of the Venkata Hills. Many of these places also have what is called a *sthala purana*, namely, a narrative that tells one why that place is holy, what were the kinds of hierophanies that took place there, and why the deities linger there for the welfare of human beings. Each *sthala purana* is unique, even though many of them are strikingly similar and can be seen as fitting into a familiar genre. Since each story – and place – is unique, visiting one is not a substitute for another. It is this sense of the special nature of each place that gave rise to the major traditions (and now, business) of pilgrimage within Hinduism. The *sthala puranas* frequently glorify the place where the deities have revealed themselves. Some descriptions are generic, but there is also a great deal of specific detail, exulting in the local landscape and describing the flora and fauna with considerable care. The purpose of these descriptions is to praise the land in which Vishnu or Shiva or the goddess has come to live in; thus in praising the natural landscape, one is glorifying the deity. These texts serve as sources of inspiration for contemporary ecological initiatives.

Ages of Time

As noted earlier, many Hindu philosophies include the category of time under the rubric of “achit” or that which is insentient. The Puranas speak about cycles of creation and destruction of the cosmos. These cycles are known as the days and nights of the creator god (a minor deity) called Brahma. During a day (which is called a *kalpa*) there are secondary cycles of creation and destruction. Each *kalpa* is approximately 4320 million earthly years. (There are distinctions between earthly years and the much longer years of the gods.) The nights of Brahma are of equal length. The total of 360 such days and nights makes

a year of Brahma and Brahma lives for 100 years. This cycle therefore is 311,040,000 million years. After this, the entire cosmos is drawn into the body of Vishnu or Shiva (depending on which Purana one is reading), and remains there until another Brahma is evolved.

During each of his days, the creator god brings out the universe periodically and withdraws it into himself. A day in the life of Brahma is divided into 14 manavantarās, and each lasts 306,720,000 years. During the long intervals between manavantarās, the world is re-created and a new Manu or primeval man appears and begins the human race.

Each manavantara contains 71 great aeons (maha yugas), each of which is divided into four aeons (yugas). A single one of these aeons is the basic cycle. The golden age (krta yuga) lasts 4800 divine years (1,728,000 human or earthly years). During this time, dharma is on firm footing. To use traditional animal imagery, the bull of dharma or righteousness stands on all four legs. The Treta age is shorter, lasting 3600 god years, that is, 1,296,000 earthly years; dharma is then on three legs. The Dvapara age lasts half as long as the golden or krta age; it is 2400 god years long (864,000 earthly years) and dharma is now hopping on two legs. During the kali yuga, the worst of all possible ages, dharma is on one leg and things get progressively worse. This age lasts for 1200 god years (432,000 earthly years). We live in this degenerate kali yuga, which, according to traditional Hindu reckoning, began around 3102 B.C.E.

There is a steady decline through the yugas in morality, righteousness, lifespan, and human satisfaction. At the end of the kali yuga – obviously still a long time off – there will be no righteousness, no virtue, no trace of justice. According to many of the texts, when the world ends, seven scorching suns will dry up the oceans, there will be wondrously shaped clouds, torrential rains will fall, and eventually the cosmos will be absorbed into Vishnu. The Puranas deal with astronomical units of time; the age of the Earth and of the human being is infinitesimally small in relation to the aeons of time the universe goes through.

The Epics and Puranas give detailed narratives of the periodic and cyclic destruction of the world. By the beginning of the third eon, things are perceptibly going awry. The Kurma Purana (1.27.16–57) says, “Then greed and passion arose again everywhere, inevitably, due to the predestined purpose of the Treta [Third] Age. And people seized the rivers, fields, mountains, clumps of trees and herbs, overcoming them by strength” (in Dimmitt and van Buitenen 1978: 39). That is just the beginning of the decline in virtue and behavior. The epic Mahabharata (c. 500–200 B.C.E.) is graphic in the portrayal of the events at the end of the fourth – and worst – aeon and what happens after a thousand such ages. At the end of the aeon the population increases; there is a stench everywhere. The

“natural” order of things becomes sluggish; the cows will yield little milk, and the trees, teeming with crows, will yield few flowers and fruits. The Brahmins – the priestly class – it is said, will plunder the land bare for alms. Householders, out of fear of the burden of taxes, will become thieves; students who should normally work on virtues like non-attachment will be false with greed for possessions. At the end of a thousand aeons, the text continues, there will be a drought of many years and all creatures will starve. The fire of destruction will rage and large clouds will rise up in the sky. The epics pessimistically say that all humans will become “omnivores” and barbarians and naturally cruel. They will destroy parks and trees and the lives of the living will be ruined in the world (van Buitenen 1978: 586–9, 595–6).

These destructions are portrayed as cyclical and periodic; it almost seems that the events are inevitable and in some way predestined. However, many Hindus tend to take these notions of time in a metaphoric way. More literal interpretations place the beginning of kali yuga around 3102 B.C.E. It should also be noted that although these cataclysmic events are forecast, almost all theologians and philosophical texts insist on the importance of a free will for human beings and give them full agency.

There are also several texts which speak about correct human behavior. These offer advice and a large toolbox of strategies which have been deployed to avoid conflict and promote nonviolence. The Mahabharata, one of the most important texts in the Hindu tradition, focuses on a civil war, but the line that lingers in our consciousness is “ahimsa paramo dharmah” (nonviolence is the highest virtue). The Mahabharata also speaks about the eternal dharma (sanatana dharma), the virtues that should ideally exist in all human beings. Here too, it is nonviolence that is valorized: “Lack of enmity to all beings in thought, word, and deed; compassion and giving; it is these which form the eternal dharma” (Santi Parva – the section on peace, Mahabharata).

Dharma and Artha Texts and Practices as Environmental Resources

The many texts which focus explicitly on dharma or righteous behavior were composed in the first few centuries of the Common Era. Many sections of the epics Ramayana and Mahabharata and the Puranas also focused on dharma. Other scriptures have encouraged the planting of trees, condemned the destruction of plants and forests, and asserted that trees are like children. In this context, a passage from the Matsya Puranam is instructive. The goddess Parvati planted a sapling of the Asoka tree and took good care of it. She watered it and took care of it and it grew well. The divine beings and sages came and told her:

O [Goddess] . . . almost everyone wants children. When people see their children and grandchildren,

they feel they have been successful. What do you achieve by creating and rearing trees like sons . . . ? Parvati replied: "One who digs a well where there is little water lives in heaven for as many years as there are drops of water in it. One large reservoir of water is worth ten wells. One son is like ten reservoirs and *one tree is equal to ten sons (dasa putra samo druma)*. This is my standard and I will protect the universe to safeguard it . . ." (*Matsya Puranam*, chapter 154: 506–12).

The words of Parvati seem relevant even today. Trees are said to offer more than aesthetic pleasure, shade, and fruits. They are vital to maintain our ecosystem, our planet, our well-being, and Parvati extols them by saying they are comparable to ten sons. The main Puranas, texts of myth and lore, composed approximately between the fifth and tenth century C.E. have wonderful resources on trees. The Varaha Purana says that one who plants five mango trees does not go to hell, and the Vishnu Dharmottara (3.297.13) claims that one who plants a tree will never fall into hell. The Matsya Purana also describes a celebration for planting trees and calls it the "Festival of Trees" (Kane 1958: 415).

Just as the planting of trees was recommended and celebrated, cutting them was condemned by almost all the dharma shastras. Kautilya Arthashastra (ca. fourth century B.C.E.) prescribes varying levels of fines for those who destroy trees, groves, and forests. Kautilya said:

For cutting off the tender sprouts of fruit trees, flower trees or shady trees in the parks near a city, a fine of 6 panas shall be imposed; for cutting off the minor branches of the same trees, 12 panas, and for cutting off the big branches, 24 panas shall be levied. Cutting off the trunks of the same shall be punished [with a fine between 48–96 panas]; and felling of the same shall be punished with [a fine between 200–500 panas] . . . For similar offenses committed in connection with the trees which mark boundaries, or which are worshipped . . . double the above fines shall be levied (in Shamasastri 1967: 225).

Despite such exhortations, there has been massive destruction of trees in India. This has been particularly true in the twentieth century when, in the deforestation that has occurred in the Himalayas and in the Narmada basin, there has been a tragic transgression of dharma in the destruction of national health and wealth. Some temples are now in the forefront of the "afforestation" (re-forestation) movements, urging devotees to plant saplings.

Aspects of Nature

Although the philosophy of Ramanuja may not be well known to the larger Hindu population, it is most definitely

true that most Hindus perceive divinity in many aspects of nature. Many animals, snakes, mountains, rivers, trees, indeed the entire universe, pulsates with something divine. Some Hindus personify natural phenomena as divine; others think of them as having presiding deities. Although the divinity is considered invested in some natural phenomena and habitats, it does not follow that these are not used or abused. As with many religious traditions, there is dissonance between perception and behavior.

Sacred Animals

Many deities are connected with animals, birds, and/or plants. Elephants are considered to be omens of auspiciousness; they are connected both with the goddess Lakshmi and with the deity Ganesha. Lions and tigers are associated with the goddess Durga; still, they are hunted and killed. The Garuda bird, which is like the eagle, is a mount of Vishnu and held to be sacred. Almost all south Indian Vishnu temples have a shrine for this bird. Hanuman, a divine person who was born as a monkey, is the paradigmatic servant of the god Rama. There are other animals and birds that are sacred, but it is only the cow that is not killed and consumed.

Cows have been revered for the last two to three millennia and most Hindus do not eat beef. Some scholars interpret early Vedic texts as saying that cows were consumed; others consider this to be a misinterpretation. Certainly, in the last two millennia, the cow has been seen as an animal worthy of veneration, an animal that symbolizes everything good in nature, and as an animal symbolic of the maternal giving of the deities Vishnu and Lakshmi. Some Hindus think that by venerating the cow they are symbolically venerating all living creatures. Others believe that the cow is the ultimate "giving" animal; its products and hide can be used in many ways.

It is for very different reasons that the naga or snake is venerated. In many villages and in many quiet places in the cities, there are sacred trees that have a simple platform built around them. Under the trees may be many small stone images of intertwined snakes. These serpent images are venerated with red spots of kum kum powder that is used to adorn the forehead of women, or used in worshipping the goddesses. Women come to these open-air shrines to worship at particular times of the year, or when they need a wish to be fulfilled. The serpents, called nagas, may well be one of the earliest features of the Hindu tradition. Hindus think of nagas both as serpents and as having human characteristics. Epics mention groups called Nagas and it is possible that snakes were tutelary deities for them. Hindus in many parts of Kashmir, Nepal, and other areas consider themselves as having Naga ancestors. Similar stories are found in the Hindu kingdom of Kambuja-desha (Cambodia) where the people thought of themselves as having been descended from the Nagas. Snake imagery is still dominant in the Cambodian

countryside. Nagas are said to have powers that human beings do not have and are considered worthy of veneration and protection.

Sacred Mountains and Rivers

Many of the mountains and rivers are personified and venerated in Indian culture. Mountains are generally considered male, though there are some exceptions such as Nanda Devi in the Himalayas. The goddess Parvati, whose name means “born of the mountain” is a much-beloved goddess who is also called “vanaja” or born of the forests. These mountains and rivers are glorified in the many sthala puranas or texts which speak about the sanctity and mythical history of a place. Hills such as the ones in Tiruvengadam (Tirumala Tirupati in South India) were thought of as so sacred that there are stories of how holy teachers climbed them on their knees just so that their feet would not sully the sacred soil. Many mountains such as Kailasa – thought of as the abode of the deity Shiva – in the Himalayan range are places of pilgrimage.

The towers of the temples are frequently compared to mountains. The inner shrines of Hindu temples, known as the “womb house” or garbha griha are the caves which served as houses of worship. But more importantly, it is not just any mountain to which temples are compared – many Hindu and Buddhist temples are modeled after Mount Meru, which is believed to be the center of the universe. The largest and most famous example of this correlation is the Angkor Wat in Cambodia.

Rivers such as Ganga, Kaveri, Godavari, and Narmada are much venerated by devotees, both as rivers and as goddesses. In many south Indian temples, the river goddess Kaveri is present in the inner shrine. Many rituals are also associated with the river. For instance, in the Tamil month of Adi (July–August), when the river Kaveri is turbulent because of the monsoons, she is considered to be pregnant, and many local residents who live by her banks in the state of Tamilnadu picnic on the banks of the river and offer food to her. Veneration and rituals to river and mountain deities can thus be very personal.

By bathing in the great rivers of India, one is said to be both physically cleansed and morally purified of one’s sins (papa), which are destroyed. Moreover, one acquires merit or auspiciousness in this way. A story popular in oral tradition makes the point:

A king goes to sleep on the banks of the River Ganga. When he wakes up in the middle of the night, he sees some women covered in filth taking a dip in the holy river. They emerge from the river cleansed and then disappear. The king returns on several nights and sees the same thing. Eventually he asks them who they are; they reply that they are the embodiments of the rivers of India. Everyday,

they tell him, human beings bathe in the rivers and their sins are absolved by that act. The rivers – embodied as women – absorb the moral dirt and then come to the Ganga, the grand purifier, to purify themselves.

Variations on the story say where the Ganga goes to get herself purified, although it is generally assumed that she needs no purification. In stories that extol the river Narmada, Ganga goes to bathe in that river. In a metastory, ascribed to oral tradition, she goes to bathe in the holy city of Prayag (modern Allahabad) to absolve herself of the moral filth. The story obviously praises the sanctity of Prayag, but ends up being a circular narrative because the holy city itself gets its importance because the Rivers Ganga and Yamuna meet there.

The generic version of the story distinguishes between two kinds of dirt – moral dirt or sin, known as papa in Sanskrit, is perceptible as physical dirt in the bodies of the river. The story, therefore, makes a direct connection between morality and physical pollution, a connection that is dominant as we saw initially in the *fin de siècle* myth. In addition to moral and physical purity, one may also note that in other Hindu contexts there is a third kind of purity: ritual purity. When one bathes in them, rivers and other bodies of water may bestow the pilgrim and his/her clothes with ritual purity. Ritual purity encompasses physical purity, but as Kelly Alley has explained, all that is physically clean is not ritually pure. Even if a person is physically and ritually clean, the mere association with people and garb which are deemed ritually unclean or impure may be contagious and polluting.

Many families keep a small jar of Ganga water in the shrine to use when someone is dying. The holy water is then sprinkled on the dying person. After death, the body is cremated and the ashes are immersed in any body of water. Some families may preserve a small amount of the ashes of a dead person to be immersed in the Ganga at a later time. The waters of these rivers are also brought to various continents and mingled with the waters of local rivers, and used to consecrate newly built temples. So important are these rivers that Hindus who migrated to Southeast Asia in the first millennium considered local rivers such as the Kbal Spean in Cambodia to be like the Ganga. In late twentieth century, Hindus in the diaspora have used rivers like the Thames in London as local substitutes for the Ganga.

Although there is strong belief in the religious purity of the rivers, from an environmental perspective they have become severely polluted. In light of accelerating rates of environmental degradation, the story relating the need of rivers to cleanse themselves has become particularly poignant. The desire for consumer goods and quick profit has led to a rapid industrialization and release of toxic waste in the rivers. Due to overpopulation and the lack of

basic sanitary facilities, the sacred rivers have become latrines, despite injunctions in the dharma texts against such behavior. The rivers, which are supposed physically, morally, and ritually to purify human beings, now reflect adharmā: unrighteous behavior. Devotees' belief that the rivers are intrinsically pure, moreover, works against the cleansing of the rivers, for some people believe that they cannot really be polluted.

Sacred Forests, Trees, and Groves

While the texts praised the planting of trees, temples tried to exemplify the practice of venerating them. Almost every temple in south India dedicated to the gods Shiva or Vishnu, or to a manifestation of the goddess, has a *sthala vriksha* ("the tree of a [sacred] place"), a particular tree that was sacred to that area. This is the "official" tree of the temple and is usually a grand old specimen that is surrounded by a beaten path used for circumambulation by pilgrims and devotees. Early Tamil texts such as the *Ahananuru* and *Purananuru* (first–second century) affirm the sacrality of trees. Many temples in south India have sacred temple trees that have been venerated by the local devotees for centuries. Such sacred temple trees stand symbolically for other trees, all of which are worthy of respect.

The sacred temple tree is generally venerated by women; it is adorned with colored thread, scarves, red and yellow kumkum and turmeric powder. Lamps are waved in front of the tree and acts of ritual adoration are occasionally performed. Despite this worship, all trees are not necessarily considered to be major deities or divinities; they are like the cow and some other sacred animals, recognized to be essential providers for and sustainers of human life. Planting of trees in temples has been a latent ideal in many communities. Now, in the light of extensive destruction of trees, many temples in Andhra Pradesh and Tamilnadu have revitalized the custom of planting trees within their precincts.

References to various trees in the epics and Puranas as well as the practice of worshipping the deities with plants and leaves sacred to them have inspired some activists to grow "sacred plants." Research by some of these activists has led to the identification of dozens of varieties of plants and trees in the holy texts, and many have learnt a new respect for forests and trees.

The religious significance of plants is also related to their healing properties, which are emphasized in many texts and healing practices. The medicinal texts of *Ayurveda* ("the knowledge of [long] life"), for example, find that trees have medicinal qualities. The neem tree was one of the most useful in this regard. Its twigs are used as tooth brushes in rural areas, its leaves are used to treat skin ailments, and the tree as a whole is said to have antibacterial properties. Many of these claims are now being scientifically tested. Plants and herbs in India were also

used for digestive and respiratory ailments, and were therefore regularly planted and nourished. As early as the time of King Ashoka in the third century B.C.E., there are rock edicts urging the planting of medicinal and herbal plants and trees all over the empire. The Second Major Rock Edict of King Asoka (who reigned 269–232 B.C.E.) says that medicinal herbs which are useful to human beings and animals are to be planted everywhere along with various kinds of plants and trees. This king also had wells dug and trees planted on the roadside to help travelers and pilgrims.

Trees and groves are also seen as the habitats of semi-divine beings known as *yakshas* and *yakshis*, who, when disturbed from their natural habitats, may cause problems to local human residents. Many groves were left undisturbed in the past because they were considered homes of these beings and it was thought that felling the trees and plants would render these beings, animals, and birds, homeless.

The Eight Cardinal Directions and Building Structures

Many Puranic texts speak about the *ashta dik* or the eight directions. The eight directions are spoken of in many contexts. Each one of the directions has a guardian (*dik pala*) who is venerated. Sometimes the directions figure as part of the rhetoric used to praise a hero or heroine who is said to have conquered lands in all the eight directions. The potential and power said to be inherent in each of the directions is also discussed in texts and observed in practice. Thus, the east is frequently associated with everything good; many temples face this direction. The west is also good and many Vishnu temples face this direction. The south is considered to be associated with death. The northeast is one of the best directions; the north has the potential to increase one's fortune. The directions also have presiding deities; Agni, the fire god, for instance, presides over the southeast. Frequently, he is portrayed in carvings in the southeast corner of temples. When applied to the function of the buildings, these concepts translated to placing of rooms in particular directions, so as to magnify and harness the potential of the Earth. Thus, the kitchen in a home, or the halls for fire sacrifices, were frequently built in the southeast part of the structure because Agni, or Fire, presided over this direction.

Many temples in India and in Southeast Asia were aligned very specifically in certain directions, to maximize the perceived power of the land and the directions. While a lot of this was based on various conceptual belief systems, some temples were precisely aligned with the planets and the stars to serve as giant calendars or perhaps even observatories. This is not immediately evident in Indian temples today because, as with many structures, they have been added upon and rebuilt over the centuries, but has been abundantly shown in recent research by Eleanor Mannikka on temples like Angkor Wat. The orientation

of these buildings and the shape of the structures have historically been connected, as in many cultures, to notions of space and time. Angkor Wat may have served as a giant calendar and or astronomical calculator, tracking the movement of various planets.

Hindu temples were considered to be bodies – some say of the cosmic person, some say of a giant being, some say, of a human being. The temple could be the body of God or the cosmos. But the concept most pervasive in Hindu popular cultures is that of the vastu mandala, a specific geometric grid of 64 or 81 squares in which we find the body of a person of somewhat ambivalent disposition, neither human nor divine, called the Vastu Purusha, who lies on the ground on which we build our homes, our businesses, and temples. The legends are not very clear as to whether he is good or is an asura, a demon. The stories say that this being fell into Earth and, to vanquish him, the many celestial beings – devas – jumped on him and pinned him to the ground. The head is to the east; this is the most auspicious direction; and the figure of this person is fitted into the square of the extended universe. The mandala and the form of this Vastu becomes “a diagrammatic field of co-ordinates, intersections and diagonals [and] is sensitive to any interference with its order and in this respect it functions like the subtle body of the human being.” Such constructions have wide currency in Indian thought where they are said “to signify the universal law as a working entity” (Kramrisch 2002: 71). The body is said to be a place of coordinated activity where each part is the seat of a special function. Such coordinated function is made factually and repeatedly in Brahmanical cultures and in Buddhism; in sacred texts, rituals, and works of arts. The presence of the Buddha is spoken of in reliefs in Sanchi and Amaravati (Andhra Pradesh, India) by having his footprints in the place of the feet, a tree or pillar as the trunk and axis of the body, the wheel as head and the sun-shade above it.

The many principles of vastu and geomancy govern the positioning of a house, a bed, a desk or even one's computer. The orientation of buildings to specific directions, whether east to the rising sun or to the west, informs us about the notions of the people's spatial relationship to the cosmos; their function as astronomical centers, aligned with and observing planetary and stellar movements, informs us of their calculation of time. Sacred cities and towns were built like mandalas, powerful diagrams of the universe. Hindu temples, towns, and cities tell us how human beings have experienced embodiment, conceptualized the divine, constructed social hierarchies, and aligned themselves with the natural forces of the Earth, the stars and the planets.

Planets and Stars

An integral part of Hindu religious life is one's relationship with the planets and stars. Many Hindus believe that

human beings are integrally connected with various parts of the universe, including the stars and planets. The position and relationship of these bodies are believed to affect human nature and destinies. The belief and practice of “the study of stars” (jyotisha) or astrology was a significant branch of knowledge in ancient India and considered to be a vedanga or a field ancillary to the study of the Vedas. The Indian astronomers were in contact with the Greeks and framed their knowledge in religious discourses. By about the middle of the first millennium C.E., nine planets (nava graha) were recognized. These nine planets included the sun and the moon, along with Mars, Mercury, Venus, Jupiter, and Saturn. Two other entities, called Rahu and Ketu or the ascending and descending nodes of the moon, were added to this list. Since the study was primarily on bodies which affected people on Earth, our planet was not included in this scheme. As with various other aspects of nature – mountains and rivers, for instance – the nine planets have been personified and venerated. Architects depicted them on the lintels of temples in Orissa by the ninth century. In the last few centuries these planets have been consecrated in south Indian temples all over the world, including Atlanta, Pittsburgh, Tampa, Chicago and other cities. They are arranged in a specific square format, without any of them facing each other directly – a symbolic way of showing that their orbits do not intersect.

Many Hindu communities have the birth horoscopes of infants drawn in great detail and this becomes a blueprint to guide a person through good and bad times. In certain periods of one's life, for instance, Mars or Saturn may not be in the right place. This, a Hindu may assert, can cause havoc in one's life. To minimize the negative placements of these planets, specific worship ceremonies are indicated and are carried out. Belief in astrology cuts across social class, caste, gender, and education. Highly educated Hindu communities have strong faith in the stars and planets and consider their influence on life as perfectly natural, taking this for granted as they would a force like gravity. Computer software programs now chart horoscopes and in many communities these are used as compatibility guides for marriages.

Although there have been texts and practices which extol the protection of Earth, several centuries of colonial rule, industrialization, and increasing human numbers have led to extensive pollution and denigration of the environment. Many contemporary environmental activists, both inside and beyond India, view Hindu religious culture as a valuable resource for responding to this crisis.

Hindu Philosophical Systems

Some environmental philosophers, particularly in the West, have seen the Hindu philosophical systems as potential resources for India's environmental crises. While these systems of philosophy are significant in some areas,

they have not inspired solutions to the environmental crises as much as the texts of dharma.

Six traditional or orthodox systems of philosophy are recognized within the Hindu tradition. The word translated as “philosophy” is literally *darsana* or “vision.” One may call these schools viewpoints or visions of reality. Some of the schools go back to about 500 B.C.E. The development of Vedanta, on the other hand, continues even now and is of considerable speculative significance in the intellectual history of the Hindu tradition.

Samkhya (“numbers” or “count”) was probably one of the earliest philosophical schools. It predates the Bhagavad Gita and is explicitly dualistic in its conceptual framework. Innumerable souls (*purusha*) are seen to be enmeshed in matter (*prakriti*). *Prakriti* is composed of three strands, which also color human attributes. These are *sattva* (purity), *rajas* (passion), and *tamas* (sloth). During creation, the five sense organs (the *functions* of sight, smell, taste, touch and sound) are derived from the notion of *ahankara*, (“i-ness” or ego) and connected with the essences of sight, smell, taste, touch and sound. These subtle essences produce the five gross elements – Earth, water, fire, air, and *akasha* (translated usually as “ether,” “space,” or “vacuum”).

Liberation of the Soul Is through its Extrication from Primordial Matter

In its liberated state, according to such philosophy, the soul is blissful in its splendid isolation. In later compositions like the Bhagavad Gita, the worldview of Samkhya-yoga is integrated into a theistic worldview. Elements of the Samkhya worldview were also integrated into Buddhism and Jainism. Yoga, the second school, was tied up with Samkhya in its philosophical framework. Yoga in its theoretical aspects is theistic in outlook, differing from Samkhya philosophy, which does not focus on a deity.

Vaisesika, one of the six schools, dealt with nine categories of irreducible principles (Earth, water, time, space, fire, etc.) constituting the universe. Vedanta (end of the Vedas) is the sixth school of philosophy and has been significant over the last 1000 years. While yoga has been overshadowed by devotion in importance, the intellectual and spiritual interpretation of Vedanta philosophy has preoccupied and continues to engage many Hindu thinkers.

Traditionally the term Vedanta was used to denote the Upanishads, the final part of the vedic corpus. But the term has more popularly been used to denote systems of thought based on a coherent interpretation of three works, the Upanishads, the Bhagavad Gita, and a text called the Brahma sutras. Vedantic philosophers wrote extensive Sanskrit commentaries on these texts; modern writers do it in English and also give oral discourses to the public, explaining particular viewpoints.

Shankara, who lived around 700, was a prominent interpreter of Vedanta. He portrayed this Earth and life cycle as having limited reality; once the soul realizes that it is and always has been Brahman, this life passes away like a dream. For Shankara, reality is nondual (*advaita*). There is only one reality, Brahman, and this Brahman is indescribable and without any attributes. Brahman and Atman (the human soul) are identical. It is because of *maya*, an illusory power that ultimately defies definition, that one believes oneself – or the universe – is different from Brahman. When this *maya* is cut through, the soul is liberated through the realization of its true nature. Liberation, therefore, is removal of ignorance and a dispelling of illusion through the power of transforming knowledge. Shankara’s philosophy, therefore denies *ultimate* ontological reality to nature and to this universe, but postulates that for people caught in the cycle of life and death, it is real.

While the “oneness” doctrine and its ecological implications are sometimes underscored by some Western philosophers, recent work by Lance Nelson shows how the *advaita* (“nondualism”) conceptual system does *not* promote eco-friendly behavior. Nelson presents overwhelming evidence that Shankara’s nondual (“oneness of all creation”) doctrine *does not* find any spiritual value inherent in nature and ultimately expresses a functional dualism. He demonstrates that this philosophy actually devalues nature and concludes that this “is not the kind of nondualism that those searching for ecologically supportive modes of thought might wish it to be” (Nelson 1998: 65). In addition to what Nelson says, it is also important to note that the oneness is only in the state of liberation and not when one is trapped in the sea of life and death. Thus, arguments that Hindus *ought* to value nature because ultimately there is a sense of non-difference do not really hold much weight, because the reality of nature and the physical universe is ultimately denied when one is liberated. We should remember, however, that Shankara’s interpretation is only one of several schools of Vedanta.

Ramanuja (ca.1017–1137) was the most significant a interpreter of theistic Vedanta for the Sri Vaishnava community of south India. For Ramanuja, Vishnu is immanent in the entire universe, pervading all souls and material substances, but also transcending them. Thus, from a certain viewpoint there is only one reality, Brahman, but from another, one may say that Brahman is qualified by souls and matter. Since the human soul is the body (*sharira*) and the servant (*sesha*) of the Supreme Being, liberation is not portrayed as the realization of identity between the two. Rather, it is the intuitive, total, and joyful realization of the soul’s relationship with the lord.

The elaboration of this philosophy, where the universe is understood as the body of Vishnu, is found in the many texts of Ramanuja and his followers, according to John Carman. According to Ramanuja, the universe, composed

of sentient (*chit*) and non-sentient stuff (*achit*) forms the body (*sharira*) of the Vishnu. Just as a human soul (*chit*) pervades a non-sentient body (*achit*), so too does Vishnu pervade the souls, the material universe, and Time. Vishnu-Narayana is inseparable from Shri-Lakshmi, the Goddess. According to the Sri Vaishnava theologian Vedanta Desika (1268–1368), both Vishnu and Shri pervade the universe together; the universe is their body. It is important to note that in this philosophy, it is *not* the case that the material universe is female and the transcendent god is male; together, the male and female deities create and pervade and yet transcend the universe. What the body-soul metaphor translates to in devotional praxis for Ramanuja and Vedanta Desika is that human beings and the entire natural universe are the body of Vishnu and Shri; they are owned and supported by them. However, while the devotional songs emphasize the drama and engagement of interpersonal relationships between the deity and the devotee, the philosophical underpinnings of the universe as the body of the deities has been practically unknown, except among a few philosophically learned people in the Sri Vaishnava traditions.

Tantra

The component of the Hindu tradition that is termed Tantra is hard to define, partly because it is portrayed differently by its advocates and its detractors. Essentially it centers on a body of ritual practices; some of these have been integrated into the larger devotional universe of the Hindu traditions, while others are considered by many Hindu communities as socially unacceptable. Tantra, which etymologically means “loom,” began to gain importance in the Hindu and Buddhist traditions around the fifth century. The tantric tradition influenced many sectarian Hindu movements; Shaiva and Vaishnava temple liturgies, still practiced, are in large measure derived from tantric usage. For example, when the images of the deities are installed in temples, large geometric drawings (*mandalas*) representing the god or goddess and the entire cosmos are drawn on the floor and used as a tool for meditation and ritual.

The tantric tradition advocated its own form of yoga, known as kundalini yoga. Kundalini refers to the shakti or power of the Goddess, which is said to lie coiled like a serpent at the base of one's spine. When awakened, this power rises through a channel passing through six cakras or “wheels” to reach the final center located under the skull. This center is known as a thousand-petalled lotus. The ultimate aim of this form of yoga is to awaken the power of the kundalini and make it unite with Purusha, the male Supreme Being, who is in the thousand-petalled lotus. With this union, the practitioner is granted several visions and given psychic powers. The union leads eventually to final emancipation. In some tantric texts, the Goddess is identified with prakriti or material nature.

Theological Resources for Social Problems

The many Hindu theological texts and philosophical systems (*darsanas*) do contain engaging accounts of reality, which, could serve as important resources for several social and moral problems. The Hindu traditions have competing and intersecting worldviews recommending specific behavior patterns. In some Hindu philosophical systems, these are arranged in a chronological fashion – thus, it was mandatory for a male from one of the so-called higher castes to be celibate and not earn a living while he was a student, but when he got married, it was the norm to procreate, earn money and so on. In his later years, he had the option of becoming a forest dweller (not too many did) or monk, to be engaged in the study of theological texts which would guide him to his liberation from the cycle of life and death. As a householder, goals such as dharma, money and power, and sensual pleasure were important; as he focused on his liberation, he would be encouraged to understand and experience the *tattva*, the categories of reality posited in the texts of liberation (*moksha*). In theory, these stages were not available for women and the so-called lower castes, but in practice, most men did not become students and stopped at being householders.

There are many meanings for *dharma*. In some of its manifestations it is concerned with *loka sangraha* or the welfare of human beings. Dharma refers to many topics including notions of righteousness and duty as well as virtues such as gratitude and compassion, which are thought of ideally as common to all human beings. The texts on dharma also form the basis for formulating parts of Hindu family law in India. Moksha, on the other hand, refers to liberation from the cycle of life and death. While in some philosophical traditions, doing one's dharma or duty led to moksha, in other cases, the dictates and norms of dharma to sustain society (beget children, earn money) could be seen as binding one to the cycle of life and death and as tugging in a direction away from liberation. The pathways to liberation included meditative and reflective paths focusing on control of the human body and mind as well as intellectual and emotional devotion to the deity of one's choice. Detachment from everyday life – even while living in the midst of the world – was an integral part of the enterprise.

The texts that deal with moksha or liberation are generally concerned with three issues: the nature of reality, including the Supreme Being and the human soul; the way to the supreme goal; and the nature of the supreme goal. Generally the nature of reality/supreme being is called *tattva* (truth) and corresponds to the term “theology” or “thealogy.” These texts do not focus much on ethics or righteous behavior in this world; that is the province of dharma texts. The theological texts or sections that deal with *tattva* focus on weaning a human being from the earthly pursuit of happiness in favor of what they

consider to be the supreme goal of liberation (*moksha*) from this life. It is important to keep this taxonomy in mind, because *theological doctrines do not necessarily trickle down into dharmic or ethical injunctions; in many Hindu traditions there is a disjunction between dharma and moksha*. Some scholars, such as Johannes van Buitenen, see a fundamental opposition between them; while dharma involves the ordering of society and the centering of the human being, liberation may be considered to be an abandonment of the established order, not in favor of anarchy, but in favor of a self-realization which is precluded in the realm of dharma. Other scholars, including Daniel Ingalls, disagree with the sharp nature of the cleavage described by van Buitenen but acknowledge that there have always been some religious leaders who have insisted on the contradiction between dharma and moksha. This disjunction between dharma and moksha is marked in Hindu literature and communities. Dharma texts promote righteous behavior on Earth and moksha texts encourage one to be detached from such concerns. A few texts like the Bhagavad Gita have tried to bridge dharma and moksha paradigms.

Thus, a theology that emphasizes the world as a body of God, a pervasive pan-Indian belief that Goddess Earth (Bhu Devi/Vasundhara/Prithvi) is also a consort of Vishnu, or the notion that the Mother Goddess (Amba, Durga) is synonymous with nature (*prakriti*), does not necessarily translate to eco-friendly behavior. Likewise, renunciation, celibacy, and detachment are laudable virtues for one who seeks liberation from the cycle of life and death, but the texts on dharma say that begetting children is necessary for salvation. These bimorphic worldviews have to be kept in mind if we are to see the relevancy of philosophical viewpoints such as deep ecology for the Hindu traditions. On another front, the dissonance between dharma and tattva/moksha texts also accounts for how some Hindu traditions hold the Goddess to be supreme while women do not always have a high position in society. It is true that some theological/tattva texts speak of certain kinds of “oneness” of the universe and in some cases, of the equality of all creation. Some tattva texts speak of the oneness of creation and the Creator, and the absolute identity between the Supreme Being (Brahman) and the human soul (*atman*) – a oneness which transcends the concept of “equality of many.” This philosophical system of nonduality is considered an important resource for environmental ethics by some Western philosophers, who have interpreted the idea presented in *some* schools of Hindu philosophy – that there is ultimate oneness of creation – as an affirmation of continuity between human beings and all other life forms. They surmise that because Vedanta philosophy maintains that all life is one, there must be a natural reverence for all things. This generalization, however, does not hold true on two fronts; first, the “oneness” of the universe is a concept seen only in one

school of Vedanta (that of Shankara) and secondly, this oneness is only seen when the soul is liberated from the cycle of life and death.

Thus, in Hinduism, the philosophies of Shankara and Ramanuja are relevant to those who seek liberation and are not seen as guides to everyday behavior. Hindu communities, customs, and traditions are ordinarily not established on the sense of oneness or equality found in moksha, but on many hierarchies based on gender, caste, age, economic class and so on. Hindu institutions and eco-activists have therefore found more resources in the narratives found in the dharma texts.

Thus, although some tattva texts contain rich resources for the problems of ecology, population, and consumerism, in the Hindu contexts they have limited power over ethical behavior. While logically the theological/tattva texts ought eventually to translate to human action, the timeframe for such connections would probably be rather long. Texts of dharma, on the other hand, function like law codes in some countries – sometimes not known by the subjects, sometimes followed, sometimes flouted, sometimes ignored, sometimes evaded, sometimes taken to heart as the right thing to do to maintain social stability.

Environmental Activism in the Contemporary Period

In India there has been a fairly long, though sporadic, history of environmental activism. One of the most famous has been the faith of the Bishnoi; and in recent years the Chipko movement and the Narmada Andolan have become well known. The Bishnoi tradition – or as some call it, the eco-religious revolution – was started around 1485 in Samrathal Dhora (north India) by Jambho-ji (b. 1451). Jambho-ji was said to have been influenced by the pastoral life led by the deity Krishna and is believed to have preached his faith for about 51 years. Of the 120 sayings credited to him, 29 (“bish-noi”) directives are said to be particularly significant. Many adherents today interpret these teachings as promoting biodiversity and the protection of trees.

Some temples like the one at Tirumala Tirupati in south India – the largest and richest temple complex in the country – have also encouraged eco-activism. Billboards saying “Vriksho rakshati: rakshatah” (“Trees protect: Let us protect it” or “Trees, when protected, protect us”) greet visitors to the sacred pilgrimage town of Tirumala-Tirupati in the state of Andhra Pradesh.

The statement on the billboard is obviously adapted from the Laws of Manu which say that dharma when protected, protects us. In response to the ecological crisis in India, the Venkateswara (“Lord of Venkata Hills”; a manifestation of Lord Vishnu) temple at Tirumala-Tirupati began what is called the Vriksha (tree) Prasada scheme. Whenever a pilgrim visits a temple in India, s/he is given a piece of blessed fruit or food to take home. This is called a prasada or “favor” of the deity.

The Tirumala-Tirupati temple, which is located at an elevation of 3000 feet and was once surrounded by heavy forest, has now established a large nursery on the hills and encourages the pilgrims to take home tree saplings as prasada. But one must also remember that the Tirumala-Tirupati temple is not just any other temple; it is the richest shrine in India and carries with it a great deal of dharmic and financial clout. The nurseries of the Tirumala-Tirupati temple have many varieties of plants, both decorative and those considered to be medically useful. The saplings cultivated are suitable for the soil in various parts of India, and by planting them at home one can have a real piece of the sacred place of Tirumala wherever one lives.

Apart from this public-relations initiative, which one may call an ecology-consciousness-raising venture for the pilgrims, the T.T. Devasthanam (the official bureaucracy of the temple) has also started the Shri Venkateswara Vanabhivridhi Schemes. The Forestry department of the T.T.D. began this scheme in 1981 and it was initially called the "bioaesthetic plan." The donation made by the devotee is used for the purchase and planting of trees and plants. The donor is honored by being granted special darshan (viewing of the deity in the inner shrine) and by having his/her name displayed next to the tree that has been planted. Over 2,500,000 indigenous trees are said to have been planted on the hills and the plains as a result of this program. In support of it, the temple itself quotes relevant texts on the importance of trees and, most importantly, honors devotee-participants in this thriving program. Both in texts and in practice, the Hindu traditions and some institutions have encouraged a proactive plan in the planting and protection of trees and plants.

Environmental activists have deployed several religious strategies in the fight against the damming of rivers. Sunderlal Bahuguna, a famous environmental activist, says that damming a river is like killing it. In resisting the building of the Tehri Dam in the Himalayas, a seismic zone, he has argued that several holy pilgrimage sites will be destroyed if the dam were to break.

Most of the rivers of India are considered to be female and mountains male. There are exceptions: some rivers like Krishna have male names and some mountains like Nanda Devi bear women's names. Rivers are perceived to be nurturing (and sometimes judgmental) mothers, feeding, nourishing, quenching, and when angered, flooding the Earth. Hindu girls in India are frequently named after rivers. Rivers are personified as deities. River Ganga is sometimes portrayed as a consort of Lord Shiva. In the south, Kaveri Amman (Mother Kaveri) is the name by which the river is fondly addressed. Hundreds of girls born in the area of Coorg, where the Kaveri has her source, are named after her. In the plains of Tamilnadu, Kaveri is seen as a devotee and sometimes the consort of Lord Vishnu, and several temples (like Terazhundur, near Kumbakonam) have a striking image of this personified

river in the innermost shrine. In the eighth-century Vishnu temple at Tiruchera, a small village near Kumbakonam, River Kaveri is seen as in a maternal posture with a child on her lap.

In the hundreds of grassroots movements around India, leaders like Veer Bhadra Mishra and Sathya Sai Baba, institutions like the World Wide Fund for Nature, and pilgrimage sites such as Badrinath have all used religious narratives, ritual, and values of dharma as ways of successfully motivating Hindus to take action and clean up the environment, plant new trees, and value biodiversity as an integral part of their activities. In many of these movements, women have played a very active role.

Women and Contemporary Environmental Action

Beginning in the late twentieth century, activist intellectuals such as Vandana Shiva began to bring together an ecofeminist critique of gender and environment pertinent to India, comparing the denigration of the rivers to the denigration of women at various times in the history of Hindu civilization. Shiva has also eloquently and forcefully explored the ways in which women suffer as "development" destroys forests near their homes. Gruzalski summarizes such dynamics:

Deforestation, as well as replacement of mixed forests with eucalyptus or Chir pine groves, has degraded not only the environment, but also the condition of these women. They often need to spend the entire day gathering fuel and fodder, not only an exhausting task in itself, but one that makes cooking and the care of children more difficult. In addition, as the mixed forests are destroyed, springs and streams dry up and the women must go further for water. In short, the degradation of the forest environment means more work and suffering for the rural village women (Gruzalski 1993: 107).

Shiva's argument was that these are "maldevelopment" projects in which "Nature and women are turned into passive objects, to be used and exploited for the uncontrolled and uncontrollable desires of alienated man" (1988: 6), and this argument has been influential globally, especially among ecofeminists. Shiva also works on issues of hazardous wastes, biodiversity conservation, globalization, patenting and intellectual property rights (calling the profiteering of corporations from traditional ecological knowledge "biopiracy"). Often inspired by such critiques, women from diverse social classes have become environmentally active in India. It is not surprising that women, in the Chipko ("hugging trees") movement for example, have been involved in protecting trees, for they are generally the first to feel the impact of deforestation. In an important development, however, many women from more powerful classes have become influential environmental

activists in their own right, adding their own strengths to the cause.

Women have been actively and creatively involved in communicating the tragedy of ecological disasters and facilitating environmental awareness and action, sometimes using traditional religious art forms, sometimes through mainstream media and technology. Many women, for example, publish regular reports about the ecological crises in India, including ones that draw out the religious dimensions of environmental concern, as does *Manushi*, a “magazine for women and about women.”

Indian Classical Dance and Environmental Action

Awareness of ecological concerns has also been heightened through the medium of traditional Indian dance, the Bharata Natyam. The theory and practice of classical dance in India (natya shastra) is seen as a religious activity. The birth myth of the dance describes it as the fifth “veda” or sacred knowledge, one that is accessible to all human beings. In other words, dance – indeed, most performing arts – are optional ways to salvation within some Hindu traditions. In the twentieth century, classical dance has also served as a medium for a social commentary on women. Bharata Natyam is now the medium by which other social concerns are being expressed. Mallika Sarabhai, a noted dancer and feminist communicator, has choreographed many dances with environmental themes. She presents in “Shakti: The Power of Women”, the story of the Chipko movement in northern India. Through this medium, audiences around the country, urban and rural, both literate and illiterate, understand quickly the urgency of this message.

Sarabhai’s communication through this art form is not a novel example of innovative dance portraying the courage of the rural women who protect and are protected by the trees – there are other performers who focus on this socially relevant theme. Instead of performances where the central piece highlights the pining of the individual soul for God, some women performers have begun to portray ecologically sensitive messages. Dancers in the United States also have begun to dance to environmental themes.

With the growing awareness of our ecological plight, Hindu communities are pressing into use many dharmic texts and injunctions. They are drawing on the epics and *Puranas* for inspiration as they plant gardens and revive customary lore regarding the medicinal importance of trees and plants. Women, through song and dance, increasingly communicate about the ways in which environmental deterioration injures both women and nature, and call for environmental protection and restoration, sometimes engaging in direct action resistance to environmentally destructive practices. The philosophic insights of Hinduism may not have been strong enough to prevent environmental disasters, but the dharmic resources have provided rich resources for the sub-continent’s early ini-

tatives to reverse these trends and make the sub-continent green and toxic free.

Vasudha Narayanan

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See also: Ahimsa; Amte, Baba; Appiko Movement (India); Art of Living Foundation; Athavale, Pandurang Shastri; Aurobindo, Sri; Bahuguna, Sunderlal; Bhagavadgita; Bishnoi (Rajasthan, India); Buddha; Caves – Sacred (Thailand); Chipko Movement; Creation Myths of the Ancient World; Dance; Dharma – Hindu; Domestication; Elephants; Gandhi, Mohandas; Goshalas; Harris, Marvin; Hinduism and Pollution (and adjacent, River Ganga and the Clean Ganga Campaign); India; Indian Classical Dance; India's Sacred Groves; Krishnamurti, Jiddu; Mother Earth; Naess, Arne; Prakriti; Ralegan Siddhi; Re-Earthing; Religious Environmentalist Paradigm; Religious Studies and Environmental Concern; Sarvodaya Shramadana Movement; Seeds in South Asia; Serpents and Dragons; Shakti; Shiva, Vandana; Southeast Asia; Swadhyaya; Tantra; Tantrism in the West; Tehri Dam; Theosophy; Yamuna; Yoga and Ecology.

Hinduism and Pollution

The river Ganga, known to Hindus of India as *Mother Ganga*, is sacred. She is a mother, goddess, purifier and sustainer of all life. Along with the Ganga, many other rivers and mountains are considered sacred and powerful in the Hindu worldview. In fact, Hindu sacred sites in India are often located aside rivers or on top of mountains. Yet when considering the Ganga, the less faithful and followers of other religious persuasions consider the river polluted and in some reaches almost dead. To non-believers, the coexistence of sacred purity and environmental pollution appears paradoxical.

Anthropological analysis in India shows that the coexistence of sacred purity and environmental pollution is not paradoxical for Hindus who believe in Ganga's sacred purity. Hindus talking about sacred purity do not render purity and uncleanness mutually exclusive conceptual categories and conditions. Hindus consider the Ganga a goddess who possesses the power to purify all sorts of human and worldly impurities. They invoke the purifying power of "Ma Ganga" (Mother Ganga) through ritual ablutions, meditation, and worship. They understand Ganga's deep symbolic history and cite eulogies to her developed in the sacred texts – the *Ramayana*, *Mahabharata*, the *Puranas*, and *Mahatmyas*. A popular narrative, drawn from a chapter of the *Ramayana*, describes how she descended from heaven on the locks of Lord Siva.

Numerous places of healing and sacred power for Hindus are located along her 2525 kilometer traverse across northern India. In these sacred complexes, pilgrims and residents perform ablutions and undertake the ritual of arati to revere her. Devotees perform arati by waving oil lamps in front of Ganga while standing on the riverbank. The sounds of bells, gongs, drums, and conch shells also play a prominent role in focusing the devotee's attention

River Ganga and the Clean Ganga Campaign

Scientific assessments of ecological conditions made by government officials often conflict with assessments of ecology made by members of religious organizations and members of non-governmental environmental groups in India. While scientific theories use terms such as biological oxygen demand (BOD) and fecal coliform count (FCC) to indicate river-water-quality conditions, devout Hindus use notions of sacred purity and female forgiveness to talk about a river's power. In the Ganga river basin, there are marked disagreements between those claiming that the river is polluted and those claiming she is eternally pure. One particular non-governmental organization plays a leading role in bridging these radically different interpretations.

The Sankat Mochan Foundation, a religious trust in Varanasi, spearheads the "Clean Ganga Campaign" (Swatchha Ganga Abhiyan). The campaign is run by three professors who teach engineering at Banaras Hindu University and their local and international support groups. In 1982, they formed an organization called the Clean Ganga Campaign and listed it under a religious institution run by one of its principal members. They have found that the distinction between physical cleanness and sacred purity is crucial to their environmental message and they evoke it as a way to form a syncretism of Hinduism and science. The importance of this distinction is evident in their organization's name. They use the word *svaccha*, which they spell *swatchha*, to show that they are an organization concerned with physical cleanness rather than sacred purity. But campaign members are not removed from religious concerns. The leading member of the group is the head priest of a religious institution, the Sankat Mochan Foundation. This organization manages the Sankat Mochan Temple, an important Hindu temple where the saint-poet Tulsi Das received his vision of Hanuman, the monkey-god of the *Ramayana*. The leaders explain that their concern is with the impact of waste on the physical Ganga. They do not contest or seek to denigrate her eternal sacred purity. However, while they revere Ganga through worship rituals in their private lives, they do not claim to promote a revitalization of such rituals through their own organization work.

Although there is no large-scale environmental movement in Varanasi today, campaign members continue to work from their unique position bridging Hinduism and science. They engage in direct confrontation with government officials in the Ganga Project

Directorate using scientific arguments. Yet they also understand the deep religious connection to the river goddess and respect her purificatory power. However, this bridging of perspectives is not appreciated by either the Ganga Project Directorate or Hindu pilgrim priests in Varanasi. Instead, government officials and pilgrim priests appear skeptical about the sincerity of any party's desire to respect Ganga's purity or prevent her pollution. Pilgrim priests see sewage treatment plants and projects as vehicles for state moneymaking, and complain that pollution prevention work "on paper" has not made any real progress. The Clean Ganga Campaign provides scientific evidence for the argument that officials have not adequately capped the drains feeding wastewater into the Ganga. Pilgrim priests agree with this, though their evidence rests on what they consider to be temporary conditions of material uncleanness, not sacred impurity. Pilgrim priests are not active in the Clean Ganga Campaign, and appear alienated by scientific concepts that do not match up with their own worldview. All concerned citizens acknowledge that sewage treatment and public activity on the riverbank fall well short of keeping human uncleanness away from the river. But when pilgrim priests and other residents of Varanasi face the vacant meanings of scientific concepts and witness blunders in official projects, the divide between them and environmental scientists and officials widens. Bridging science, religion and official policy and practice in this context is an extremely difficult task, but the Clean Ganga Campaign members are determined to continue their efforts.

Kelly D. Alley

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on the sacredness of the river. The festivals of Ganga Dussehra and Ganga Saptami celebrate her purifying power and please her immensely. When Ganga is pleased, she blesses the faithful and purifies their minds and souls.

Hindus of the sacred city of Varanasi consider that the

following elements entering the Ganga are unclean (*gandagi*): dirty water from drains (*nalas*), industrial waste, household trash, soap from bathing and washing clothes, human excrement from "doing latrine" on the riverbank, and betelnut (*pana*) spit. Many consider that

material dirtiness and bodily wastes have only a temporary impact on Ganga, making her unclean at a particular stretch. Sacred texts and popular manuals on pilgrimage, spiritual life and good conduct communicate ideas about distancing unclean bodily functions from pure-water bodies. They direct people to distance some everyday human processes such as defecation, brushing teeth, spitting, and washing clothes from the riverbank. Yet at many sacred places that border sacred rivers, while pilgrims perform ablutions, others wash clothes with soap, a pilgrim priest spits, an old woman “does latrine” on the riverbank (for lack of public facilities), and urban sewage flows into the river. Material uncleanness surrounds the people who seek purification.

The Hindu practice of cremation on the banks of sacred rivers aims to reduce the corpse to the five basic elements of existence: fire, air, water, ether, and Earth. Hindus use the words *asuddha* or *apavitra* to describe the state of impurity brought on by corpses and cremation, and they tie these notions to ritual and cosmic order. According to Hindu concepts of death, dead bodies, *per se*, are not problematic for Ganga because she has always accepted the bodies of holy men (*sadhus*), children, lepers, and smallpox victims, who are by rule not cremated. But pilgrim priests point out that some corpses found floating down the Ganga fall outside this acceptable category. This indicates a lapse in the respect for ritual order.

Some Hindus include uncremated or partially cremated corpses in the category of dirtiness (*gandagi*) they enunciate. At first glance, dead bodies in the Ganga represent another example of how the unclean is in the immediate vicinity of sacred purity. The issue is more confusing, however, because corpses are carriers of ritual impurity as well. When mentioning uncremated bodies dumped in the Ganga, Hindus conflate notions of ritual impurity and physical uncleanness. Moreover, government officials use floating corpses as key symbols in their assessments of river pollution.

Hindu pilgrim priests firmly believe that dead bodies do not threaten Ganga's spiritual integrity. But they fear that industrial waste, or more generally dirty water from drains, may have a harmful impact over time, by making the Ganga *asvaccha* or physically unclean. Still residents insist that *gandagi* cannot alter Ganga's power to give liberation (*mukti* or *moksa*) and purify the ashes of the deceased. This power is eternal and not subject to fluctuations in material reality. As long as humans demonstrate their reverence through ritual ablution, *arati*, and other forms of worship, Ganga will remain happy. As long as she is happy, she will purify the cosmos, soul, body, and heart. But even if, in theory, Ganga's purificatory power remains eternal, Hindus who express concern about their personal health when bathing appear disturbed by *gandagi*.

Hindus also conceive of the river in feminine terms, linking femininity with motherliness, housekeeping,

clean-up, and forgiveness. Hindus will remark that Ganga, a good mother, cleans up the messes her children make and forgives them lovingly. In this way, she cleans up other kinds of dirtiness people bring to her and excuses dirty behavior with maternal kindness. Ganga is forgiving rather than angry about human dirtiness. By attributing a forgiving nature to Ganga, environmental activists argue, Hindus undermine pollution-prevention activities. Environmental activists argue that this view of sacred purity and loving tolerance leads to a passive acceptance of polluting behavior. However, these very activists understand that revising the deep religious association between water and womanhood to include human responsibility for Ganga's well-being is difficult indeed. Hindus link morality to *gandagi* but do not find that the Ganga participates in the sin-game (*pap-lila*) of humans. This means that she is unaffected by the sins of humans and not motivated toward retaliation. She did, after all, descend to Earth to wash away those very misdeeds.

Kelly D. Alley

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See also: Ahimsa; Appiko Movement (India); Bhagavadgita; Dharma-Hindu; Hinduism; India; Prakriti; Tehri Dam; Yamuna.

Hippies

The counterculture that blossomed in the Western world in the late 1960s and early 1970s had as a major theme a romantic love of nature. The hippies were sharply critical of the degradation of the environment that had accompanied the development of industrial and technological society. The seeming human desire to master nature was, the hippies argued, a fatal mistake; instead, one should realize that human beings were simply part of nature's flow and should seek to become one with that flow rather than swimming upstream.

The hippie writings that took industrial society to task at length were often influenced by Asian religious thought and certain strains in American Indian religion. Many hippies read Asian religious classics avidly (the

Bhagavadgita, the *I Ching*, and various sutras, for example), and even more read the works of Asian and Asian-inspired religious teachers in the West (for example, D.T. Suzuki, the Zen teacher; the Maharishi Mahesh Yogi, founder of Transcendental Meditation; and Alan Watts, the Episcopal priest turned Zen Buddhist). Hippies also typically were fascinated with American Indians, who were seen as people living close to the Earth and in harmony with the flow of nature.

The use of drugs by hippies was often tied to the countercultural desire for union with nature. Hippies often distinguished between “good” and “bad” drugs, the good list usually including marihuana, LSD, mushrooms, and peyote, which were all regarded as consciousness-expanding and therefore useful, and the bad including such substances as heroine and amphetamines that led to stupor and death. Good drugs could open one’s awareness in a way that would lead to rejection of industrial society in favor of natural simplicity. The use of marihuana by hippies also spurred the larger movement to get back to the land, where the precious weed could be grown and used more discreetly than was possible in the city.

The desire to get back to nature took several forms. The simplest was an attempt to eliminate artificial materials and processes as fully as possible from daily life. Many tried, for example, to avoid the use of plastics, processed foods, and/or artificial fibers. In that spirit some drug-friendly hippies used only marihuana and psychoactive mushrooms and cacti in their quest for consciousness expansion, avoiding all refined and processed drugs, including heroin, cocaine, LSD, and alcohol. Going one step farther, some hippies avoided owning or riding in cars, and a few eschewed the use of electricity and modern machines. Others best exhibited their affinity for nature in affirming, even glorifying, the human body through massage and other kinds of physical bodywork and exercise regimes. Where isolated surroundings permitted, many hippies doffed their clothes, communing with nature as completely as possible. In many rural communes, especially, nudity was considered a sublime pleasure.

Although many counterculturists disdained political activism, most rose up as advocates of cleaning up the despoiled environment. Those who could stomach at least a modicum of organized activity were early participants of the late twentieth-century phase of the larger environmental movement. The first Earth Day, held on 22 April 1970, had a strong countercultural presence and flavor. The milieu of environmental concern and activism that hippies helped propagate led to the emergence of several of the more radical national environmental organizations, including Greenpeace and Earth First!, even though many of the less countercultural environmental activists found the hippies high-minded but not terribly politically effective.

From its early days in the mid-1960s, the counterculture counted many in its midst whose desire for natural living embraced a desire to leave the city and live in a rural area, preferably one as remote as possible. Many hippies fled the cities as individuals and families, seeking peaceful and natural lives on homesteads that would be as self-sufficient as possible. Others sought companionship in the rural quest and founded thousands of communes in scattered locales from coast to coast. From their earliest days the hip communes displayed strong natural leanings; Tolstoy Farm (1963, Washington state), for example, worked toward self-sufficiency using old, non-motorized tools, and Drop City (1965, Colorado) consisted of about a dozen domes pieced together largely from discarded construction and junkyard scrap to create a place where one could live apart from modern industrial society.

The counterculture began to disappear as a distinct cultural phenomenon in the middle to late 1970s, but its legacy lives on in Western society. Its waning days coincided with the rise of neo-paganism and Wicca, and many hippies pursued their love of nature within that framework. The desire of hippies to avoid processed food and large supermarket and restaurant chains helped the previously tiny health-food industry mushroom into an extensive international network of natural food stores, many of them run cooperatively, and health-oriented restaurants, generally small local proprietorships. The passion of the hippies for the preservation of the environment helped cultivate the ground for the international environmental movement found in all Western countries today. The countercultural sense of love for and enhancement of the human body has been an important feeder of the modern bodywork movement that ranges from reflexology to yoga to rolfing. The desire to get out of the cities and back to the land is embodied in the thousands, probably millions, who live in rural locations and, in thousands of cases, in communes, hundreds of which founded by the hippies survive today. It is fair to conclude that the countercultural love of nature contributed substantially to later natural interests and commitments in the larger society.

Timothy Miller

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See also: Back to the Land Movements; Bioregionalism; Bioregionalism and the North American Bioregional Congress; Entheogens; The Farm; New Age; New Religious Movements; Rainbow Family; Snyder, Gary; Tolstoy Farm; Western Esotericism.

Hogan, Linda (1947–)

Native American writer Linda Hogan, born in 1947 in Denver, Colorado, grew up in Oklahoma among a Chickasaw family with a vigorous storytelling tradition. The award-winning author of numerous poetry and short-story collections, novels, essays, and most recently a memoir, *The Woman Who Watches Over the World* (2001), Hogan has also coedited three important anthologies of women's writing on spirituality and the natural world. Hogan considers herself primarily an environmental writer; her work emerges from a pan-Indian tradition of reverence for nature, an interest in physics and biology, years of volunteer work in wildlife preservation, and an ecofeminist orientation that links the exploitation of women, natives, animals, and the Earth.

Much of Hogan's work focuses on the dispossession of indigenous peoples that began with the European conquest of North America and persists in contemporary land and resource appropriation. Her first novel, *Mean Spirit* (1990), is set during the "Osage Reign of Terror," a series of murders of Osage people for their land and oil rights during the Oklahoma oil boom of the 1920s. Her second and third novels are also based on historical events – *Solar Storms* (1995) on Cree resistance to the Canadian government's James Bay hydro-electric project in the 1970s, and *Power* (1998) on the killing of an endangered Florida panther in the Everglades. Each is a female quest narrative in which an abused and alienated mixed-blood teenager undertakes a wilderness journey, remaking her identity as she negotiates new relationships with history, place, and a community resisting the devastating effects of "progress." Environmental justice, Hogan suggests, is predicated on a recovery of human embeddedness in nature that recognizes the sentience, agency, and voices of the natural world.

Hogan traces the current environmental crisis to a "broken covenant" between humans and world that originated in Christianity's dominion theology and Enlightenment values of abstraction, objectivism, and materialism. Language, Hogan believes, has the power to heal the splits between humans and nature, mind and body that are written on the bodies of women, natives and Earth, a power she realizes most effectively in *The Book of Medicines* (poetry 1993) and the lyrical prose of *Solar Storms* and *Dwellings* (essays 1995). Drawing parallels between indigenous cosmologies and post-modern science, between tribal oral narratives and the

stories of Christianity, Hogan enfolds Western dualistic discourses within a reimagined indigenous worldview of interconnectedness and participation. Her recent work continues the project of rewriting the Bible begun in *Mean Spirit* by Osage healer Michael Horse, whose "Gospel According to Horse" corrects the Christian "mistake" that gives man dominion over nature; *Solar Storms* adds the "lost days of creation," which give humans their place in relationship to stories, the animals, and Earth. Hogan regrounds, feminizes, and "heterarchializes" (i.e., levels hierarchical relationships in; see Murphy 1995) the stories of Western culture, writing into being a new spirituality that is inclusive, process-oriented and evolving.

Ellen L. Arnold

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See also: Environmental Justice and Environmental Racism; Memoir and Nature Writing; Silko, Leslie Marmon.

Holidays

The holiday is a time of celebration that interrupts the normal business and legal cycle. It is mandated either by law or custom and usually commemorates or honors a particular event or person – whether hero, saint or deity. The holiday would appear to have grown out of the feasts originally connected with the observance of rites of passage marking the important transitions in the life of the individual: birth, naming, circumcision, adulthood, marriage, pregnancy, death and post-mortem commemoration. As a parallel to celebrating the significant stages of the person, the holiday more collectively became a means to recognize the turning points of the year: solstices, equinoxes, full and new moons. Consequently, the festival is a social institution that affirms the cycles of both men and women as well as that of nature. As a communal expression, it extends in addition to remembering

fortuitous occasions for the community, religion and state and also the significant events in the lives of the gods.

As collective celebrations, holidays undoubtedly originate with commemorating the food supply and its production upon which the community depended: first-fruit ceremonies and harvest festivals. First-fruits were offered to whomever was deemed responsible for the crops, fish and/or animals: nature spirits, the gods, the priests as their representatives, the king or the ancestors. These offerings were intended to ensure the protection of produce in its maturation process. The harvest ceremonies commemorated the other end of the cycle: its completion and the death of vegetation. Symbolically, the suspension of fertility was represented in the withdrawal of the Earth Mother of nature or her child to the underworld. The harvest festival was both a time of concern for the fertility of the future and of rejoicing for the current bounty. Although festivals have continued to be augmented through additional occasions on which to commemorate an illustrious civic contributor or those memorials of national thanksgiving, disaster and armistice, at their base are the seasonal observations that honor the round of nature and humanity's intimate connection with it.

Nevertheless, with the increased urbanization of Western culture, the natural festival continues to undergo radical transformation. This process began already with the shift away from spontaneous pagan sensitivities that occurred in Judea and Christian Europe. For instance, Jewish harvest festivals suppressed their primitive fertility features and became occasions simply for jubilation. Pagan vernal and Yule celebrations were converted into the Christian holidays of Easter and Christmas – to which were added the feasts of Pentecost, Epiphany, the Ascension, All Souls as well as those of the saints and the Virgin. But as the Christian ascendancy already indicates a restriction of the sacred when compared to the notions of immanence held by its pagan predecessor, contemporary times in the twentieth century and beyond are increasingly characterized by secularization. This decline of religion can be witnessed in the suspension of prohibition against business trade on Sundays and in the transference of commemorative celebrations to the closest Monday. This drive toward greater efficiency and non-interruption to the business/working week is a far cry from the original holiday impulse that in pagan times allowed one to become accustomed to interruptions of normal life “which broke up the calendar and honoured the gods” (Fox 1986: 67). As Fox recognizes from this, “Pagan cults created the divisions of civic time” (Fox 1986: 67). The merrymaking and feasting associated with these civic breaks of the holiday relate to the original idea of carnival as a time-outside-time. The festival and carnival represent suspensions of the ordinary and/or intrusions of the special and the holy.

Consequently, the holiday provides an occasion for

both the individual and community to step outside normal routine and view things from a different perspective. In the gaining of new insights and understandings, a person or collective experiences the possibility of regenerative renewal. For many people today in Western societies, with the diminishment of religious if not also municipal and national significance within the accepted calendar of established holidays, along with the increased sense of urban alienation, the framework of legal days of interruption become opportunities to visit national parks and reserves in order to commune with nature and regain a sense of the natural and holistic. Increasingly, as people today lose a sense of the religious associated with traditional holidays, these times of commemoration become instead windows through which the sanctity of nature is often rediscovered.

Michael York

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See also: Pagan Calendar.

Holism

Holism, coined in 1926 by the South African philosopher and statesman Jan Christiaan Smuts in his work *Holism and Evolution* (1926), is a modern term for an ancient concept (known under differing names as the whole, *to holon*, or totality) that refers to a whole, composed of many parts, or in its modern usage, to a greater whole than the individual parts of which it is composed. Modern concepts of holism then describe a comprehensive worldview that produces order and coherence not only among the sciences, but also in the realms of ecology, politics, aesthetics, theology, and morals. Indeed it provides meaning for the parts and the whole as they mutually and reciprocally influence and modify each other. Holism, in reaction to much contemporary scientific reductionism, not only stresses relationship, but in addition introduces concepts of history and teleology into the scientific worldview.

Holism was reconceptualized temporally through the influence of Christianity, in particular through the notion of the three historical ages advanced by the twelfth-century mystic Joachim de Fiore. His views prefigured later socialist and Marxist understandings of society. Antonio Gramsci held that socialism was an “integral vision of life” because it included not only the economy,

but also a philosophy, a mysticism, and a morality. This vision was developed particularly by Western Marxists such as Ernst Bloch, who included nature as an essential element. While certainly anthropocentric, this was rooted in a cosmic vision of wholeness that went far beyond the Marxism of his time. His work *Principle of Hope* was to deeply influence German political theologians such as Baptist Metz and Jürgen Moltmann, who both linked nature to the Christian conception of hope and promise of eschatology that points to God's guidance of the whole. Both these theologians were to influence early liberation theologians.

Smuts coined the term holism to express his philosophical doctrine according to which the universe is understood as an evolutionary process that produces wholes of ever-increasing complexity and self-awareness. The constituent parts are such that their totality is greater than the sum of their individual parts. Not only is the concept of holism conceived of as a process of synthesis, (chemical analogies are used to indicate the creation of more inclusive wholes), but it is also combined with a deep belief in personalism. For Smuts, personality was the highest level of development in an ever-developing universe. This included belief in the value of the individual, and in love as the force that brought humans together in associations. Holism then for Smuts, as for others in the Western philosophical tradition, represented a reaction against the mechanist conceptions of science and the accompanying individualistic fragmentation that marked much of the modern worldview. Against such reductionism, holism understands all the elements of the human whole as continuous with each other, the world, and the whole universe. The part rather is a manifestation of a prior whole. The human personality is the center of self-determination and evolution comprises the achievement of higher forms of self-determination, resulting in an inner cosmos where the part is more related to the whole than to the constituent parts. Such spirituality in turn gives purpose to the whole. This almost mystical perception enables the individual to strive to the whole through the struggles and negations of existence.

Whether as a normative or as a descriptive term, holism or wholism or totality remained a critical concept in ecology, psychology, the natural sciences and theological movements in the late twentieth century. These are ably synthesized and presented in the recent works of Leonardo Boff which draw directly on Smuts' concept. Boff utilizes holism to present an ecological theology which offers an integrated vision of all reality. Such a paradigm stresses the interrelatedness and complexity of all being and is expressed through the metaphor of the Spirit. This paradigm avoids the errors of past Western thought and their accompanying cosmologies, namely: the Theocentric (understood as hierarchical and whose metaphor is the organic chain of being) and the modern or Anthro-

pocentric (understood as objective and rational and whose metaphor is the machine). Holism thus, ever since Aristotle, has implied hierarchy and subordination and modern reconceptualizations have sought to address these facets, with varying degrees of success.

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See also: Boff, Leonardo; Christianity (7b) – Political Theology; Descartes, René; Dualist Heresies; Ecofascism; Haeckel, Ernst; Smuts, Jan Christiaan.

SP The Holocaust and the Environmental Crisis

On Holocaust memorials we often proclaim that we will "never forget."

Yet when we discover the myriad radiation experiments done on unknowing subjects and communities in support of the Cold War, do we remember the medicalized torture of children in Auschwitz?

When our communities face pesticide-spraying airplanes, dioxin-spewing industrial chimneys, chemical food contaminants, and leaking landfills, do we remember the Zyklon B flowing into the gas chambers?

When we listen to our children cough, and wonder why so many have asthma, and continue a way of life that creates the air pollution that weakens their lungs, do we remember how well-meaning, passive bystanders helped make the Holocaust possible?

When we hear about the countless indigenous peoples with monstrous cancer rates because of uranium mining on their land, or victims of cultural genocide because their forest homes were turned into so many board feet of lumber, their villages dispossessed in the name of some mindless "development" scheme – do we remember how the world (most of the Allied governments, the Catholic Church, the spokespeople for great and noble causes) managed to ignore what was happening to the Jews?

When we see how the assault on the rainforest eliminates dozens of species of trees that have been evaluated as having potential for cancer treatment (even for the cancers that may afflict those who direct the assault), do

we remember how the German government made transporting the Jews to the death camps their first priority, even when that priority interfered with their own military goals?

When we hear of a corporation lying to the public to protect a toxic chemical it sells, or paying off a legislator to get some environmental regulations weakened, do we remember how the Nazi elite got rich off Jewish slave labor?

When we see the full force of our own denial of the ecological dangers surrounding us, do we remember that it was thought impossible – especially by the victims! – that a modern, industrialized state could systematically slaughter millions of unarmed civilians?

Some years ago, Holocaust survivor Eli Wiesel, commenting on the potentially final ecological catastrophe of nuclear war, said: “It seems that the whole world has become Jewish” (in a television interview about the television movie *The Day After*).

Wiesel was not saying that a nuclear war would have been just like the Holocaust. And neither is the environmental crisis “just like it.” Despite the obvious differences, however, the Holocaust can serve as a warning. This is so because there are several important analogies between the two events. Both the Holocaust and ecocide depend on highly developed technology and large, impersonal bureaucracies; and both reveal how irrational modernity can be. They disclose a profound inability to empathize with other people and other forms of life and express a vision of human relationships keyed to domination and exploitation. That is why the Holocaust and ecocide both call into question many of the basic premises of our civilization. Religious traditions, family structure, forms of personal identity, and distribution of economic and political power are all rendered suspects when humanity’s way of life undermines its own survival.

While the Holocaust involved the centralized, strategically planned annihilation of a particular group, ecocide stems from myriad sources and is not anyone’s self-proclaimed goal. It happens because corporations pursue profit, governments develop military power, ordinary citizens seek a “better lifestyle,” and peasants deforest hillsides so they can cook dinner. From these varying strategies for profit, power, pleasure, or simple survival comes the ruin of the world. Yet what the Holocaust does reveal, and part of what connects the two events, is just how devastating modern states, bureaucracies, and technologies can be; and thus how carefully we “ordinary men and women” must examine our participation in them. It is precisely the “normal” and “ordinary” that may be the most terrible.

We also can learn in this context that while environmentalists’ direst predictions must always be evaluated in detail, they cannot be dismissed out of hand due to a mistaken confidence that governments and corporations

would not commit mass murder; or that intelligent citizens might not just sit back and let it all happen. After Auschwitz, such confidence makes little sense. In a way, the Holocaust “prepares” us to take in the fact of ecocide, teaching that there is virtually no limit to human folly, lust for power, and bureaucratic complicity in mass murder. The slaughter of six million Jews and five million other victims, carried out coldly and “rationally” by civil servants and professionals as well as politicians and soldiers by a “legitimate” government and with the sanction or passive acceptance of much of the rest of the world, is an omen for the environmental ruin we are creating now. This time, however, the catastrophe may spread far beyond the borders of any particular community, nation or region.

Also, both events depend on a complex structure of aggressors, victims, and bystanders. Thus both raise particularly complicated moral questions about good and evil, guilt and innocence, responsibility and forgiveness.

Finally, in both settings people facing overwhelming odds have fought back. The presence of this resistance can help change the way we think about both the Holocaust and the environmental crisis – transforming them from examples of unrelieved horror to settings in which, despite everything, people managed to resist.

As an example of the connections between the Holocaust and the environmental crisis, consider the history of Zyklon B.

Zyklon B was the gas used on Jews in the death camps. It came to the attention of a young SS officer at Auschwitz as the camp was starting to operate. Remembering how a Hamburg pesticide firm had fumigated the insect-laden Polish army barracks that the SS had taken over, Hauptsturmführer Fritsch decided to try the pesticide on people. It worked well enough. The next move – from killing insects and rodents with a powerful chemical to killing millions of Jews the same way – was not very difficult. The Nazi leadership believed, after all, that Jews were vermin, and that the “health” of Germany required that the Jews be exterminated.

Ironically, while the Nazi machine has long been defeated, the use of chemical pesticides still threatens human beings; and the notion that “vermin” can simply be exterminated without any ill effects on those of us left alive has led to widespread poisoning of many life forms – including our own. Pesticides kill people even when they are aimed at bugs. In agricultural communities throughout the world, for instance, water supplies are tainted by pesticide run-offs. In some areas so much has accumulated in women’s bodies that breast milk is legally considered too dangerous to feed infants. And breast-fed babies have more than three times the amount of the toxic PCBs in their bloodstream as bottle-fed infants.

What is common, then, is the logic of extermination. The challenge is to learn from the Holocaust the con-

sequences of using modern forms of power in the pursuit of extermination – whether of people, bugs, weeds or anything else.

Roger S. Gottlieb

See also: Fascism; Judaism.

P Holy Land in Native North America

What is sacred? That is a question asked in courtrooms, administrative hearings, and city council meetings across the country. In the end there is no absence of irony: indeed, the oppressed must go to the Court or administrative hearing process of the oppressor to quantify exactly how sacred something is in North America. Nowhere is the discussion more passionate than the debate over the preservation and protection of sacred sites.

Chris Peters, a Pohik-la from northern California, discusses the distinction between native spiritual practices and Abrahamic religious traditions as having different paradigms. Native spiritual practices are “affirmation-based religions,” while Abrahamic religious systems are “commemorative religions,” in terms of a broad definition (author’s discussion with Peters, 8 June 1992). Native American religious and spiritual practices are often based on the reaffirmation of the relationship of the human to the creation. Native oral traditions often tell of the place of the “little brother” (i.e., the humans) in the larger creation, and consequently, our need to be continuously thankful for our part in creation; the gifts given to us by the Creator are always underscored. These teachings are reinforced in Midewiwin lodges, Sun Dance ceremonies, world renewal ceremonies and many others. Abrahamic religious teachings and events frequently commemorate a set of historic events: Easter, Christmas, Passover, Hannukah, as examples within two of the dominant religious practices in the world.

The difference in the paradigms of these spiritual practices has, over time, become a source of great conflict in the Americas. The history of religious colonialism, including the genocide perpetrated by the Catholic Church (particularly in Latin America), is a wound from which native communities have not yet healed. And, the notion that other non-Christian spiritual practices could have validity was entirely ignored for centuries. Consequently, while there may be some “sacred sites” in Abrahamic religious traditions, for instance the “holy land” in modern-day Israel/Palestine, the existence of other “holy lands” has been denied.

There is a place on the shore of Lake Superior, or Gichi Gummi, where the Giant laid down to sleep. There is a place in Zuni’s alpine prairie, where the Salt Woman moved, and hoped to rest. There is a place in the heart of Lakota territory where the people go to vision quest

and remember the children who ascended from there to the sky and became the Pleiades. There is a place known as the Falls of a Woman’s Hair, which is the epicenter of a salmon culture. And there is a mountain upon which the Anishinabeg rested during their migration, and looked back to find the place they were instructed to go by their prophets.

A “holy land” cannot be exclusive in a multicultural and multispiritual society; yet indeed it has been treated as such. Papal Law became the foundation of colonialism, the Church a handmaiden to military, economic, and spiritual genocide and domination. In their time, each subsequent pope would pass new papal bulls, all underscoring the legitimacy of Christian manifest destiny. Those papal bulls underscored the supremacy of Christendom, and ostensibly authorized the practices of colonialism. All of that carried over to the Americas, with perhaps some of the most virulent and disgraceful manifestations of dominance beginning the process of colonization in the Americas.

Indeed, xenophobia and a deep fear of native spiritual practices became the centerpiece of early reservation policy as native religious expression was outlawed in North America. To practice your traditional form of worship was tantamount to a death sentence for many peoples. The Wounded Knee Massacre of 1890 occurred in large part because of the fear of the Ghost Dance Religion which had spread into the Lakota nation, and hundreds of Lakota, and other native spiritual leaders, were sent to the Hiawatha Asylum for Insane Indians in present-day Canton, South Dakota, just for their spiritual beliefs. So it was by necessity that native spiritual practitioners went deep into the woods, or into the heartland of their territory, to keep up their traditions, always knowing that their job was to keep alive their instructions, and hence, their way of life.

In 1978, some two hundred years after the American constitution guaranteed freedom of religion for most Americans, Congress passed the American Indian Religious Freedom Act and President Carter signed it into law. Although the act contains worthy language which seemed to reflect the founders’ concepts of religious liberty, it had few teeth. The act states:

It shall be the policy of the United States to protect and preserve for American Indians their inherent right of freedom to believe, express, and exercise the traditional religions of the American Indian, Eskimo, Aleut and native Hawaiians, including but not limited to access to sites, use and possession of sacred objects, and the freedom to worship through ceremonials and traditional rites . . .

While the law insured that native people could hold many of their ceremonies (although Native American Church

ceremonies remained challenged), it did not insure the protection of the places where many of these ceremonial practices would take place, or the protection of that which is needed for the ceremonies, such as salt from the sacred Salt Mother for Zuni ceremonies, salmon from the Columbia River for Columbia River Tribes, or the sanctity of these places from desecration whether by rock climbers or bulldozers. The Religious Freedom Act was underscored with President Clinton's 1996 Executive Order 13007, for preservation of sacred sites:

In managing federal lands, each executive branch agency with statutory or administrative responsibility for the management of Federal lands shall . . . avoid adversely affecting the physical integrity of such sacred sites . . .

Those protections were applied to lands held by the federal government, not by private interests, although many sacred sites advocates have urged compliance by other landholders to the spirit and intent of the law. The administration of George H.W. Bush, however, has ignored that Executive Order.

Dr. Henrietta Mann is a Northern Cheyenne woman and chair of the Native American Studies Department at Montana State University. She reiterates the significance of the natural world to native spiritual teaching,

Over the time we have been here, we have built cultural ways on and about this land. We have our own respected versions of how we came to be. These origin stories – that we emerged or fell from the sky or were brought forth – connect us to this land and establish our realities, our belief systems. We have spiritual responsibilities to renew the Earth and we do this throughout Ceremonies so that our Mother, the Earth, can continue to support us. Mutuality and respect are part of our tradition – give and take. Somewhere along the way, I hope people will learn that you can't just take, that you have to give back to the land (Taliman 2002).

So, we have a problem of two separate spiritual paradigms, and one dominant culture. Make that a dominant culture with an immense appetite for natural resources. The exponential growth of the U.S. economy for two centuries was largely related to the expropriation of Native American lands and resources, as colonialism would be replaced with neo-colonialism, but each step of the way requiring more land to feed the growing industrial infrastructure. The U.S. consumes one-third of the world's resources. To create that level of consumption a significant level of production had to occur, much of it on and from native people's lands. By the 1930s, the native land base had been reduced to 52 million acres, or about 4 percent of

our original land base. Indeed, we saw some 90 million acres taken by the federal government from native people just from 1889–1934, and within all of those takings, more than 75 percent of our sacred sites were removed from our care and jurisdiction.

Native people must now request permission, quite often to use their own sacred sites, and, more often than not, find that those sacred sites are in danger of being obliterated, or just simply desecrated.

To complicate the challenge of attempting to maintain your spiritual practice in a new millennium is the problem of the destruction of that which you need for your ceremonial practice. The destruction of 50 million buffalo in the Great Plains by the beginning of the twentieth century caused immense hardship for traditional spiritual practices of the region, especially since the Pte Oyate, the buffalo nation, are the older brothers of the Lakota, and many other indigenous cultures of the region. Similarly, the decimation of the salmon on the Columbia, Klamath and other rivers in the northwest by huge dam projects, overfishing, water diversion, and logging has caused great emotional, social and spiritual devastation to the Yakama, Wasco, Umatilla, Nez Perce and many other peoples of the region. New efforts to domesticate, patent and genetically modify wild rice similarly concern the Anishinaabeg people of the Great Lakes region.

In terms of struggles over sacred sites in the United States, there are many which are ongoing, although some have been resolved, favorably, at least for now.

The Valley of the Chiefs in Montana was almost destroyed by an oil drilling project, but was protected, at the last minute, by the concerted efforts and organizing of many. Containing one of the largest collections of sacred pictographs on the continent, it contains a refuge for those involved in many ceremonies. Threatened by oil drilling, a campaign of opposition by the Crow, Comanche, Lakota, Blackfeet, Northern Cheyenne and a host of environmental groups led to the donation of oil leases to the National Trust for Historic Preservation, after which the Bureau of Land Management followed suit, withdrawing an additional 4200 acres in the area from the mineral leasing process. During the battle, the coalition against the mining was able to leverage support of U.S. congressional representative Nick Rahall of West Virginia, who introduced legislation to protect the Valley of the Chiefs, terming the proposal to drill something like "erecting an oil derrick in the Sistine Chapel."

Medicine Lake rests high in the northern California mountains and is held sacred by the Pit River, Modoc, Shasta, Karuk and Wintu people. The Pit River people recall that after creating the Earth, the Creator and his son bathed in the waters of the lake. And then, the Creator imparted his spirit to Medicine Lake. That water is used for ceremonies, and the entire area is recognized as a place to train medicine people from the region. In 1999 a coalition

of tribes successfully petitioned the National Register of Historic Places to recognize the Medicine Lake Caldera as a Traditional Cultural District. The Calpine Corporation proposed a geothermal project in the area, with the hopes of harnessing enough steam power to run as many as six power plants. Court and administrative battles went on until California's energy "crisis" created a political climate making it possible for the Bush Administration to site a \$120 million, 48 megawatt geothermal power plant at Telephone Flat, one mile from Medicine Lake.

Zuni Salt Lake rests peacefully within the domain of the Great Salt Mother. It is here, among purple mesas, lush grasses, and tenacious trees, that Zuni Salt Lake rises majestically in the center of a gentle sanctuary. She is called *Ma;Oyattsik'i* by the people of Zuni Pueblo, and stories are remembered of her movement to her present resting place, across the land. Today, great pilgrimages are taken by the men, not only of Zuni, but of neighboring Acoma Pueblo, *Dine Bii Kaya*, or Navajo land, Apache, and other neighboring peoples to collect salt for their ceremonial life, indeed, their lifeblood. That is perhaps why *A:shiwi A:wan Ma'k'yay'a dap an'ullapna Dek'ohannan Dehyakya Dehwanne* exists, a 185,000-acre sanctuary, from time immemorial.

The Salt River Project, however, the nation's third largest public utility, is running out of coal at the McKinley mine near Gallup, New Mexico. The company has its sights on 80 million tons of coal just 11 miles from the lake, with the proposed 8000 acre Fence Lake Mine, and the state is supporting the proposed mining. Despite protests by native nations and the environmental community, it appears the mining will be permitted.

Black Mesa is located in the heartland of the Colorado Plateau, and is the region's largest and most productive watershed. It is also a coal body, representing at its prime over 22 billion tons of coal. But the largest community in the area, Tuba City, receives only a scant seven inches of rainfall annually. The Navajo Aquifer is the sole source of dependable drinking water for the region. Hence, the combination of massive mining development, combined with the use of water from the aquifer, has been a huge blow to the ecology of the region. For the past 35 years, 1.3 billion gallons of pristine water annually has been sucked from the Navajo Aquifer, just to move coal. Peabody, with its affiliate, the Black Mesa Pipeline Company, ship approximately 5 million tons of coal in a pulverized powder-like consistency pushed by up to 4500 gallons of water a minute some 273 miles west to the Mohave Generating Station in Nevada.

The irony of waste is not lost on the Hopi. Vernon Masayeseva is a former Chairman of the Hopi tribe and is now executive director of Black Mesa Trust, a non-profit organization focused on trying to prevent the destruction of the Black Mesa aquifer.

Masayeseva explains that one billion gallons of the

ancient, sacred water has been fouled beyond reclamation or evaporates each year in Nevada's desert skies. Hopi could live on this water for 100 years. Thirty years after the mining began, water levels in some Black Mesa wells have dropped more than 100 feet, and many of the springs are dry. Hopis contend that by the year 2011, the dewatering will leave the Hopi village of Moenkopi without water.

Bear Butte: Mato Paha. There is nothing quite like Bear Butte, as it looms high on the horizon in the heart of Paha Sapa, the Black Hills, the heartland of the Great Plains, and indeed the Lakota universe. A new proposal forwarded by the city of Sturgis, South Dakota (home of the Black Hills Classic, Sturgis Motorcycle race) has plans to build a sports complex and shooting range four miles from Bear Butte, which will lead to 10,000 rounds per day of gunshots from rifles and handguns. The range will negatively impact the serenity sought by the native people who go to Bear Butte to pray and conduct vision quests. The region's tribes were never consulted about the project and are now fighting its development in an effort to protect Mato Paha.

Spirit Mountain. When the Ojibwe migrated from eastern North America to the west, each of the resting places provided a time for deliberation. It is said that we came to Spirit Mountain, and from there were able to see our final resting place: *Moningwanakwaning*, now called Madeline Island. The Anishinaabeg journeyed to this Mountain. Then, we were able to understand our instructions and view our destiny. The Anishinaabeg are not the Jews. We did not have a Moses and the tablets of stone. Yet, in Christian analogies, it is perhaps possible that Spirit Mountain would be for us akin to Mt. Sinai. For years, the city of Duluth has grown in the shadow of Spirit Mountain, but in the past few years, the City Council has taken an interest in supporting development of a world-class golf course on Spirit Mountain. Almost every Ojibwe tribal government in the region, and hundreds of individuals, have opposed the project, and during the summer of 2002, Ojibwe traditional spiritual practitioners came to the Duluth City Council meetings to present their concerns about the issue. They were told by one councilman that the Ojibwe migration story was a fabrication, he having read that the Ojibwe first saw this land, and the Spirit Mountain, when brought to the region on boats by explorers. Others asked the Ojibwe to identify which parts of the Mountain were sacred so that mitigation might occur. Such is the problem of quantifying the sacred and presenting a native worldview.

Dzil Nchaa sian or Mt. Graham rises 10,700 feet up from its base in Arizona's Sonoran Desert, a home to clouds at the top, and streams and flowing hot springs at its base. It is an oasis in the midst of a desert. It is also one of the largest mountains in the state, a part of the Pinaleno Range. Consequentially, in part because of both location and height, Mt. Graham possesses more life zones and

vegetative communities than any other solitary mountain in North America. Within those vegetative zones, live three species of mammals, three species of flowering plants, three species of snails, a mollusk and many arthropods that have never been found anywhere else in the world.

Mt. Graham is also central to Apache spiritual practices, the source of many of their medicines, and the home of deities. It is also a sacred mountain for other native groups in the region. In a battle spanning more than a decade and despite opposition by the Apaches and dozens of national and international environmental groups, in 2004 three telescopes stood on Mt. Graham. Interestingly, one was built by the Vatican Observatory to listen in on the heavens and search for extraterrestrial intelligence, in part motivated by the quest to evangelize any who might be found. As the Jesuit director of the observatory told a reporter, they intended to ask extraterrestrial life forms if they knew “a Jesus who has redeemed” them (in Taylor 1995: 126). The major push behind the projects, however, still comes from the University of Arizona’s Department of Astronomy. The U.S. Congress consistently supported the telescopes, overriding existing laws and circumventing injunctions and lawsuits, approving even five more telescopes, all of which are considered desecrating acts by most Indians and environmentalists from the region and others familiar with the case.

Petroglyph National Monument. Between 2000 and 500 years ago, the ancestors carved their messages into the lava formation just west of Albuquerque. Now known as Petroglyph National Monument, its historic value was recognized when it was named a national monument in 1990. But today both greed and the growth of the city of Albuquerque spurn the ancestors. A six-lane highway connects Albuquerque to its own sprawl and threatens to push through the center of the ancient lava chalkboard. All of New Mexico’s native nations, including the 19 Pueblos, have opposed it, and a tenacious group known as the Sage Alliance continues its work to stop the proposal.

Coldwater Springs is a spring of water which for centuries has been known for its healing properties, and is used by many for ceremonies in the region. The 10,000-year-old limestone bedrock spring flows down the bluff to the Mississippi River and is estimated to have between 100,000 to 144,000 gallons of water per day going by it. It is said that it is fed from *Taku Wakan Tipi* (Something Sacred Dwells Here), a nearby hill, which was bulldozed to build the Minneapolis/St. Paul International Airport. The spring has remained and prevailed through the development of the south Minneapolis region, but beginning in the early 1990s, proposals for highway expansion, in particular Highway 55, threatened to intersect the spring. A bitter struggle ensued between native people, environmentalists and the state Department of Transportation. Eventually, much of the highway was built, but some pro-

visions were made to protect the spring. But afterwards flows at the spring vacillated between 55 and 115 gallons per minute (79,000–166,000 gallons per day) and new, further “compromise” proposals are being viewed with skepticism by the Mendota Dakota, Anishinaabeg and other people of the region.

The White Man’s Law and the Sacred

There remain many more sacred site issues in the United States, but the underlying question in all such controversies is “How sacred is it?” In the fall of 2002, the National Congress of American Indians came together with traditional spiritual people and sacred sites advocates to discuss some of the challenges within the context of the battle to protect sacred sites. The National Congress of American Indians (NCAI) adopted by consensus a resolution declaring “Zero Tolerance for desecration, damage, or destruction of sacred places,” adding, among other things, that there is a

recognition that sacred places are to be defined only as places that are sacred to practitioners of Native traditional religions and that sacred places include land (surface and subsurface), water and air, burial grounds, massacre sites, and battlefields, and spiritual commemoration, ceremonial, gathering and worship areas.

NCAI also joined with other native people in pointing out some of the most challenging aspects of the sacred site struggle, calling them objectionable elements, which include: definition of the sacred, prioritizing sacred places, centrality or degree of significance requirements, discrimination against non-federally recognized tribes with traditional sacred places to protect. So-called “mitigation” of impacts to sacred places was also criticized, as well as “reliance on previously published or recorded coerced or incomplete information regarding sacred places.”

In the summer of 2002, the California legislature passed a bill which would have protected sacred sites within the state, and increased dramatically the consultation with native nations with regards to many development projects at such sites. Governor Gray Davis did not sign the bill into law. Proposals for national sacred site legislation will continue to be advanced by Native Americans, environmentalists, and human rights activists until these places are protected and free religious practice fully ensured.

More than two hundred years after the founding of the United States it is still hard to be a native person here. As spiritual challenges continue, native people will continue, as we have for centuries, and in our prayers and songs, given our understanding of the sacredness of the land, we will always be thankful.

Winona LaDuke

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- See also: Anishnabeg Culture; Black Mesa; Deloria, Vine; Devils Tower, *Mato Tipi*, or Bears Lodge; G-O Road; Indigenous Environmental Network; LaDuke, Winona; Law, Religion, and Native American Lands; Manifest Destiny; Sacred and the Modern World, The; Sacred Geography in Native North America; Wise Use Movement.

Homosexuality

Attitudes toward and responses to homosexuality and same-sex behavior have varied widely among the world's religions, from fully accepted and embraced, to completely prohibited and violently repressed. At stake in these differences are widely varying attitudes toward nature, what counts as "natural" and what difference this makes for religious claims and practices, and how diverse sexual behaviors and identities across human cultures and animal species are valued or disvalued.

Indigenous religions often have embraced more diversity in sexual identities and gender roles as an integral and honored part of the natural diversity within nature than the world's great religious traditions, particularly the monotheistic religions of the West. Robert Baum observes,

In contrast to the patriarchal or asexual image of the godhead in Western religions and the nontheistic focus of most schools of Buddhism, traditional religions of the Americas ... often see spiritual

SP Homosexuality and Science

Attitudes toward human homosexuality in religions and cultures often rest on assumptions about nature, particularly homosexuality in nonhuman nature. Increasingly, scientific studies of sexuality are influencing religious and cultural debates about homosexuality, even as lesbian, gay, bisexual and transgendered persons reclaim and reshape religious practices and spiritualities.

Recent studies of animal behavior document the widespread presence of same-sex behaviors throughout the nonhuman world. Biologist Bruce Bagemihl notes that homosexual behavior has been observed in more than 450 kinds of animals in every major geographic region and every major animal group across the globe. According to Bagemihl: "Animal homosexuality itself is a rich and multifaceted phenomenon that is at least as complex and varied as heterosexuality" (1999: 42).

Studies of sexual behaviors in nonhuman primates, our closest animal relatives, suggest homosexual primate behaviors go back at least 25 million years to the Oligocene epoch. This suggests that homosexuality is part of both the human evolutionary and cultural heritage as primates. One distinctive difference between human and nonhuman responses is an almost complete lack of hostility on the part of animals toward same-sex and transgender behaviors in other animals; animals exhibiting these behaviors almost without exception are fully integrated into their respective animal groups. In contrast, human cultures and societies vary enormously across time and geography in their attitudes toward homosexual behaviors and identities, from fully accepting to completely rejecting to severely repressing, even with violence.

Arguments about the morality of homosexuality have long looked to animal behavior to support claims on both sides of the debate. Ethicists and others have noted the flaws in the logic of these arguments. Many activities that most human groups reject as immoral exist as "natural" behaviors throughout the animal world. At the same time we use our biological facilities in many ways "unintended" by nature without ascribing a moral value to such actions, such as using the tongue for kissing or blowing bubbles. Moral arguments about homosexuality will have to be made on other grounds.

More recently some have looked to scientific studies of human sexuality to answer questions about the etiology of homosexuality in hopes of deciding debates about the morality of homosexuality. Since at least the mid-nineteenth century, most study of human sexuality in general, and homosexuality in particular, took place within the field of psychology, where sexuality was understood primarily as a mental phenomenon, largely influenced by social, cultural, and environmental factors. Debates raged about whether homosexuality

Continued next page

(and heterosexuality) was primarily a result of nature (a biological predisposition) or nurture (caused by environmental influences). With the recent rise of neurobiology and especially molecular genetics and brain studies, this is increasingly seen by researchers as a false and ultimately unhelpful dichotomy: genetic, hormonal, and environmental factors all ultimately are expressed in the body where they influence a person's sexuality through interactions of genes and brain chemistry.

After several decades of neurobiological and genetic studies, the factors that determine a person's sexual orientation remain largely unknown, yet it does seem clear that sexuality is a result of a complex interplay of genetic, prenatal, and environmental factors in each individual. The diversity of sexual behaviors seen in the animal world are reflected in the human sphere where they are complemented by a rich diversity of sexual and gender identities. Religious and cultural traditions that proscribe homosexuality based on antiquated understandings of nature and what is "natural" increasingly must confront the results of many different branches of science that show homosexuality to be a cross-species, crosscultural expression of sexual diversity across the animal and human worlds.

Daniel T. Spencer

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power in a sexual dimension, with different types of spiritual power associated with each biological sex. In many instances spiritual beings and their religious specialists in the human community are seen as androgynous, or of an intermediate gender, and thereby provide an importance for a diversity of sexual orientations that remain peripheral to many other religious systems (Swidler 1993: 2–3).

Several North American Native American religious traditions, including the Oto, Zuni, Navajo, Mojave, and Papago nations, for example, have embraced the "two-spirited" person (often referred to in earlier writings as the "berdache"), a sacred man or woman who mixes gender categories and may participate in same-sex relations. Typically two-spirit persons have an honored role in Native American societies as shamans, healers, or wise persons. Similar attitudes and homosexual and transgender roles are found in many indigenous cultures across the globe, such as the Sambia and Bimin-Kuskusmin peoples in New Guinea, the Araucanians or Mapuche people of Chile, and the Inuit and Yup'ik peoples of the Arctic.

In each of these cultural complexes, nature in general, and animals in particular, are central to the group's spiritual and religious beliefs and myths; and beliefs about sexual and gender variability in animals often parallel and symbolize the recognition and valuation of homosexuality and transgender among humans. In North America, for example, associations between left-handed bears and two-spiritedness are found among the Nootka, Kutenai, and Winnebago peoples. As Bagemihl observes, "Bears are thought to combine elements of both masculinity and femininity, and they are also seen as mediators between the sexes and between humans and animals" (1999: 217). Animal associations with transgender and homosexuality may also be linked to personal vision quests and two-spiritedness, such as dreaming of a bison among the various Sioux nations. In other cultures, the trickster-transformer figure, such as a coyote or fox, may symbolize human transgender and homosexuality.

The two-spirited traditions in North and South American indigenous cultures were heavily repressed by European and American colonizers and Christian missionaries, who categorized these complex cultural phenomena as sodomy and barbarism. In Indian communities that largely assimilated into Euro-American culture, two-spirited persons either went underground or disappeared, or risked increasing amounts of scorn from within their community. With the reaffirmation and reclaiming of traditional Native American ways since the 1960s, in the United States has come renewed interest in two-spiritedness, and two-spirited persons increasingly are active within and across indigenous nations today, including among the Navajo, Lakota, and Zuni peoples.

While less is known about African sexuality in general, similar patterns of transgender and transgenerational homosexual relations are found among some of the indigenous religions of Africa. Male adolescent homosexual behavior is common among groups such as the !Kung of southern Africa and the Naman of the Namib desert, though such same-sex behavior is expected to cease with adulthood and heterosexual marriage. In cultures with polygynous households, reciprocal relationships among women that may or may not have a sexual component are common, as among the Azande of southern Sudan, the Twsana of southern Africa, and the Nupe of Nigeria. In some African societies, such as the Zulu, and the Ambo of Angola, males who receive a spiritual calling may assume an intermediate gender role similar to the two-spirit person in Native American societies. As in the Americas, European colonialism and Christian missionary activity have in many cases repressed or obscured indigenous African attitudes and practices toward homosexuality and transgender.

In contrast to indigenous religions, the scriptures and dominant teachings of the three Western monotheistic religions of Judaism, Christianity, and Islam have been

largely perceived as hostile toward homosexuality. Jewish teaching regarding homosexuality is rooted in the *halakhah*, traditional Jewish law developed from the Torah and Talmud, which proscribes all same-sex sexual behavior. Jewish moral teaching on sexuality focuses on sexual acts, rather than sexuality, and limits licit sexual acts to those within heterosexual marriage. The sexual relationship plays an important and positive role within marriage, both for procreation and for building intimacy between husband and wife. Male homosexual behavior is specifically proscribed in Leviticus 18:22 (“Do not lie with a male as one lies with a woman; it is an abomination”) and 20:13 (“If a man lies with a male as one lies with a woman, the two of them have done an abhorrent thing; they shall be put to death”), part of Israel’s Holiness Code that required Israel to emulate God’s holiness in refraining from the practices of their Egyptian and Canaanite neighbors. Among these practices were a series of sexual sins that the Israelites must not practice, including incest, adultery, bestiality, and male homosexuality (the Torah is silent on female same-sex acts).

Contemporary Jewish attitudes toward homosexuality largely divide along how the authority of Torah and *halakhah* are interpreted. Within the North American Jewish community, Orthodox Judaism continues to proscribe all acceptance of homosexuality. Conservative Judaism expresses concern for gay and lesbian Jews and individuals, and supports civil rights for homosexuals while continuing to maintain heterosexuality as the norm and prohibiting openly homosexual rabbis and cantors. Reform and Reconstructionist Judaism largely accept gay and lesbian Jews, including as rabbis and cantors, and several gay and lesbian synagogues and Jewish associations have formed in recent years.

Integrating its Hebrew roots with Greek, Latin and pagan influences, Christianity has shaped much of the moral and theological debates about homosexuality in Western society and religion. These arguments typically draw on either the Christian biblical-theological tradition or the Western philosophical tradition, or both, to argue that only heterosexual relationships (usually within monogamous marriage) can be accepted as moral, natural, and within God’s plan for humankind. Contrary to popular belief that Christianity has always been hostile to homosexuality, however, historian John Boswell has documented a wide spectrum of attitudes and practices within the Christian churches and cultures prior to modern times. These include a long tradition of Christian liturgies celebrating same-sex unions in pre-modern Europe – in many cases long before similar heterosexual marriage ceremonies were practiced within the Christian Church (marriage within the Christian Roman Empire was largely a civil practice outside the Church through at least the first ten centuries).

Roman Catholicism, the oldest of the Western branches

of Christianity, combines biblical interpretation with natural law to declare homosexuality unnatural and all homosexual behavior sinful. The primary New Testament text supporting this position is Paul’s letter to the Romans where he writes about the Gentiles and their idolatrous behavior:

For this reason God gave them up to dishonorable passions. Their women exchanged natural relations for unnatural, and the men likewise gave up natural relations with women and were consumed with passion for one another, men committing shameful acts with men and receiving in their own persons the due penalty for their error (Rom. 1:26–27).

Catholic moral theology has followed Aquinas’ emphasis on natural law and declared all non-procreative sexual acts unnatural, including bestiality, homosexuality, and masturbation. With changing views of science that now largely see homosexuality as a natural expression of sexual diversity in human cultures, some Catholic theologians develop theological arguments based on natural law and contemporary science to argue for the full inclusion of gay and lesbian persons within Church and society.

While today the Roman Catholic, Orthodox, and Conservative Protestant churches largely continue to reject all forms of homosexuality, mainline Protestantism has been engulfed with debates on such issues as ordination of homosexuals and the blessing of same-sex unions. Some denominations, including the United Church of Christ and Unitarian-Universalism, have moved to a theological-ethical stance of full inclusion of their lesbian, gay, bisexual, and transgendered members and advocate for their full inclusion in society. These Christian communities ordain openly gay and lesbian persons and often recognize and celebrate same-sex unions. Other mainline Protestant denominations such as Presbyterian, Lutheran, and Methodist, advocate for civil rights for homosexuals while remaining deeply divided over issues of ordination and same-sex marriage within their denominations.

Islam is perhaps the most consistent of the three Abrahamic traditions in its rejection and condemnation of homosexuality. Its primary source, the Qur’an, is understood to have been revealed directly to Muhammad and thus to be uncontestable, and it is explicit in its condemnation of homosexuality as outside Allah’s will for humanity. Drawing on the biblical tradition of Lot and the destruction of the cities of Sodom and Gomorrah, homosexuals are termed *qawm Lut*, Lot’s people. About them the Qur’an records “How can you lust for males, of all creatures in the world, and leave those whom God has created you as your mates. You are really going beyond all limits” (26:165–166). The Prophet Muhammad is reported to have said in his “Farewell Sermon,”

Whoever has intercourse with a woman and penetrates her rectum, or with a man, or with a boy, will appear on the Last Day stinking worse than a corpse; people will find him unbearable until he enters hell fire, and God will cancel all his good deeds.

Islam considers itself to be the true religion of nature that all humans should adhere to, and homosexuality therefore is a violation of the laws of nature. Islam puts a strong emphasis on heterosexual marriage, and abhors celibacy. The *shari'a* or Islamic law considers homosexuality not only a sin, but also a crime. But the standard of evidence required to be convicted of the crime of homosexuality is extremely high – as long as one is not public in one's homosexual behavior or identity, there may be a great deal of tolerance for what goes on in private in many Islamic societies. Hence, as long as homosexual persons are heterosexually married and discrete about their homosexual identity and behavior, most find a degree of tolerance within Islam.

Comparatively less scholarly work has been done on the question of homosexuality in Eastern religions, and particularly of lesbianism, but the broad pattern seems to be tolerance of varieties of human sexual expression. Hinduism scholar Arvind Sharma has surveyed Hindu texts and the scholarly literature and concluded that classical Hinduism saw homosexuality as a matter of marginal concern. Because of subsequent and often negative contact with outside groups, medieval and modern Hinduism has tended to associate homosexuality with outsiders and in a largely negative light. With the rise of modern Hindu nationalism, homosexuality typically has been associated with the British and Muslim dominant minorities to be overcome, and hence a negative facet of Hindu life.

Buddhism scholar Jose Ignacio Cabezon argues that despite the historical and geographic diversity of Buddhism, on the whole Buddhism has been mostly neutral on the question of homosexuality. The principal question in Buddhism has been one of sexuality versus celibacy, rather than heterosexuality versus homosexuality; where homosexuality has been condemned it has usually been for involving sexual desire rather than for involving partners of the same sex. In contrast to Buddhist doctrine, however, the cultures within which Buddhism has flourished have varied widely in their attitudes toward homosexuality, and Buddhist tradition has tended to reflect the particular socio-cultural norms where it is found.

Generally tolerant attitudes toward homosexual activity interspersed with occasional periods of sexual repression seem to characterize the histories of both China and Japan. Both cultures record long histories of homosexual behavior and same-sex love. In China, primary reservations about homosexuality stemmed largely from Confucianism's concern for family and social stability and

continuity, and with Daoism's concern for balancing yin and yang energies in sexual intercourse. Japanese culture has been far more embracing of the diversity of human sexual expression, including same-sex behavior. Long associated with the warrior samurai class, male homosexuality was termed "Love in the Satsuma way," a reference to the locale where military training went together with homosexual practices. Shintoism's life-affirming worldview and lack of a detailed moral code, together with a cultural focus more on pollution (coming from contact with a woman) rather than sin, seem to lie behind Japan's generally liberal outlook on sexuality.

Finally, nature plays an important role in the spirituality and religious practices of many contemporary lesbian, gay, bisexual and transgendered persons in modern society. Reclaiming the body and the erotic within nature is seen as central to these emerging traditions, as it is to many radical environmentalists who argue that human cultures will never reharmonize life on Earth until we overturn repressive and misguided restrictions on eros. Within both communities, embracing homosexuality, bisexuality, androgyny and transgender are seen as key to a future that is both ecologically sustainable and socially just. Within gay and lesbian Earth-based spiritualities, sex itself is experienced as sacramental, connecting oneself to nature, others, and a sense of the divine. Among gay men, the Radical Faeries movement began in the 1970s as an effort to reclaim gay identity from both the cultural mainstream and the mainstream gay movement. Closely identified with nature, Radical Faeries reclaim sexuality and ecstasy as central to spirituality and gay identity, while critiquing the often hypermasculine gender identity of the mainstream gay male "clone" culture. Similarly many lesbian communities rooted in nature have embraced Wicca or other Earth-based and ecofeminist spiritualities as a way to ground their lesbian identities in the Earth. These radical communities in turn have influenced many lesbian, gay, bisexual and transgendered persons who continue within more traditional and mainstream religious communities, leading to the possibility of the transformation of these traditions to be more embracing of nature and the diversity of the Earth's inhabitants as central to their religious identities.

Daniel T. Spencer

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- See also: Dirt; Sexuality and Ecospirituality; Sexuality and Green Consciousness.

Hopi – See Black Mesa; Greenpeace; Hopi-Navajo Land Dispute; Hopiland to the Rainforest Action Network.

Hopi-Navajo Land Dispute

"Welcome to Jerusalem," opened the Hopi Tribal attorney. "... We have a very serious problem where both religions are coming up against one another ..." The religions: those of the Hopi and Navajo peoples. The occasion: a hearing before the Ninth Circuit Court of Appeals in San Francisco. The context: *Jenny Manybeads et al v. United States of America et al*, one of many lawsuits filed in the near forty-year litigious history of the Hopi-Navajo land dispute.

The "dispute" concerns arid desert land, sparsely forested with pinyon and juniper, supporting grasses, forbs and shrubs such as greasewood, winterfat, and rabbit brush. It provides poor but sustainable grazing land for cattle, sheep and goats. Occasional pockets of trapped ground water and flood plains provide farming opportunities in desert-adapted corn, beans, squash, melons and fruit trees. Willow, tamarisk and Russian olive line streambeds, dry except in the summer monsoon season when they carry flash floods. Huge deposits of coal, gas, oil, and uranium underlie the entire region. The Hopi and Navajo Tribal governments share ownership of the minerals. But legal jurisdiction over the surface area and

rights to use its sparse resources constitute the subject of contested histories and competing definitions of community, personhood, and cosmology.

History

Created in 1868, the Navajo Reservation has its western boundary in Hopi country. The Hopi Reservation was not created until 1882. After 1884, the government expanded the boundaries of the Navajo reservation so that by 1934 the 25,000 square-mile Navajos surrounded Hopi land on four sides. Navajos' land base had increased, but not enough. Navajos, who numbered close to 200,000 by 1970, moved onto the Hopi Reservation, competing with the 10,000 Hopis for grazing land.

In implementing stock reduction to reverse erosion, the Government divided the Hopi and Navajo reservations into twenty grazing districts and assigned all but three of them completely to Navajos. Although in theory the "Hopi Reservation" comprised 2.45 million acres, Hopi jurisdiction was limited to one district, covering only 624,064 acres; Navajos were granted permits to live and graze their livestock everywhere else.

In 1961, a federal court ruled that each Tribe had "joint, equal, and undivided" possession to the surface as well as the subsurface (the minerals) property of the 1882 Reservation outside District Six, 1,822,000 acres. This area subsequently became known as the Joint Use Area, or JUA. But in fact, Navajos continued to exercise exclusive use and control of the JUA for all practical purposes. Hopis lodged protests.

In 1977, a mediator appointed by the U.S. Government divided the "JUA" into two areas: the Hopi area – 905,000 acres – Hopi Partitioned Lands, or HPL; and the 922,000 Navajo acres – NPL, Navajo Partitioned Lands. Hopis and Navajos on the "wrong" side of the partition line had to move.

Life and Land

Hopis live in nuclear family households and in thirteen compact settlements. At birth, each child's umbilical cord should be placed in the mud-and-brush ceiling. Few houses have been built with these traditional ceilings since the 1930s. Within a village, a larger group of people, a matrilineal clan, collectively own houses and use rights to farm land. A clan or family's farming and grazing land are located outside the village, often as far as ten miles distant.

In contrast, each of the several dozen Navajo communities on the HPL portion of the JUA consisted of three or four households, usually representing three generations, related through parental or brother-sister ties. At birth, every child's umbilical cord is buried near the home. Farm land and grazing land are located nearby, although a spouse's grazing land might be located in a distant community.

The Religious Factor: Hopi

Living side by side for three centuries, the Hopi and Navajo honor parallel, but distinctly different, worldviews and ritual commitments. Hopis may cooperate in planting and harvesting, but their main sense of community comes from collectively owning one or more rituals, along with ritual items. Rituals are performed by a group of persons specially recruited and initiated who are, for the most part, not members of the clan that owns the ritual. The groups perform the rituals in specially constructed chambers, kivas, owned by one of the clans that owns one of the ceremonies conducted in it. Nearly every ritual includes some public performances that are attended by most, if not all, members of the village. Thus, Hopis within a village are tied together in solidarity by a complex warp and weft of clan and ritual ties.

Hopi religion revolves around “duty” and land, although Hopis do not have a word for “religion” *per se*. Rather, Hopis speak of wiimi “religious rites to which one is initiated,” navoti (“teachings, traditions”), and tumala, “responsibility,” that mandate performing rituals and maintaining clan identity. Part of that responsibility entails stewardship of the area within boundaries marked by stone ruins of villages no longer inhabited and by shrines. Hopis claim an aboriginal territory bounded by Tusak Choma (San Francisco Peaks); Po ta ve taka, Polungaoihoya, Nei yavu (Lolomai Point, Grand Canyon); Tokonavi and Ky westima (Betatakin Ruin); and Tsi mun tu qui (Woodruff Butte). Various shrines, at the boundaries and inside them, constitute pilgrimage areas. Some of these shrines are associated with springs, while others are known by location and marked only by the depositing of prayer feathers. The area marked by all of these shrines is much larger than the Hopi Reservation. It includes shrines in national forests, on private land, and on the Navajo Reservation. A number of shrine areas are nesting areas, where Hopis go at a certain time of year to secure young eagles and hawks necessary for ceremonies. Ancestral ties to material surroundings stretch back centuries. Not to periodically venerate these shrines would be to shirk important duties.

Destruction and desecration threaten shrines. A century of tourists hiking the “Hopi Salt Trail” in the Grand Canyon, disregarding shrines and offerings deposited at them, led the Park Service to close the area to all but authorized Hopi priests in the 1980s. Peabody Coal Company has operated a gargantuan strip mine on Black Mesa, within Hopis’ shrine area, since 1968, under leases from the Hopi and Navajo Tribal Councils. Opposing the mining at the time, many Hopis still feel that despite the income to the Tribal government, the lease was a big mistake. Tsi mun tu qui, Woodruff Butte, has been in private, non-Hopi ownership for decades. Recently turned into a gravel mine, the top of the butte was dynamited and five of six shrines were destroyed in the process.

The Religious Factor: Navajo

Navajos also do not have a specific word meaning “religion.” Rather, traditional Navajo “religion” centers around maintaining hozho, “harmony.” Illness stems from hocho, “ugly conditions,” the opposite of harmony. To remove hocho and restore balance, a ceremony, a “chant,” must be conducted by a ritual specialist, a “singer.” The singer must use appropriate materials. Because nearly everyone needs several chants during his or her lifetime, many individuals maintain an “Earth bundle” of appropriate materials, gathered from near home, for this purpose.

The chant is held in a Hogan. Although Hogans were formerly used as dwellings and for ritual purposes, now nearly all Hogans are constructed specifically as ceremonial chambers and are blessed by a singer. The Hogan represents the world and its elements. Navajos sometimes compare the sky to the ceiling of an immense Hogan; the Earth is its floor. Thus the round ceiling of an actual Hogan is the sky and the Hogan floor is the Earth. When a singer performs a ritual, the singer does so within a microcosm representing the universe. Chants last at least two and often five or nine nights. Although only the singer, the patient, and a few close relatives participate in the rituals, dozens of relatives come to supply moral support and food. Thus, a sing entails much preparation, including construction of temporary structures to shelter the visitors, and many people.

The Dispute and Relocation

After division of the “JUA” in 1977, Government crews began demarcating the line by constructing a fence. Elderly Navajos in the isolated Navajo community of Big Mountain resisted the fencing, and their cause became publicized and celebrated nationally and internationally. Supporters came to Big Mountain from urban areas, undertaking what amounted to pilgrimages to assist what they perceived as a handful of Navajo elders resisting destruction of their lives. The late 1970s and early 1980s saw the peaking of the “deep ecology” movement, which searched not only for solutions to environmental problems, but also for models for how to live a renewable, sustainable, “low-tech” lifestyle. What Navajos in the remote communities lived with from necessity – one- or two-room houses shaded by willows and surrounded with sage; unpaved roads; juniper and pinyon as cooking and heating fuels; meat from range-fed livestock; careful husbanding of water – urban-dwellers saw as a desirable and appropriate lifestyle. The politics of resistance to relocation became increasingly linked with religion and life in a particular ecosystem.

Conclusion

Relocation proceeds inexorably, but some Navajos still refuse to move. A further complication entails the Sun

Dance. Brought to the Navajos on the JUA by Lakota ritual specialists in the 1970s, the annual “Big Mountain Sun Dance” emphasizes community solidarity as well as personal commitment and sacrifice and attracts hundreds of participants. In a dubious demonstration of its sovereignty over HPL, the Hopi Tribal Government ordered the area bulldozed shortly after conclusion of the 2001 ceremony, outraging many people, including some Hopis.

Hopis and Navajos have not always been at odds over religious land. In the 1970s, they united to oppose the construction of a second ski resort on Tusak Choma, the San Francisco Peaks. The opposition was unsuccessful. But tribal jurisdiction on Tusak Choma did not exist and was never a possibility. Regarding the fraction of their “shrine” over which Hopis now have jurisdiction, attorneys referenced “Jerusalem” to raise questions of definition and access: whose religion ultimately defines sacred places? Does mandatory relocation impair a Navajo’s ability to practice religion in specific ways because it requires irrevocably abandoning the Hogan where ceremonies are conducted, where a person’s umbilical cord is buried, and where materials for Earth bundles are obtained? Do continued use and occupancy of ancestral Hopi land and shrine areas by Navajos impair Hopis’ ability to practice their religion? Despite mediation in the 1990s and congressional legislation enacted in 1996 purporting to settle it, the dispute, whether phrased in historical, economic, or religious terms, persists.

Richard O. Clemmer

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- See also: Black Mesa; Hopiland to Rainforest Action Network; Law, Religion, and Native American Land.

P Hopiland to the Rainforest Action Network

From West Virginia to Hopiland

In the contemporary world of my youth, religion and nature were separate, though both were a part of my life. From birth to age eight I grew up enjoying the four seasons and the forests of West Virginia. At year eight, we moved to Central Florida where the swamps became the playgrounds of my explorations and adventures. My great-grandmother deeply influenced these outdoor reveries. She was half Blackfoot Indian and wonderful to me. With childlike wonder I often pranced through these forests and swamps, pondering what it would have been like to be Indian. As a “half-breed” in a white-dominated society, she didn’t talk much about her Indian heritage. Still, my West Virginia family was somewhat clanlike, even tribal. Mystery and intuition seemed to permeate my youth. The mothers, grandmothers, and great-grandmother of our family would often state who was calling on the phone before anyone had a chance to answer it. They were usually right. They often declared the gender of the upcoming baby. This was before modern methods of testing. My religious upbringing was Protestant, the First Christian Church. I went most Sundays as a kid and enjoyed it. However, I don’t recall any significant references to nature or to God’s earthly creations. In church, sacred was a term that had little meaning for me. What I do remember is looking out the church window a lot and seeing the beautiful and mysterious Spanish moss hanging from the scrub-oak trees. The natural world moved me, and although I thought church interesting, it held no spirit for me. Much later, after college, I moved west, spending time over the next ten years with the Elders of Hopi Nation. At that time, sacred came to mean something that was both pragmatic and profound. This redefinition of sacred has influenced all my work since then, whether in the world’s tropical rainforests, or in the corporate boardrooms where I negotiate on behalf of Mother Earth as the President of the Rainforest Action Network.

In college (1968–1973) there were many classes, of course, but college life in these years was also about sex, drugs, and rock and roll. Yet, there was an additional element to those times – cosmic consciousness. Janis Joplin and others sang about it. And we read a great deal about it in the popular works about native people like Black Elk, Lamé Deer, and Don Juan. I did well in school learning the usual things, but by my senior year I was questing for a more spiritual connection. A college friend suggested I go to a poetry reading by Gary Snyder. I did and became enamored with the California/beat movement. Snyder knew a lot about things I cared about.

Soon after this encounter, after a yoga class my instructor told me, “I see you going west and working with

the Indians.” I don’t know if he was prophetic or if I just liked the idea but I soon went west and landed in the former beat enclave, and now artist/tourist town, of Sausalito.

In California I took a yoga class from the teacher of my teacher. There I met a likable yoga student named Tom Styles, who in a way stereotypically Californian later became Swami Mukunda. Styles had been researching a college thesis on crosscultural prophecies, and when he invited me to go with him to some Indian land near the Grand Canyon, I was happy to go. I did not at the time know the name of the tribe, but he led me to my unique and rewarding decade with the Hopi elders.

The Hopi

The Hopi have lived for at least ten thousand years (*they* say a lot more) on Black Mesa, the Colorado Plateau of the Southwestern United States, in an area the size of the state of West Virginia. The Hopi villages are just north of the Painted Desert and east of the Grand Canyon at the south end of Black Mesa. I was not an understudy to any spiritual leader or medicine person but worked more as secretary and driver for the elders. From them and the high desert of Hopiland I learned much. The elders would often say that white people have tribal wisdom if they would just go back in their own histories. They put the onus of discovery right back on me. It was probably a way to not have to answer too many stupid questions, but nevertheless, I learned many lessons, including that the laws of nature are final and have absolute authority governing this Earth. Natural laws will prevail regardless of man-made laws or governments. When we disturb the cycles of nature by interfering with the natural elements, destroying species of life, or changing species of life, the consequences may be immediate, or may fall upon our children, or our children’s children, but we will suffer and pay for our mistakes.

Hopis say that we human beings are charged with the responsibility of working for the continuation of all life. Our fate is intertwined with one another; what affects one affects all. Euro-American domination and destruction of nature as well as of indigenous ways continues. To alter this course, Westerners would do well to seek advice from and cooperate with indigenous people.

The Hopi tribe did not just survive for thousands of years as desert farmers. They developed a high culture and one that can help us with issues of ecological sustainability and peace. I am honored to stand in solidarity with nature based on the Hopi tribal perspective. It is work to maintain their land and the natural ways of life. Hopi, as well as other tribal cultures, would often say that their work is to help hold the world in balance. That phrase means something I do not fully understand, but I know it relates to an annual set of ceremonies.

Hopiland as my Seed Time

It was in 1973 that Tom Styles and I left Sausalito around midnight one evening and made it to the south rim of the Grand Canyon around sunset. The descending sun cast shadows over red rock walls. We drove into the Hopi Nation to the village of Old Oraibi. A dirt road heads south to Oraibi off of the only paved road in Hopiland. Oraibi is the oldest continually inhabited village in North America. Just outside of Oraibi we came to a sign that said essentially, “Warning white man. Because you cannot obey your own laws, let alone ours, you are hereby prohibited from entering this village.” The night was upon us and we camped next to the sign along the road. We did yoga atop nearby rocks and hoped that some Indian blasting by in a pick-up truck would invite us in. The Milky Way was stellar and we could hear the drumbeat from a ceremony going on in this forbidden village. We were left in the dust that night, but the next day was a different story.

Somehow Yoga Tom knew the names of several of the elders. We were soon at the next village of Kyakotsmovi, knocking on the door of Thomas Banyacya’s adobe and cinderblock house. Thomas, I was to learn, was not a medicine man, but he was from the Coyote Clan. Coyotes are barkers. His role was one of spreading the word about Hopi relationship with nature and their message of peace. Fermina Banyacya, a Bear Clan woman, answered the door. She was gracious regarding our many undoubtedly naive questions. I was 23 years old, and spellbound by her singsong voice, beauty, and what she had to say about nature and future and purpose. Her demeanor harkened back to my great-grandmother. Eventually, she invited us in. To this day she remains a friend. From Fermina and many other Hopi I came to my deeper understanding of sacred.

When the Hopi talked about the Great Spirit or the many spirits in nature it had a ring of authenticity that I did not experience in the First Christian Church. I would stay for weeks at Hopi, often shuttling elders around to community meetings. The meetings were often about the government trying to put electricity lines in some of the villages or about coal and uranium mining on their ancestral lands. These were the lands they had been charged with protecting. They had the responsibility of maintaining the cycles and fecundity of nature. It was a difficult time for them, and they still struggle with these imposed conflicts. I was going back and forth to California from Hopiland, many times a year at this point, a pattern I repeated for an entire decade. The Hopi Elders with whom I worked eventually realized I was earnest about wanting to help the Earth and support native peoples.

After many years there, one rather common-looking old man revealed to me that he was a Snake Priest. He spoke of how the snake was a communicator between the minerals in the Earth’s crust and the climate-making aspects of the atmosphere. Snakes are often painted as

lightning strikes in Hopi art, traveling between the sky and the land. The Snake Priest explained to me, though I doubted him at the time, that lightning strikes not just from the sky to the Earth, but from the Earth to the sky.

At such times I could sense the importance of their oral traditions. Their method of learning included one of trial-and-error experimentation, just as we do in Western science. Learning occurs while living in the same desert home over generations, and is transmitted over thousands of years. This is why they know so much about the ways of the plants and animals, and the land and sky.

The medicine person, it seemed to me, was more of a scientist than a magician. The Hopi Snake Priest stood amidst a library and lineage of teachers. That is not to say that one doesn't learn through intuition. At Hopi, I believe, everyone is intuitive and something of a medicine person. Some are better at it than others or have a sub-set of special gifts, but in Hopi Culture, the line between science and intuition are relatively indistinguishable.

Some lessons seep into your soul slowly and expressing them in words is difficult, but I'll try. When a plant, insect, or animal is killed or perhaps the entire species goes extinct, this is tragic. But, that loss is more than the loss of a sentient being or species. Its function in the web of life is lost as well. Certain species or certain aspects of nature have a special function in the web, and the loss of that function weakens the Whole, subsequently reducing Earth's resilience to the human onslaught on destruction. The following example is mundane, but in our Euro-American culture we know about the special function of the canary in the coal mine. When the canary dies, the air is so foul that you had better vacate or make some change fast. The functionality of many things in nature can be very specific and can relate to life-and-death issues. These special functional places or aspects might be a certain mountaintop, a water spring, or a rattlesnake in an electrical storm. It can even be something invisible to us like a line of energy running through a village like Hotevilla just east of Old Oraibi. These are sacred sites or sacred animals to the Hopi and to many indigenous peoples including those in the Amazon rainforests. Knowledge about the sacred/functional is passed on by the priests, or in the case of the Hopis, by certain people initiated into one of the many clans like the One Horn or Two Horn Kachina (nature spirit) Clans. Some of the knowledge can come directly from a person's sensitivity to nature and nature's ways. Even a sacred feather placed near a Kiva (underground ceremonial chamber) can be of great significance perhaps in helping keep the world in balance. As I was not an understudy I can say little more about these matters.

One doesn't necessarily need to know a lot about these things to know one should desire to protect the natural world. And it isn't just sacred sites that must be protected. When asked once to draw a circle around a sacred site, the

Hopi just shook their heads and walked away. They told me later that such a line would convey that anything outside the circle was not sacred. An isolated spot in the web of life cannot be saved without maintaining the entirety of it.

From Hopiland to the Rainforest Action Network

Such are the lessons of Hopi that I bring into my current work. The Rainforest Action Network, co-founded with the Earth First! hero Mike Roselle, is a forest protection group, but it is also a human rights group with a focus on the rights of native peoples. As we all know, the people in some governments and giant corporations are profiting at the expense of nature, indigenous peoples, and future generations. The web of life we call the biosphere is being dangerously shredded. Climate change and what scientists now call extreme weather events mark a particularly precarious moment in human history. At Rainforest Action Network we call these extreme weather events "eco-spasms." The biosphere, Mother Earth, is becoming spastic. Ecological spasms show up as gigantic hurricanes of greater force than we have ever seen before. They include tornadoes occurring in places that have never seen them before. The forces degrading ancient forests and native peoples are many. They include industrial invasion of agribusiness, toxic waste, uranium mining, timber cutting, cattle ranching, and unfortunately, racism. But, individuals and movements have arisen to address and reverse such problems.

A clear set of principles and policies around which we can build a better world is emerging that starts with giving honor to the laws of nature. The new global movement gathers annually at the World Social Forum (WSF), among other places. That event started in year 2000. The WSF has had three annual gatherings in Puerto Alegre, Brazil. India will host the 2004 gathering. These efforts will continue to invite the widest possible participation.

The Hopi speak about a window of opportunity where the age of appropriate technology (the marriage of the circle and the cross, but that is another story) can come about. At Hopi there is a petroglyph on a sandstone rock that shows healthy corn plants in the future and the possibility of hope for all life. Hopi say this won't necessarily be our future, but it could be. It depends on what we all do to help shape that course. It is fair to ask the key question, can we rally to the task in time? Can we rally on a scale commensurate with the problem and the urgency?

Another lesson I learned at Hopi has to do with prophecy. Prophecy, I surmise, is what people of European heritage call what the Hopi elders see as supposition or projection based on a combination of human nature and probability or trend. As the elders often told me with a chuckle, prophecy is far easier to declare after events have occurred. The marriage of religion (spirituality) and nature has not been completely lost. It can and must be restored.

When you dedicate yourself to nature's needs, there is mystery and providence in the journey.

Though we may come from different cultural, economic, and racial backgrounds and though we will not agree on everything, we can cooperate, share honestly, and work with one another in respect. Again, a broad-based movement to protect nature, develop just societies, and halt the demise of native peoples exists. It is growing. At the Rainforest Action Network we know that we must be a part of these efforts and we hope you will be as well.

Randy Hayes

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Randy Hayes also directed the award-winning film *The Four Corners, A National Sacrifice Area*. The film won the Academy of Motion Picture Arts and Sciences award for "Best Student Documentary" in 1983. This epic film documents the tragic effects of uranium and coal mining on Hopi and Navajo tribal lands in the American Southwest.

See also: Beat Generation Writers; Black Mesa; Earth First! and the Earth Liberation Front; Greenpeace; Radical Environmentalism; Snyder, Gary.

Hopkins, Gerard Manley (1844–1889)

A Jesuit priest born in mid-Victorian England, Gerard Manley Hopkins composed some of world's most vivid nature poetry. Unknown during his lifetime, his highly distinctive work was first published in 1918 and is now considered a major literary achievement. Hopkins' influential contribution to the religious nature lyric tradition features striking stylistic and technical virtuosity, acute descriptive observation, and an urgent eco-poetical consecration of wild nature.

A star student and promising young poet at Oxford in the 1860s, Hopkins was converted there to Roman Catholicism, and afterwards became a priest of the Society of Jesus. For several years he renounced verse-making as an aesthetic pastime inconsistent with his religious vocation. But in 1875 he abruptly resumed composition and began privately producing, for the eyes of a few literary friends, a remarkable new kind of poetry chiefly representing human obligations and response to a natural world deeply infused with specific religious and theological meaning: "news of God." Evidently this newly "prophetic" approach was the justification for an otherwise unaccountable change of mind regarding the religious value of writing.

Hopkins' letters and journals record the attentive habits of a lifelong amateur field naturalist and artist, as well as his horror at wanton environmental despoliation by an industrial society "founded on wrecking." But it is in much of the best poetry itself that he affirms, to an unusual degree among Christian writers of his or any era, the mutual interdependence of humanity and created nature and the inter-implication of our own salvation with its survival.

Of particular interest, then, are Hopkins' poems that do associate God and humankind and the Earth in ecological terms. Of these, the best known is perhaps the sonnet "God's Grandeur," a lament for a world obscured from us by industrial commerce: "All is smeared with trade, bleared, seared with toil / And wears man's smudge and shares man's smell" (Hopkins in MacKenzie 1990: 139). We can no longer discern or detect what lies beneath the burnt, begrimed, oily, stinking surface of modern things. Still, the poem also testifies to the divine "charge" of meaning in the physical world. Something resilient, a "dearest freshness," still "lives" somewhere "deep down" under the now "spent" and blighted surface of creation, and it abides in "things." The basis for this hope, the firm "Because" of it, is faith in a divine spirit, the "Holy Ghost," its life principle. Implicit here is something more active, or even activist, than passively trusting in God. The breath of the Holy Ghost is also traditionally charged with the function of inspiring language and utterance, the words of poets, prophets, priests, and possibly all of us, and by this agency possibly to animate the human world to action, to sound the alarm, as it were.

Another eco-lyric, "Ribblesdale," confirms that writing poetry was justified, for Hopkins, by its exertions in response to and on behalf of suffering Earth's voiceless appeal. This poem also resumes the "God's Grandeur" motifs of wrecking, of spending, of "bentness," and of the bareness of the Earth's once lush surface. In this instance, the visibly wronged being of Earth is said to plead silently (or by implication through the voice of poets?) to "self-bent" and "thriftless" humankind.

Confirming Hopkins' perceptual or even epistemological emphasis on the consequences of destroying nature is another lyric, "Binsey Poplars." Here the fragility, the delicacy of nature is more than "sweet." In some mysterious way we depend upon it. We know not what we do when we dig, cut, hack, and rack, or imagine we are somehow improving a world whose very "being" is actually as sensitive to permanent injury as our own translucent eyeball tissue ("But a prick will make no eye at all") (in MacKenzie 1990: 157). Here again is the ominous cycle of violence and self-blinding, with the enigmatic implication that the consequences for ourselves are, if anything, greater than for the physical world itself. The poem's most important warning is about losing access to channels of knowledge and understanding. Hopkins

clearly connects an ethic of conservation with the means and prospects for our own salvation.

Among the many other religious nature poems by Hopkins that include similar elements are "The Starlight Night," "Spring," "The Sea and the Skylark," "As Kingfishers Catch Fire," "Pied Beauty," "Hurrahing in Harvest," "Spelt from Sibyl's Leaves," and "That Nature is a Heraclitean Fire."

The famous nature poems of Hopkins demonstrate the urgency with which he seized upon ecological contexts as an essentially religious impetus or imperative for his suddenly renewed poetic mission. The world would otherwise probably not have had his poetry at all.

Michael D. Moore

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See also: Roman Catholic Religious Orders.

Huaorani

World Creation and Predatory Forces

One of the greatest problems with Tylor's view of animism, according to Nurid Bird-David, is its monolithic character. She argues instead for a plurality of animisms: different belief systems conceptualize "life," "non-living" and "human" in fundamentally different ways. Exploring the animism of a forest people from the Ecuadorian Amazon, the Huaorani, who have lived between the Napo and the Curaray Rivers and from the Andean foothills to the Peruvian border for hundreds of years, indicates the value of such an approach.

There are no words in *huao terero*, "the language of the true people," corresponding to nature, ecology, religion, animals or plants. Like most Amazonian societies, and most indigenous societies, the Huaorani do not conceptualize the world in abstract, reified categories that separate the body from the mind, belief from perception, or human society from the nonhuman environment. "Our homeland," "our territory," the rainforest or nature is *monito òmè*. Within *monito òmè*, people distinguish pristine forests with high and old trees (*òmere*) and secondary forests, defined as "places where trees have grown again" (*ahuene*). Successional fallows are further divided into

huiyencore (four- to ten-year-old clearings characterized by the frequency of balsa trees), *huyenco* (ten- to twenty-year-old clearings), *huiñeme* (twenty- to forty-year-old clearings characterized by the high incidence of adult palms), and *durani ahuè* (forty- to a hundred-year-old clearings remarkable for their bigger trees). Huaorani ecology is primarily based on specific plant/animal relationships and on people's experience of how different plant species grow, mature and reproduce. Animals are identified and named at species level, although, when pushed by an inquisitive researcher, a Huaorani may use the name of an iconic species to define broad categories such as fish, primates, or birds.

Huaorani territory is not definable from without as a well-demarcated space bounded by clear limits on all sides. It is, rather, a fluid and ever-evolving network of paths used by people when "walking in the forest" (*òmere gomonipa*). Men, women and children spend a great part of their lives slowly exploring *monito òmè*. They hunt and gather but they also simply *walk*, observing with pleasure and interest animal movements, the progress of fruit maturation, or vegetation growth. When walking in this fashion, people feel in and *with* the forest, their bodies absorbing its smells. Walkers keep these paths open through many small and careful gestures, such as the picking up of a thorny leaf fallen during the night, the breaking of bending branches, or the cutting of invasive weeds. As soon as they have fallen into disuse, paths revert to forest, indistinguishable from the vegetation cover. Well-trodden paths located at strategic intersections become the repositories of traumatic memories in the same way as physical landmarks (i.e., creeks, particularly tall and old trees, lagoons, or hill formations) recall bloody attacks or spearing raids. Other paths form a network criss-crossing unknown or forgotten land; they lead to exciting discoveries, especially food plants said to have been planted by past people. Trekking in the forest is therefore like walking through a living history book in which natural history and human history merge seamlessly. Walkers, while maintaining the paths, move from direct observations of animals or people to detecting their presence; they also note material signs evoking times long gone.

Life as a continuous process involving the right combination of elements and species is central to Huaorani spirituality. Their social life, knowledge of the world, and cultural understanding are all inspired by the life-force and energy characteristic of all organisms – especially plants – which caused them to be born, grow and mature. This energy, in a sense, has authored their lives. The myth of origin, which develops around the giant ceibo tree (*Ceiba pentrandia*), container of all life forms, expresses the fundamental characteristics of the Amazon ecosystem, which largely depend on a delicate balance between heat and humidity, and shade and light.

In the beginnings of time the Earth was flat; there were no forests or hills, moon or night. The Earth was like a dried, barren, and endless beach, stranded at the foot of a giant ceibo tree. This tree, attached to heaven by a strong vine, was the only source of shade against the merciless heat of the sun. All that was alive dwelled in the giant tree. In those times of beginning, living beings, neither animals or humans, formed one single group, with the exception of birds (doves), the only game available to hunters. There were also two dangerous individuals, Eagle (raw meat eater) and Condor (eater of rotten flesh), who preyed on people and doves alike. Life in the giant ceibo would have been good, if it had not been for the two predators. Every time someone left home, Eagle or Condor would descend on their victim, kill her and take her back to the nest on the highest branch. The victim's relatives would hear in grief the noises of the cannibal repast, and see the bones of their dear kin fall to the ground, one after the other. At last, Squirrel and Spider decided to take action and put an end to this dreadful business. They climbed one day to the very top of the tree, where Eagle had fallen into a deep sleep after one of his copious meals. Spider wove a tight and intricate web all around Eagle's body. Eagle remained unaware of the snare until the following day when he attempted to swoop down on his next prey. He was soon seen hanging upside down, his head swinging in the air. Squirrel's plan was to detach him and let him crash to the ground, like a dead log, but the maneuver went wrong. Instead of cutting the web off the branch, Squirrel's teeth incised the vine linking the tree to the sky. The vine sprang up, with Squirrel still biting on its end, causing the giant tree to fall westward all the way to the ground. Squirrel's tail can still be seen in the sky, especially on the bright nights that precede heavy rains, where it glows like a fluffy trail of golden dust. The Amazon watershed was born from the fallen tree, and numerous fish species from its leaves. Before the fall, there was only scarce rain avidly collected in small clay pots. During the fall, the plug which blocked the underground waters loosened up from the giant tree's roots, causing the country to be submerged under an enormous flooding which killed almost everything in its wake. A few people survived by taking refuge in a hollow branch in which they made their way up river. They died of exhaustion, except for a brother and a sister, who became husband and wife. By flying over the immense flood plain, Woodpecker succeeded in lifting hills out of the sea of mud. Forests soon covered the hills, in which the first Huaorani found refuge, dwelled, multiplied and grew numerous (in Rival 1997: 69–70).

Although the correlation between mythology and society is far from direct or straightforward, there are grounds for arguing that the Huaorani myth of origin expresses the fundamental characteristics of the Amazon ecosystem. There would be no life on Earth without trees, as they provide shade, food and shelter, and prompt rain formation. The primordial tree is a small ecosystem in itself, and the world expands when this perfectly self-contained microcosm collapses, giving birth to a new ecosystem, which is as integrated and self-generative as the primordial tree. The story of the fall of the great ceibo tree unambiguously belongs to the Cosmic Tree religious complex. Like in a number of ancient religions founded on the sacred tree of life, the Huaorani cosmic tree represents the central axis around which the universe is ordered. The myth of origin articulates another powerful message, which associates social categories with two distinct natural processes: the aggressive relation between predators and their prey, as found in the animal kingdom, and the life-sustaining relation between people and forest plants.

Hunting and Shamanism

Before the recent introduction of new garden crops, shotguns, dogs and Western medicine, as well as the intensive use of air transport and radio contacts which undermined traditional foraging, the Huaorani hunted almost exclusively monkeys, especially the woolly monkey (*Lagothrix lagotricha*), the howler monkey (*Alouatta seniculus*) and the spider monkey (*Ateles paniscus*), birds, such as the curassow (*Mitu salvini*) and the Spix guan (*Penelope jacquacu*), and white-lipped peccaries (*Tajassu peccari*) with essentially two kinds of weapons, the blow-pipe and the spear. The Huaorani say that monkeys and birds reproduce without difficulty as long as humans leave them enough food to eat, and as long as inter-species population dynamics are balanced, that is, as long as human settlements remain relatively small, interspersed, and transient. Huaorani hunting is a form of gathering, whereby using and consuming natural resources does not impair – and possibly even encourages – their continued reproduction. Furthermore, game animals are kept close and in plentiful supply through shamanic practices. Supernatural jaguars who visit shamans in rites of spirit possession and control game stocks make birds and monkeys stay closer to humans, and tell humans where to find game in the forest.

Men become shamans (*meñera*, literally “parents of jaguars”) at a mature age. A man does not choose to be a shaman, but is chosen as an adopted father by a jaguar spirit who first appears in his dreams. If the dream recurs, the jaguar spirit feels welcome and confident that the man has accepted him as his son. From then on, the jaguar spirit visits his human father, his “mother” (i.e., his human father's wife) and his “siblings” (i.e., his human father's

children) regularly at night. Such visits make the man “die” temporarily, as the jaguar spirit/son takes the place of the man’s soul, and uses his body as a “tape recorder” to broadcast his visions and conversations with his human audience. Adoptive fathers of jaguar spirits are not only mature men with a family of their own, but also survivors of a grave childhood illness, who were given the hallucinogenic drug *mihi* (*Banisteriopsis muricata*) as the ultimate remedy. Finally, the “heart souls” (*mimo*) of dead shamans and warriors killed while fighting are said to “give birth” to several female jaguar cubs which are adopted and raised by “real” forest jaguars as their own cubs. In short, the spirits that live in jaguar bodies, adopt certain men as their fathers, and visit humans, once lived in human bodies.

Palm Groves and Natural Abundance

The Huaorani vision of life is not limited fertility, but natural abundance. Huaorani people, like other Amazonian trekkers and foragers, largely depend on managed, but not yet domesticated plant species. They also use a whole range of more or less intentional management practices to encourage the continuous growth of certain fruit trees and palms in old sites and to facilitate the propagation of certain plant species (Rival 2002). It is in the nature of trees and other food plants of the forest to give continuously to humans without asking anything in return. The Huaorani say that past people “did” (*què*) and “lived” (*huè*) in such and such a part of the forest, and that their activities “have made the forest grow,” by which they mean that subsistence and ceremonial activities have encouraged the *natural* growth of useful forest plants. The forest is turned into a giving environment – that is, an environment that gives in profusion without asking anything in return – by the life activities of past people. In short, the forest, which stands as the historical record of past human activities, is inseparable from the people who have lived in it, and with it.

People are also conscious that their present activities are making similar activities possible in the future. However, such awareness is devoid of moral implication, and has nothing to do with the modern notion of planning for the benefit of future generations. Future and past are envisaged from the point of view of a continuous, timeless present. The dead do not ask for anything, so no exchange takes place between the living and the dead. What they “give” to the living is not really a gift, anyway; it is more like a by-product, a consequence of spending their lives giving to, and receiving from, each other; today’s useful resources are the legacy of their sharing economy. The forest, far from being a pristine environment external to society, exists as the product of the productive and consumptive activities of past peoples. Both the forest and society are regenerated through the business of ordinary

life, without need for accumulation, surplus, stealing, or the transfer of life energy from one sphere to another.

Socio-cosmologies and Value Systems

This exposition makes it obvious that the Amazon rainforest has had a profound impact on Huaorani cosmology and social philosophy. Huaorani relational epistemology, rooted in the recognition of the shared physicality and biological unity of beings that grow, mature and decay, connects persons across species boundaries, including supernatural entities. Social life is embedded within organic processes.

Huaorani religious ideas have arisen from an obsession with predation, which, as the myth of origin indicates, constitutes one dimension of the world as it was created, and, as such, pre-dates speciation. Perceiving themselves as the victims of powerful predators (human enemies or evil spirits imagined as jaguars or harpy eagles) who reproduce themselves by continuously snatching the creativity, vitality and life-force of “true human beings,” Huaorani people can do no more than elude contact with cannibal attackers and rely on their own forces. Shamanism privileges a more symbolic and positive relation with nature, particularly with the animal world. Shamans, who have the power to see what is normally inaccessible to human consciousness, receive help from visiting jaguar “sons,” who, among other deeds, keep game animals close to humans. Shamanic power symbolically replicates the forest management practices through which people transform the forest into a giving environment.

The forest’s natural bounty is understood to result from the interlocking of animal, plant and human life cycles. It is the relationship between living people, the forest and past generations that makes forest resources bountiful. The forest naturally and abundantly provides people with food and useful materials, as well as with the means of establishing physical links with the past. The past is encountered while cruising in the forest, and history is made out of the intricate relationship between ecological cycles, such as massive seeding or fructification, and past activities that naturally increase forest resources. For the Huaorani, who associate the power to generate vitality with spontaneous vegetational growth, reproduction and continuity do not depend on the acquisition of, nor can they be appropriated by, external political or religious powers.

As Gerardo Reichel-Dolmatoff wrote just before his untimely death, there are two Amazons: the Amazon of modern development based on fossil fuels, ruthless exploitation, gold mining, logging, cattle ranching, hydro-electric dams, violence, corruption and human misery; and the Amazon of the small number of indigenous peoples who still retain their tribal ecological knowledge and ancestral value systems, and for whom to know the rainforest ecosystem is to communicate and socialize with

the natural kinds or natural forces which make it alive. The Huaorani, who still belong to the latter, cultivate inter-species communication and relate to the energies inherent in animals and plants by living in – with – the forest. Their eco-economy is in this sense solar, given that all living organisms originate from the same cosmic source, the sun, its rays, and powers of fecundity.

For the last fifty years, Huaorani people have been confronted with the other Amazon, that of oil development, although it is only recently (in 1994) that oil has been commercially extracted from their land to feed the global fossil economy which is exhausting raw resources, destroying lives and livelihoods, and undermining the future. Confronted with pernicious and contradictory economic and political interests, the Huaorani are not embracing the market place ruled by the imperatives of carbon energy and corporate law in the way expected by the oil companies operating on their territory. Witnesses of the transformation of their forest into a busy oil field, with thousand of kilometers of seismic lines cut, tens of wells drilled, and numerous temporary camps established, the Huaorani have subverted the cultural logic of corporate outsiders by treating them as sources of endlessly renewable wealth. Large quantities of foreign commodities imported by oil workers have reached Huaorani homes and have been distributed, shared and used according to the same egalitarian principles as other forest resources. The forest is bountiful. Past activities of long dead people are understood to be at the origin of forest abundance. The wealth of game and plant resources, accessed through the skilled activities of every hunter and gatherer sustains the longhouse sharing economy. By treating the oil companies as impersonal giving agencies not unlike that of long dead people, the Huaorani have turned the religion of the market on its head. What they continue to value are the unfolding, personal relationships between interdependent subjects of the sacred Earth/forest. At the beginning of creation, there was the giant *ceibo* tree, rooted in Earth and tied to the sky. Through the dynamic interplay of social agency, the tree of life was transformed into a great water system and landscape. The world with all its differentiation and biocultural diversity is, and will continue to be, the historical transformation of what was given, the tree of life.

Laura Rival

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See also: Animism (various); Amazonia; Shamanism – Ecuador.

Hudson River School Painters – See Art; Romanticism – American.

Hundredth Monkey

The claim that a spiritual transformation of consciousness is prerequisite to the reharmonization of life on Earth is a recurrent theme in environmental enclaves. One expression of this theme is that of the "Hundredth Monkey," first published by Lyall Watson in *Lifetide: A Biology of Consciousness* (1979).

In *Lifetide* Watson described how on the Island of Koshima in 1952 a Japanese monkey of the species *Macaca fusacata* was provided with a new food, sweet potatoes. They were covered with sand and dirt and this particularly intelligent monkey, dubbed Imo by the primatologists studying the troop, quickly apprehended the potatoes would taste better if first washed in the river. Imo subsequently taught the behavior to his neighbors, which between 1952 and 1958 spread throughout the island, adopted by most of the monkeys. "Then something extraordinary took place" (1979: 147), Watson wrote, indicating that what happened next is not certain and that he had

to gather the rest of the story from the personal anecdotes and bits of folklore among primate researchers, because most of them are still not quite sure what happened. And those who do suspect the truth (1979: 147) are reluctant to publish it for fear of ridicule. So I am forced to improvise the details, but as near as I can tell, this is what seems to have happened (Watson 1979: 147–8).

In the fall of 1958, a large group of monkeys was washing potatoes, "Let us say, for argument's sake, that the number was ninety-nine" (148), when "one further

Monkeys in the Field

During the 1980s there were regular "Hundredth Monkey" protests against nuclear weapons at the U.S. government's Nevada Test Site. While engaged in fieldwork exploring radical environmental sub-cultures I learned that many Earth First! activists had participated in protests at the test site and had been inspired by the story. One of them told me during a 1992 interview (4 January, Siskiyou National Forest, Oregon) that the idea has to do with paradigm shifts:

I'm trying to remember if it was a myth that became a scientific experiment, or a scientific experiment that became a myth, but during the '50s, there were studies on these monkeys on an island off the coast of Japan. The scientists gave the monkeys potatoes to see what they would do with them, and they would eat them whether they were sandy or not. Then one day a girl (sic) monkey took her potato . . . and washed it off and ate it, preferred it, showed her friends, then the parents, and they caught on, and pretty soon all the parents, and the whole island washed the potatoes, and then [as if by magic] monkeys on all the other islands begin doing it, even though there was no physical contact.

When I responded, "So this shows interconnectedness of all beings?" he replied, "Oh yes. The magic of these paradigm shift stories shows that a lot is going on we can't easily feel, touch and taste."

Shortly after this conversation I noticed an article in *Earth First!* endorsing a similar metaphysics. Commenting on the "one percent effect" claimed by practitioners of Transcendental Meditation, the author wrote that it "demonstrates that when 1% of the population in a given area practices meditation . . . crime rates decrease along with instances of mental illness and disease. We literally can [therefore] dream back the bison, sing back the swan" (Lewis 1989: 27-8).

John Seed, the Australian deep ecology activist and itinerant Council of All Beings missionary also mentioned the "one percent effect" during an interview (5 November 1992 in Osceola, Wisconsin). He indicated that there was a journal article documenting it and that, although he was not sure about the validity of this research, the environmental crisis is so grave that only a miracle precipitated by massive spiritual-consciousness transformation could prevent massive extinctions.

Not all radical environmental activists, however, are enthusiastic about such beliefs. During a 1993 conversation between Dave Foreman, probably the most charismatic of the founders of Earth First!, and board members and staff of the Wildlands Project in the United States (24 February 1993, Tuscon, Arizona), the conversation turned to the collision of sub-cultures that had led to a schism in the radical environmental movement a few years earlier. In this context the idea of the Hundredth

Monkey came under discussion. Then executive director of the project, David Johns, noted how activists from Oregon had shown up at Earth First! campaigns wearing "no them" buttons. These buttons expressed an anti-dualistic perspective toward political adversaries, in other words, the point of view that one's opponents are not enemies or evil but misguided, implying that a transformation of human consciousness (like those envisioned in New Age circles and in stories like the Hundredth Monkey) will eventually overturn such distinctions. Foreman indicated that he did not fit in with such people and that he tended to ridicule the Hundredth Monkey stuff.

Johns, however, stated that there may be some truth to the theory, adding that such an effect would be too subtle to yield the radical changes needed to protect the Earth's forests. As the conversation continued it became clear that most of those gathered thought the idea might be plausible. One mentioned favorably Peter Thomkins' *The Secret Life of Plants* (a book that reached #1 on the *NY Times* best-seller list), which purported to show scientifically that plants have feelings and could communicate. Another board member talked about the sense of communication that American explorers reported having with the land. And for all his relative skepticism, Foreman himself stated, "I talk to trees. I think they're telling me that it's all connected." He added that trees have even warned him on a number of occasions not to camp in a particular place.

Such interviews and conversations suggest that the plausibility of the Hundredth Monkey story resides not in its accuracy or scientific credibility. Such stories are resilient within the environmental countercultures because they cohere with the personal spiritual experiences of connection and extra-ordinary communication that many of these activists have had with nature's various energies and life forms.

Bron Taylor

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- See also: Breathwork; Council of All Beings; Deep Ecology; Earth First! and the Earth Liberation Front; New Age; Radical Environmentalism; Re-Earthing; Seed, John.

convert was added to the fold in the usual way,” sitting down and imitating the others.

But the addition of the hundredth monkey apparently carried the number across some sort of threshold, pushing it through a kind of critical mass, because by that evening almost everyone in the colony was doing it. Not only that, but the habit seems to have jumped natural barriers and to have appeared spontaneously . . . in colonies on other islands and on the mainland . . .

The relevance of this anecdote is that it suggests there may be mechanisms in evolution other than those governed by ordinary natural selection. I feel that there is such a thing as the Hundredth Monkey Phenomenon and that it might account for the way in which many memes, ideas, and fashions spread through our culture. It may be that when enough of us hold something to be true, it becomes true for everyone. Lawrence Blair says, “When a myth is shared by large numbers of people, it becomes a reality.” I’ll happily add my one to the number sharing that notion, because it may be the only way we can ever hope to reach some sort of meaningful human consensus about the future, in the short time that now seems to be at our disposal (1979: 148).

Watson concluded *Lifetide* arguing that this and the other examined scientific and occult phenomena demonstrate,

What we regard as ordinary physical matter is simply an idea that occupies a world frame common to all minds. The universe is literally a collective thought, and we have a very powerful say in the reality manifest on our particular sector (1979: 310).

This story spread at least as rapidly as the potato-washing monkeys. Ken Keyes, a self-help pioneer (d. 1996) explained that he learned of the story from talks given by the New Age writer Marilyn Ferguson (best known as the author of the New Age classic the *Aquarian Conspiracy*, if it is not an oxymoron to call it that) and Carl Rogers (the founder of Humanistic Psychology and arguably of the so-called Human Potential Movement). Keyes borrowed Watson’s story to promote a transformation in consciousness that would reverse our tendency to “experience people as ‘them’ – not ‘us’,” which he believed necessary to eradicate nuclear weapons and to restore our “bond with Mother Earth” (quotes from internet version www.testament.org/testament/100thmonkey.html, which includes additional material from Keyes 1982: 106–7).

Published with no copyright in 1982, *The Hundredth Monkey* story spread rapidly, first within the cultic milieu of Western religious and political countercultures – anti-nuclear, New Age, and environmental. Its popularity was

boosted by a video by the same name in which Keyes and Rupert Sheldrake (who in his own books articulates a novel metaphysical explanation for animism) repeated and promoted the story in this medium. The story lives on at numerous internet sites and will likely do so for many years to come.

But its popularity cannot be accounted for without understanding its appeal. The *Hundredth Monkey* transmits a nature spirituality expressing metaphysics of interconnection, namely, belief that, at least at a sub-atomic level, everything is connected to everything else. At the deepest levels of Being, therefore, there is no “us versus them,” a point which Keyes made explicitly in *Hundredth Monkey*. The metaphysical interconnection of all universal energies makes possible diverse modes of communication not observable scientifically, including telepathic pathways. They even make possible dramatic and rapid human cultural evolution that could bring social justice, peace and environmental well-being.

It is especially noteworthy to understand the appeal of the vision when considering that those most commonly embracing it are barraged continually with the depressing environmental apocalypticism that is pervasive within the environmentalist sectors of the cultic milieu. The Hundredth Monkey suggests a metaphysical basis whereby humankind and other earthlings might evolve in such a way as to live harmoniously. This is an idea expressed in various ways within New Age enclaves and the subcultures they influence. We can see such ideas, for example, in José Argüelles’s understanding of the “Harmonic Convergence, James Redfield’s “Celestine Prophecy,” and in the idea of the “one percent effect” in Transcendental Meditation. They are also reflected in countless artifacts of material culture; for example, in bumper stickers and posters proclaiming we can “Dream back the Bison / Sing Back the Swan” and “Visualize World Peace.”

An appealing story is not necessarily accurate, of course. It is apparent to most of those who read the original scientific reports that Watson did not truly base his story on them. That he also implied that he had interviewed sources and patched together accounts from those present, an implication for which there is no evidence, also raises serious questions of his integrity and veracity. Keyes presented the story without mentioning Watson’s qualification about the uncertainty surrounding the incredible parts of the story, and did not mention that Watson himself acknowledged that he had “improvised” parts of the story. Skeptics concluded that Watson fabricated in an unscrupulous way his entire account. Some such criticisms were published in *The Skeptical Inquirer* and republished later in a book debunking this and other paranormal “phenomenon” (Admunson 1985, 1987; Frazier 1991). A later article reported that the senior scientist involved in the original studies denied observing any

spontaneous, trans-oceanic transformation in monkey-consciousness, having heard any folklore in this regard, or even having talked to Watson (Pössel and Amundson 1996). Watson's only published response appeared in the *Whole Earth Review*, in which he essentially admitted that he made up the most salient points of the story.

A story need not be accurate, of course, to convey important truths. Watson and others moved by the story have offered the rejoinder that the story was never intended to be taken literally as a scientific theorem. It was, rather, an encouraging and empowering metaphor for the struggle to transform human consciousness in such a way that the Mother Earth and all denizens would be understood as sacred and coevolving toward a peaceful and harmonious future. Others within environmentalist sub-cultures who share the perception that the Earth is sacred dismiss the story as wishful New Age fantasy that distracts people from taking action in her defense. The reception of the story depends in part on what strategies for the hoped-for transformations activists find most plausible.

Bron Taylor

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- See also: Celestine Prophecy; Harmonic Convergence; Harmonic Convergence and the Spiritualization of the Biosphere; Natural Law Party; Sheldrake, Rupert; Transcendental Meditation.

Hunting and the Origins of Religion

Introduction

Recently the relationship between religion and biology has drawn increasing scholarly attention. Ranging from theories of religion being "hardwired" in the human brain as a result of the species' genetic structure to the application of cognitive science in attempting to understand so-called religious proclivities and their history, more and more scholars such as Atran, Wilson, Ramachandran and Boyer are pursuing the links between humans, their religions, and the "natural" environment within which they function. Nature as the totality of the context within which a subject or an object exists, including all living and non-living materials, is a broad, even endless opportunity for relationships to be identified and traced. The origins and sources of particular comportments and relationships, in turn, throw light upon how those actions can be best understood. In this setting, religion can be approached as a web of relationships with an environmental framework; any attempt to grasp the origins of these relationships must, therefore, highlight that environment or the "natural" world in which those linkages take place. Among the most prominent of the pieces in this puzzle are human consciousness, human ethical behavior, and the predatory character of human interaction with the world, especially as represented in the hunt. All three concepts and activities rank at the top of any list proposing the most controversial notions of our time.

In contemporary thought, for example, ethics threatens to disappear into a general relativism. How is it possible any longer to establish values that function normatively? How, in other words, are values capable of "binding" and thus controlling the actions of members of a society? If one attempts to do that from within a given culture, one runs the danger of being charged with discrimination on the grounds of class or sexual orientation. If, on the other hand, one attempts to establish such value scales for another culture than one's own, then, especially in the United States, one might well be tagged as chauvinistic, even a racist. What can ethical norms mean in a world where Japanese mountain climbers could struggle past dying Indian climbers near the peak of Mt. Everest in 1996 without saying a word or doing a thing to help them? Their only commentary: "Above 8,000 meters (25,000 feet) is not a place where people can afford morality" (in Krakauer 1998: 313).

Hunting, meanwhile, is being attacked from all sides. In Germany and France, for example, hunting stands have their supports sawed off and their ladders weakened; in the United States, hunting dogs are poisoned and vehicles are vandalized. In a particularly notable case in 1997, the First Amendment of the United States Constitution was applied to such an incident. Normally called upon in court actions to protect the exercise of free speech, in this case

the second part of the amendment was cited as support for the exercise of a woman's right to religious freedom. She had attempted to interrupt a legally permitted hunt in the state of New Jersey and argued that the sacred and divine character of all living things was the core of her religious beliefs; as a result, she claimed the right to transform her belief into action, in this case the protection of the hunted animals from the hunters. Her claim was rejected by the court (1999).

Great debate has emerged over the past decade concerning the structure, the function, the meaning, and above all the origins, of human consciousness. Is, for example, as Crick has argued, human consciousness simply a huge collection of nerve cells or perhaps merely a reaction to magnetic fields, as Persinger has hinted? Or perhaps a story that we recite to ourselves, but which always remains the wrong story? Only the most rigorous defender of a divine creation as found in Christianity would still use the word "soul" to comprehend consciousness, much less speak in terms of Meister Eckhart's "divine spark in the human being."

The confusion surrounding these notions is probably reason enough to reflect on whether there is any relationship between them. What can it mean to be "ethically bound" while hunting or when conscious? A common distinction is often made between morality and ethics. While the latter category is typically applied to the responsibilities and duties that result from the relationship of a human being to itself, the former label refers to the duties that emerge from the relationship enjoyed by a human being to other living (and often non-living) beings. Unfortunately it is not always easy to differentiate cleanly between these sources of human responsibility or values. If, for example, one commits suicide due to unbearable pain and suffering, has one acted morally or in relationship to oneself according to Seneca's famous dictum: "when the smoke in the room becomes too thick, then the best thing to do is to open the door and leave." But is the relationship to the self the only such connection that one entertains? Presumably there is an extensive and complicated series of relationships maintained by every individual to other humans and to the surrounding environment to which one should pay attention or act ethically. To take our example of suicide, it turns out not to be simply a moral action but a complex event involving both moral and ethical decisions and consequences. Clearly it is difficult, and not always possible, to slip one's responsibilities and actions neatly into the one or the other category only.

The Hunter and the Prey

If we turn our attention to hunting, we might ask how this action is best characterized. Obviously the hunt represents both a relationship of the actor to itself, that is, of the hunter to the hunter, as well as of the hunter to the hunted,

or the prey. The main focus, however, remains concentrated on the relationship of the hunter to the hunted, and this for the simple reason that the death of the prey is the goal of the hunt. Despite Ortega y Gasset's well-known claim that one kills in order to have hunted, it is vital to confirm that the death of the prey is a fundamental and core part of every hunt. Without the prey's death, or at least without striving for the death of the prey pursued, there is simply no hunt. I do not wish to denigrate either the so-called camera safari or any other outwitting of another living being, whether human or animal. Yet such activities are simply not a hunt, though they often are powerful and skilled undertakings that frequently serve to confirm the power and the accomplishment of the main actor. An actual hunt, on the other hand, always must reckon with death: a hunter kills. That is why, of course, hunting is such a controversial event. Not because hunting can be viewed as a "management" or conservation tool, or even as necessary to human survival (food), but rather because hunting can be comprehended as the fulfillment of a human desire and need. Put baldly, the hunter experiences a certain pleasure in the act of killing. This fact cannot be obscured by laws and regulations, or even erased by pious wishes; at the most, we can hope to understand it. The question, therefore, to be raised in this connection is what an "ethically normative" hunt can mean under these conditions? What responsibilities and duties can be derived from the intended death of another being, above all when this act will lead inevitably to the direct and violent severing of the very relationship that provides the basis for an ethical relationship? This question can be approached from three different directions.

First, one can sustain an ethical relationship to the prey by paying strict attention to *how* the death is achieved. To kill through the hunt does not mean that one simply eliminates the prey; instead, the game is killed "cleanly," which means that the animal is not destroyed but harvested. Such a death must also be inflicted as quickly and with as little suffering as possible; achieving such a death lies at the core of a hunter's act. At the same time one employs a method of killing that allows the prey a chance to avoid death; in turn this means that the game has the opportunity to participate in its own death. Without this participation of the prey in its own death, the ethical relationship is broken.

Second, the dead animal is put to use. This means that the hunter reflects on *why* the prey died. In this way the killing of a being that is bound up with the hunter in an ethical relationship is justified. Without this justification, a death through hunting is no longer ethically constituted.

Third, the dead prey is celebrated precisely in its death. By becoming a "trophy," a means to reflect on the game, its meaning in life, and its death, the killing of the prey is given *meaning*. Without this honoring of the slain animal and the consequent granting of meaning to it, which is to

be performed by the hunter, the ethical relationship loses all content.

In other words, an ethically determined hunt always bears the character of a "liturgy" or a "ritual." The marks of such a performance are to be found in the fact that the prey is always killed in a particular way and not according to whim; in the special constitution of a "sacrificial act," whereby the death has not occurred without purpose (in this way, for example, hunting is distinguished from the attempted extinction of a plague or nuisance animal); and in the perpetuation of honoring and remembering the prey and its death, which both imbue the being that has been killed with a further meaning that continues after its death. These fundamental guidelines form the basis for hunting around the world; and according to our current knowledge their beginnings reach into the Paleolithic and beyond.

Religion as a Consequence of the Hunt

If one understands hunting and its conceptual framework as here presented, then there would appear to be a direct connection between the hunt as the intentionally sought killing of another being and religion as a widely spread location for symbolic thought in general and human consciousness in particular. How can we more precisely determine this connection?

In a remarkable study of the North American pronghorn antelope, John Byers, prominent wildlife biologist, has concluded that this unique species is a survivor from a long-lost age still existing in our contemporary world. This species stands as a remaining witness to the great extinction of large mammals in North America some ten to fifteen thousand years ago. If we are fortunate, this particular antelope-like animal will always be here to "remind us of just how fast a North American cheetah could run" (1997: 244). In other words, even though the appropriate predator, the cheetah, has long since disappeared, its corresponding prey species, the pronghorn antelope, still lives and remains in possession of those characteristics that allowed it to survive its enemy. As Byers so memorably puts it, the pronghorn antelope will continue to be chased by the "ghosts of predators past" (1997: 242).

Weston La Barre, the late world-renowned anthropologist, once characterized the belief in god, indeed the construction of any religion, as a "biopsychological relationship peculiar to human biology" (1970: 20). The well-known case of Kaspar Hauser, however, shows us just how empty and unprepared for matters of religion we are upon entering this world. This so-called "child of nature" had been kept imprisoned almost all of its childhood until close to maturity without any contact whatsoever with other humans or with the natural world. After his liberation, Hauser displayed to the first observers absolutely no signs of the thoughts or insights, and certainly

no acts, that might possibly have been associated with "religion." Is it therefore possible that adaptive developments and acquisitions, evolutionary hangovers if you will, and not specific genes, build the core of those human constructions we call "religion"?

If we take Byers' example of the North American pronghorn antelope, then we might best understand religion as a collection or assembly of particular strategies, tools and constructions by which the human species achieved the transition from being purely a prey species to being a predator species. Or to put it another way: as a point of departure, let us assume that religion is a complex and complicated set of strategies, which has as its goal the production of a value system, supported by a ritual apparatus, with which the human species can determine its origins and its final fate to be located outside of itself and its environment. The goal of such a strategy would be to cope with the experience that we as a species have changed from being prey to becoming predators, ending up in the unique position of being both prey and predator at the same time. Is it, in other words, possible that the human species is still pursued by the "ghosts of predators past" just as the American pronghorn antelope is, and that therefore the human species still displays some of the adaptations by which we once survived our most potent enemies?

The Battle for Life and Death

The heart of these reflections lies in the observation that the pursuit of prey species by predator species leads to wide-reaching changes in the pursued, for example, in herbivores such as antelopes. According to Byers and others, it is often the case that these changes and developments, such as the running speed of antelopes, reflect an adaptation that took place long ago and that does not fit the present situation in which the animal lives. Why should this not also be the case for the human species? Humans were originally herbivores; consequently, traces of these adaptations should still be available. As Byers points out, such a model of explanation would rank an historical interpretation of an ecological development peculiar to a particular species as equal to an explanation that is derived from the present-day usefulness of a particular behavior. Certainly the early experiences of the human species as prey led to survival strategies, even if our memories of these moments have long ago become faint. For example, how were decisions made about who would sleep on the edge of the fire and who next to the fire, and thus about who might well be the first one taken by a prowling predator? Even more important, how were such decisions made acceptable by those chiefly affected? The issue was, after all, a matter of life and death, just as it is for contemporary primates in portions of their African range. The main point is that some of these basic strategies that would have allowed leaders to make such decisions

about who would likely be the next prey taken from the group on the one hand, and that permitted the selected individuals to accept that decision on the other, are also found in many, many so-called religions around the globe. For example, how death can be overcome by the promise of a life after death; or the persuasion that the good of the collective is more valuable than the survival of the individual; or the value of sacrifice, especially of the self; and so on. Such belief structures can be understood without much difficulty as the result of strategies that were developed for coping with the relationship between prey and predator. As a result, such strategies have become firm components of the tool kit that the human species carries around for constant tinkering with the problems of survival. Not in the sense, of course, that Freud meant, but in an evolutionary and functional meaning.

If this theory is accurate, then the origins and the beginnings of religion would meet in a unique combination of human behavior and ideas that could be thought of as an evolutionary reaction to a prey/predator relationship existing for hundreds of thousands of years. This evolutionary hangover from an earlier development is still encountered in the human species of today. Some of our primate neighbors, above all those who go upright (for example the orang-utans, the baboons, the chimpanzees), are still frequently hunted and killed by the larger predator cats. For the human species, however, this problem has been greatly reduced by the extermination or severe reduction of such predators where humans thrive, except in a few isolated situations. The human species is among the best predators on Earth. We left the trees, went to the savannahs, and became among the world's most efficient and successful predators. Just a very few years ago the remains of an early predecessor to the human species, *Australopithecus gahri*, came to light, together with tools for butchering and bones that had been worked on. These bones and accompanying remains were dated some two and a half millions year ago! For a long, long time we were not only predators but also competitors with other predators for the same prey. And that means that at the same time we remained through many millennia also a prey species.

The result, as we have seen, was the development of the human species into a better and much more successful predator. What has remained, however, are the evolutionary traces of prey behavior that came about as a result of the prominent and very long exposure to predators. Physical traces of this development are, naturally, only few, and even they are not always obvious; the human psyche, however, betrays these remains much more clearly. When we hear noises in the middle of the night, it is not some spirit or ghost that we are afraid of, but rather it is a great predatory cat or perhaps the great cave bear, who could run faster than a horse. It is no wonder that the hair along our back stands up – or at least what is left of

that hair. The chills that run up and down our spine are the result of our many back muscles that used to guide the hair formerly growing there. It was very risky, and very dangerous being a human being, and just how risky can still be seen in various parts of the world. India, for example, provides a classic example. In certain forests there that are inhabited by tigers, humans remain on the regular menu as prey for these powerful predators, and not simply the target of so-called “man-eaters” who have been driven to hunt humans because of injury or old age. Earlier, and present-day, experiences with the grizzly bears of North America together with the annual and sometimes deadly meetings with the polar bears of the far north offer further examples. And who can forget the story of John Patterson and his lions of Tsavo? He was supposed to build a bridge over the river Tsavo in British East Africa during the year 1896. Two young male lions interrupted work on the rail line and the bridge for over seven months, however, by keeping the indigenous and Indian workers on their daily menu. It took over half a year before Patterson and his colleagues were able to kill the lions. Finally, one need only turn to the constant wars that plague the human species all across the globe to experience the human being as a predator *par excellence*.

There is one more thing that links the hunt and religion with each other, and with human consciousness. Widely experienced is the attempt on the part of many religions to remove the handcuffs with which the pursuit of “history” has bound us. This attempt is made through religious belief, ritual, and stories to recover the past and have it live again in the fullness of its reality and effect. Though some historians have proclaimed precisely this achievement as their goal (one need only think of Leopold von Ranke), most, if not all, realize that this task can never be accomplished. Through the hunt, however, the event that has already occurred can actually be resurrected and experienced in all its plentitude. In the killing that is such an essential part of hunting, the hunter is able to break through the barriers of memory: time is no longer a prison but a source. Only in the rarest of human moments is anything remotely possible. The great goal of myths and of religions, always striven for but never gained, is the heart and soul of the hunter's life: through the hunt one returns to the beginning. This happens, as each hunter knows, because every kill is the first kill.

Thus we return to our beginning. Hunting is anchored in the earliest origins of the human species and in the ongoing environmental context we call nature. At the same time, however, hunting is governed by norms and devices that reoccur again and again in later developments of religion and human consciousness. Every kill is the first kill . . .

Gary Lease

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- See also: Ecological Anthropology; Ecology and Religion; Evolutionary Biology, Religion, and Stewardship; Hunting Spirituality; Hunting Spirituality and Animism; Paleolithic Religions; Shepard, Paul; Wonder toward Nature.

Hunting Spirituality

"Hunting spirituality" is perhaps most readily observable among peoples to whom the phrase itself would make little practical sense – those contemporary hunter/forager societies whose lifeways are closest to those of our prehistoric forebears, and which continue to practice subsistence forms of hunting, in combination with gathering and/or small-scale horticulture. While there are many variations from one context to the next, the attitude toward nature expressed by these Aboriginal cultures is that summed up by anthropologist Richard Nelson, with reference to the Koyukon people: "Move slowly, stay quiet, watch carefully, be ever humble, show no hint of arrogance or disrespect . . . [A]pproach all life, of which humans are a part, with humility and restraint. All things are among the chosen" (Nelson 1991: 277). This attitude of reverence arises from, and in turn reinforces, a sense of mutuality between human and nonhuman beings. The twin ideas that everything that lives is holy, and that life itself comprehends a cycle of which death is a necessary part, are perhaps more comfortably at home in an animistic setting in which the dividing line between nature and human culture (as well as that between matter and spirit) is far less firmly drawn, than in the developed world.

Indeed, hunting in developed, particularly Western, societies has generally been characterized as a form of mastery over, rather than intercommunion with, non-human nature. From ancient Greece forward, European hunting was a pastime reserved for aristocrats, the vast majority of them men. Much of the symbolism associated with it reflected patriarchal and hierarchical values. While the situation in the United States is rather more complex in terms of class (rural subsistence hunting developed alongside the European model of hunting as the pursuit of the privileged classes), in the main here too the predominating models for hunting have been those

described by sociologist Stephen Kellert as either “utilitarian” (meat or subsistence hunting) or “dominionistic” (competitive or trophy hunting). However, in his important research on hunters’ motivations, Kellert also isolated a third “type” of hunter, the “naturalistic” hunter, who seeks “an intense involvement with wild animals in their natural habitats,” and generally exhibits more knowledge of and affection for wild animals than hunters of the other two types (Kellert 1976). While these hunters are in the minority, and there is a certain amount of overlap among the three categories in any event, the number of naturalistic hunters appears to be growing. And the “nature hunter,” who according to Kellert confronts the paradox involved in killing an animal for which one also claims deep affection, represents an alternative view to the hierarchical conception of hunting.

Among European and American hunters, two sorts of hunting spirituality may be distinguished. The European tendency has been to ritualize some aspect of the kill – the “blooding” ceremony in British fox hunting (in which a small amount of the prey’s blood is spread on the face of the first-time hunter), and the “last bite” (a sprig of greenery placed in the newly killed stag’s mouth) in Germany are good examples – as well as to bring hunting itself within the ritual umbrella of the Christian Church. Catholic hunters throughout Europe venerate St. Hubert as their patron saint, bringing their hunting horns, hounds and falcons into church to celebrate his 3 November feast day. However, with occasional exceptions, traditions such as these, rooted as they are in culture-specific forms of Christianity and closely identified with aristocratic privilege, did not translate to North American hunting culture.

Hunting spirituality among non-Native Americans tends to arise from what Kellert called the naturalistic perspective on hunting, and its exponents appeal to native, non-Christian and pre-Christian models. Nelson, for example, was initiated into hunting by native Alaskans; while he is loath to disown his identity as a white, middle-class Protestant, he makes explicit use of the teachings of Koyukon elders to articulate his experience of reciprocity between himself as hunter and the deer that keep him alive both literally and figuratively. In a similar vein, Ted Kerasote (1993) writes of the “deep emotional, even spiritual investment” he and his Wyoming neighbors have in elk-hunting, and (drawing the metaphor from his Greek Orthodox background) remarks that “elk meat is the Eucharist of this place.” David Petersen presents a more secularized view of elk hunting, which reflects a ruggedly individualistic personal spirituality. James Swan relates hunting to Jungian archetypal theory, and stresses its therapeutic as well as spiritual value. In my work, I focus on the power of the symbolism of Artemis, as simultaneously the goddess of women and the ecosystem, relating hunting to childbirth. While my own Artemis,

drawn from classical mythic and ritual sources, is explicitly not the goddess of New Age spirituality, at least one practicing Wiccan, Chas Clifton, has argued the compatibility of hunting with Pagan nature-based spirituality.

These writers, and others who identify with the naturalistic model, all stress the initiatory importance of hunting, as a way of participating in the natural world, and reconnecting with the rhythms of the life-process from which Judeo-Christian civilization has become increasingly alienated. They tend, as a group, to be critical of urbanization and of advanced technology for its own sake, and to argue for what the late environmental philosopher Paul Shepard referred to as a movement back to the Pleistocene. This does not mean nostalgia for the past, or an attempt to appropriate other or earlier forms of hunting spirituality in any simple-minded fashion. Rather, as Max Oelschlaeger has argued – picking up where Shepard left off – the goal is a “new-old way of being,” rooted in a radical reconfiguring of the relationship between human culture and nature, which draws its insights from the best and deepest intuitions of those cultures which have lived more intimately in connection with the Earth.

Poet and environmental activist Gary Snyder eloquently sums up what might be called the credo of American hunting spirituality as follows:

The archaic religion is to kill god and eat him. Or her. The shimmering food-chain, the food-web, is the scary, beautiful condition of the biosphere. Subsistence people live without excuses . . . A subsistence economy is a sacramental economy because it has faced up to one of the critical problems of life and death: the taking of life for food . . . Our distance from the source of our food enables us to be superficially more comfortable, and distinctly more ignorant (Snyder 1990: 184).

Mary Zeiss Stange

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P Hunting Spirituality and Animism

I've never really thought of myself as a "spiritual person." Certainly not in any ecclesiastic sense of the term. Like television commentator Bill Moyers, I'm firmly of a mind that "a lot of religion gives God a bad name."

But recently, here in the midst of my middle years, a profound spirituality has bitten into my being. And it's all tied up with hunting. To put a name to it, borrowing from two of my literary betters, I've become an "Earthiest" (Edward Abbey), in that "I stand *for* what I stand *on*" (Wendell Berry). An Earthiest is simply a pragmatic neo-animist. And animism, I propose, is the ultimate spiritual reality. While nature – and therefore "nature worshipping" animism – is palpable, logical, and utterly understandable on any number of levels, "God," by definition, is incomprehensible. Thus, any belief in God requires unquestioning faith. And faith is nothing more than blind acceptance of something whose existence lies beyond proof.

Physicist Paul Davies restates this contentious issue well when he says:

To invoke God as a blanket explanation of the unexplained, is to make God the friend of ignorance. If God is to be found, it must surely be through what we discover about the world, not what we fail to discover (Davies in Raymo 1998).

Indeed, I'll go with my senses.

"In indigenous cultures around the world," writes psychotherapist Ralph Metzner, offering an apt summation of what draws me spiritually to animism,

the natural is regarded as the realm of spirit and the sacred; the natural *is* the spiritual. From this

follows an attitude of respect, a desire to maintain a balanced relationship, and an instinctive understanding of the need for considering future generations and the future health of the ecosystem – in short, sustainability. Recognizing and respecting worldviews and spiritual practices different from our own is perhaps the best antidote to the West's fixation on the life-destroying dissociation between spirit and nature (Metzner in Oelschlaeger 1995).

In other words, those of social anthropologist Richard Nelson, "Nature is God." (1990).

According to ethnographic research, animism has always been and remains the universal cosmology of unadulterated hunting/gathering peoples worldwide (though such peoples today, following centuries of genocide, geographic displacement, ecological erosion, and cultural cooption, are scarce as fur on a fish). Likewise, neo-animism – Earthiesm, if you will – plays actively in the cosmologies of all *true* hunters yet today, whether they know it or not. As Aldo Leopold points out in his lyrical essay "Goose Music":

Hunting is not merely an acquired taste: the instinct that finds delight in the sight and pursuit of game is bred into the very fiber of the race . . . The love of hunting is almost a psychological characteristic. A man may not care for golf and still be human. But the man who does not like to see, hunt, photograph, or otherwise outwit birds or animals is hardly normal. He is supercivilized, and I for one do not know how to deal with him (1990).

Nor do I, though they often are friends and family.

Various sciences concur today that our apish deep-time ancestors started down the long winding path to sapience some six million years ago. Across all that gaping void of time, we were gatherers and, increasingly, hunters; predatory omnivores; bipedal bears. By comparison, we've been farmers and herders for only the past ten thousand years – less than one percent of our species' tenure by even the most modest of informed estimates.

As both genetics and biology testify, ten thousand years is by no means long enough for the human DNA pattern (genome) to have even seriously begun adapting to match the radically altered social, physical, technological and cultural environment we have wrought for ourselves in that same brief interval. Were our ancient, instinctive needs for predatory omnivory (and the lifeway and cosmology such a diet implies) not so deeply etched in our genetic being – were it merely "something we once did" along the road to becoming human, rather than what we *are* – hunting would have long ago been abandoned and forgotten.

But such is not the case. And this in spite of centuries of genocidal oppression of animistic tribalism by agricultural civilization and its various messianic religions, conspiring in a concerted effort to bring about what novelist Daniel Quinn (*Ishmael* and *The Story of B*) calls the “Great Forgetting.” Certainly, humanity’s essential animistic tendencies cannot be genetically obliterated in so short a time as ten thousand years. Yet, in all urban civilizations they are effectively sublimated. Thus is the willful destruction of wild nature – which animism could never conceive much less condone – culturally codified and morally sanctioned throughout the “civilized” Christian/Jewish/Moslem world.

Meanwhile, those few among us who would fight to protect wildness, or, more daring yet, remain active players *in* wildness – those of us who clearly have *not* forgotten how we once were, how we are *meant to be* – are defiled by industrial culture as “tree-huggers, environmental elitists, and troublemakers” in the first instance, “anachronisms, barbarians, and heretics” in the latter. For my part, so be it. “To embrace the mass religions or ideologies of the present,” advises Wyoming meat hunter and poet C.L. Rawlins, “we must first deny what we know in our very bones: how the world works” (Rawlins in Petersen 1996).

And how the world works is through an endless sacred cycle of digestion. All things born must die, and, one way or another, be consumed. To be or not to be is *not* the question, but *when*.

The reality that all flesh feeds on fellow flesh is ineluctable, logically undeniable, even for the strictest of vegans. To trot out one of preeminent human ecologist Paul Shepard’s more colorfully cranky aphorisms:

The human digestive system and physiology cannot be fooled by squeezing a diet from a moral. We are omnivores: our intestines and teeth attest to this fact . . . Vegetarianism, like creationism, simply reinvents human biology to suit an ideology. There is no phylogenetic felicity in it (1998).

Phylogeny is the evolutionary history of a species, compressed into a common genome. Veganism is felicitous to the phylogeny of *no* omnivorous species, jutting like a bent spoke from the great grinding wheel of biological life. Contrarily, nothing could be more in tune with nature, thus more ultimately moral, than to follow our omnivorous instincts, needs, and “God-given” talents as what I think of as *spiritual* hunters, openly and gratefully acknowledging at least a few of the countless deaths that go to nourish our lives. In attempting and accomplishing such personal humility and metabolic identity with the rest of nature, I propose, a far higher percentage of hunters succeed than do vegans.

One of the most significant and subtle scenes in Richard

Nelson’s award-winning Alaskan memoir *The Island Within* comes when a native Koyukon hunter voices the animistic conundrum: “Remember, each animal knows way more than you do” (in Nelson 1990). In addition to its instincts – the “superhuman” ability to interpret and utilize the finest intricacies of landscape, weather, its fellow creatures, and more – what every animal not only knows but also actively acknowledges is its place in the great web of life. For millions of years, humans knew this too. And a few of us still do.

Spiritual hunting has helped me not only to accept the biological necessity of life-giving death, but also to applaud its practicality and embrace it as immutably sacred. And what is sacred must be guarded for all time.

In the end, we find sacredness only where we seek it. And only *if* we seek it. True hunters, spiritual hunters, seek and find sacredness in aspen grove and piney wood; in mountain meadow and brushy bottom; in cold clear water and stinking elk wallow; and ultimately – necessarily, *naturally* – in bloodstained hands.

David Petersen

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- See also: Hunting and the Origins of Religion; Hunting Spirituality.

Huxley, Aldous (1894–1963)

Aldous Huxley, novelist, poet, literary critic, philosopher, essayist, was among the intellectual giants of the twentieth

century. Born in Surrey, England into the famous biologist family (Julian Huxley, his brother; Thomas Huxley, his grandfather) and educated at Eton and Oxford, he developed a close friendship with D.H. Lawrence when both lived in Italy in the late 1920s and early 1930s. In his subsequent novels, Lawrence served as Huxley's primary model of the "natural man." Huxley moved to the United States in 1937.

Huxley's many novels included *Crome Yellow* (1921), *Antic Hay* (1923), *Point Counter Point* (1928), *Brave New World* (1932), *Eyeless in Gaza* (1936), *After Many a Summer Dies the Swan* (1939), *Time Must Have a Stop* (1945), *Ape and Essence* (1949), *The Devils of Loudun* (1952) and *Island* (1962). In 1959, the American Academy of Arts and Letters granted Huxley the Award of Merit for the Novel. The author's non-fiction works included his anthology of mystical writing, *The Perennial Philosophy* (1946), as well as numerous collections of essays: *Jesting Pilate* (1926), *Do What You Will* (1929), *The Olive Tree* (1937), *Ends and Means* (1937), *The Doors of Perception* (1954), *Heaven and Hell* (1956), *Tomorrow and Tomorrow* (1956) and *Brave New World Revisited* (1957) among others.

In his earlier years, Huxley was critically ambivalent and agnostic toward religion. Through remaining a cynic who saw life as essentially meaningless, he exalted the Greek ideals of sexual and intellectual happiness. If these two forms of fulfillment represent polar conflicts, in his novel *Eyeless in Gaza* they were resolved through mysticism. In his "Seven Meditations" of 1943, Huxley declared, "Unholiness arises when we give consent to any rebellion or self-assertion by any part of our being against the totality which it is possible for us to become through union with God" (in Bridgeman 1992: 23). This more mystical outlook culminates in *The Perennial Philosophy*.

Already, however, in his early essay "One and Many," Huxley concluded,

If men are ever to rise again from the depths into which they are now descending, it will only be with the aid of a new religion of life. And since life is diverse, the new religion will have to have many Gods . . . It will have to be all, in a word, that human life actually is, not merely the symbolical expression of one of its aspects (1937: 40).

Despite this affirmation of pluralism, Huxley's mystical quest took him steadily closer to a monistic position. During the 1940s and early 1950s, he became an initiate of Prabhavananda of the Ramakrishna Order, but after his experiments with entheogens as sacramental substances, he grew away from Vedanta and closer to Zen under the influence of Jiddhu Krishnamurti "who espoused freedom from any prophet or path" (Bridgeman 1992: x). Huxley is known for arranging his consumption of LSD shortly before his death.

Huxley's clearest understanding of nature is found in his 1956 essay "The Desert." Here he expresses his understanding of space, silence and emptiness as "natural symbols of the divine" (1959: 19). The desert conveys the overwhelming quality of the cosmos *vis-à-vis* humanity. For Huxley,

By the majority the desert should be taken either dilute or, if at full strength, in small doses. Used in this way, it acts as a spiritual restorative, as an anti-hallucinant, as a de-tensioner and alternative (1959: 21).

In exalting mystics as diverse as Wordsworth, St. Bernard, Thomas Traherne and Meister Eckhart, Huxley found no antithesis between nature and spirituality. But when we do not accept nature as teacher and express charity toward her, "we try to dominate and exploit, we waste the Earth's mineral resources, ruin its soil, ravage its forests, pour filth into its rivers and poisonous fumes into its air" (Huxley 1947: 109).

Huxley condemned the folly of humanity's presumptuous attempt to be the master of nature "rather than her intelligently docile collaborator," and claimed that the corollary of an immanentist doctrine is the sacredness of nature. But, he warned, "one cannot know created Nature in all its sacred beauty, unless one first unlearns the dirty devices of adult humanity" (1947: 124).

Michael York

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Hyenas – Spotted

Like lions, spotted hyenas are one of Africa's top predators. Although their territories also face encroachment by growing human populations, spotted hyenas are still found in greater numbers than lions and many other "charismatic megafauna." Spotted hyenas are bigger, bolder, more ubiquitous, more social, and more of a hunter

than either East Africa's other hyena, the striped hyena, or southern Africa's brown hyena. They have been subjected to the greatest symbolic elaboration. Like leopards, spotted hyenas are crepuscular and nocturnal. A number of ethnic groups in Africa place leopards and spotted hyenas among the animal familiars of the notorious night-witches. With spotted hyenas, few positive associations are linked to the speed and strength they share with leopards. In Africa, some ethnic groups give individuals "hyena" names (e.g., Mbiti, Ondiek, Nyang'au, Kundu) but this naming tends to have origins in negative circumstances such as a mother dying in childbirth, or a child being born alive after one or more siblings died during the birth process. In some cases, the term for hyena is a synonym for "monster." Hyenas have a place at the top of many, but not all, Africans' lists of "animal hates."

Negative views of hyenas are found around the globe. Buddhism has marked hyenas as inedible to humans for the stench associated with their carrion eating and for their predatory nature. The 1642 "Decree on the Protection of Animals and the Environment" excluded predacious hyenas from the list of animals Tibetan Buddhists were prohibited from harming. Islam has proscribed the eating of hyenas, marking hyenas as "beasts of prey" whose consumption can negatively affect a person's character. Islam's concern to slaughter animals by humane methods has been seen as antithetical to the bloody manner by which hyenas kill and consume their food. The Old Testament and Pseudepigraphical texts show ancient Israelites reviled hyenas for carrion-eating and despoiling graves to feed upon human corpses.

Reporting on Pythagoras' teachings in his *Metamorphoses*, Ovid marked hyenas as anomalous for their purported practice of changing their "function" and "sex." New Testament, apocryphal, Gnostic, and other early Christian texts echo Greek attitudes. In the second century, Clement of Alexandria contended that hyenas were improperly "quite obsessed with sexual intercourse." Clement focused, as later Christian writers were to do, on what he regarded as regular hyena 'homosexuality.' In the same period, in his *Oneirocritica*, Artemidorus, a Greek mystic, declared that in a dream the hyena represented "a virago," "poison-mixer," or person "addicted" to homosexuality. The *Physiologus*, compiled between the second and fifth centuries C.E., and the *Aberdeen Bestiary* (ca. 1200 C.E.), provide further examples of Christian portrayals of hyenas as anomalous, licentious animals that were "unclean" by multiple abominations and therefore inedible. While Aristotle attempted to refute views that hyenas were anomalously "hermaphroditic" (or changed their sex annually), his was a minority position for millennia. In 1614, Sir Walter Raleigh declared that hyenas had been excluded from the Ark because God only wanted "thoroughbreds." Raleigh imagined hyenas had risen again after the

Flood from the "unnatural" copulation between a cat and dog.

The *Aberdeen Bestiary* also displayed an attitude that has persisted longer than mistaken views of hyena intersexuality and homosexuality. Using a discourse of debasement, it applied the term hyena to human beings and declared that "the sons of Israel resemble the hyena." From the fourth century C.E. into contemporary times, some Ethiopian Christians have echoed the anti-Semitic "blood libel" canard and widespread African beliefs that hyenas are one of the animals into which humans can shape-shift. They have labeled Beta Israel Falasha Jews "The Hyena People." Right- and left-wing writing in Austria, Hungary, Peru, the United States, and elsewhere continues to use the term hyena for "international Jewry" and other enemies.

The American-based Disney Corporation has added to the large body of crosscultural references that present hyenas in a negative light in its movie *The Lion King*. One of the hyenas has a Swahili name, *Shenzi*, whose range of meanings includes "worthless bastard," "uncivilized," and "uncouth." Hyenas are emphatically excluded from the ecological paean to the "Circle of Life" overtly celebrated in the film.

Spotted hyenas' scientific name, *Crocuta crocuta*, derives from a comparison of their reddish brown-tan coats to the color of saffron, the expensive and sought-after spice that comes from the *Crocus sativa* plant. This nomenclature is where complimentary attitudes toward spotted hyenas seem, in many instances, to end. Spotted hyenas prey on a variety of animals, including pythons, puff adders, pangolins, hare, zebra, wildebeest, the calves of elephants and rhinos, domesticated dogs, sheep, and cattle. They readily devour placentas. Their preferred method of killing involves completely disemboweling animals. Hyenas' bloody means of killing seems messier than that of other predators who commonly go for the jugular and choke prey to death, but whether it makes them "the most vicious predator" has been questioned by only a few observers. Hyenas' jaws and physiology give them the ability to devour bone, hide, hair, teeth, and hooves. Instead of the thoroughness and efficiency with which hyenas can consume almost all of an animal being regarded as ecologically sound, efficient, thrifty practice, which, even though bloody, is ultimately tidy, their manner of eating has made them a trope for the sin of gluttony. Hyenas also do not display the reverence for their dead that has been connected to elephants. They have gained a reputation for killing other hyenas and being animal cannibals.

Hyena killings of *Homo sapiens* and their ancestors have been documented deep into the past. Spotted hyenas figure in early human cave art. At a cave site in Monte Circeo, Italy, a Neanderthal skull that appears to have been opened up violently was first interpreted as indicating

“brain eating and cultic practices” on the part of other Neanderthals. The more recent interpretation is that the condition of the skull was caused by a hyena that had eaten the brain and spinal cord of the unfortunate Neanderthal. Hyena killings of humans, although not common, continue in the present. Elephants have long killed humans, and still do so, without acquiring the same animus against their kind in the international arena where the term “rogue hyena” seems redundant.

Spotted hyenas will consume the remains of kills that other animals, human hunters, and poachers have left behind as unfit for further use, whether these kills are fresh or moldering. Hyenas engage in coprophagy (eating excrement). Africans and others who believe in “contagious magic” seem to have regarded coprophagy less lightly when hyenas do this, as opposed to when the domesticated dog eats feces. Hyenas roll in “grossly physiological” substances like regurgitated masses of hair and bone and the blood of dead animals as well as swamp mud, and other matter humans find malodorous, to “perfume” their bodies or keep away flies. The odor their bodies emit has added to their reputation as “unclean animals” for humans around the world who do not share hyenas’ olfactory preferences. While a few peoples in Africa in the past left some corpses out for hyenas to dispose of, like the ancient Israelites and many other peoples, many African ethnic groups have regarded hyena necrophagy with revulsion. Some have used hyenas’ services as garbage collectors while continuing to view hyenas as “animal untouchables” because of their close contact with refuse. Missionaries have developed “An African Creed” which emphasizes Jesus rose from a grave made secure so that “hyenas did not touch him” (Anon 1998: 4).

Hyena sociality and sexuality has begun to receive another reading from women in the West and elsewhere. Research is showing that hyenas have the mental and social skills attributed to the more “charismatic” elephants and chimpanzees. Female hyenas are physically larger than males. Hyena social life, like that of elephants, is one where female “matriarchs” head groups that have been called “matrilineal clans.” As with elephants, females stay with their natal clans; while males leave them at puberty. This means that the death of several females, by deliberate poisoning, killing, or “culling” at the hands of humans can have a devastating effect on a hyena clan’s ability to repopulate. Such deaths do not yet get the same publicity and level of protest from eco-theology and ecofeminism that the killing of elephants and apes has evoked, but this is a matter female ethologists and others are seeking to change.

While female hyenas do not seem to cooperate or form deep emotional bonds to the extent that female elephants do, their lives and psyches have not been studied as extensively. While hyenas do not yet have as many human

voices speaking for them, studies have shown that hyenas’ own communicative abilities are not limited to their so-called “maniacal laughter.” Bonds among the highly social spotted hyenas are maintained by a complex repertoire of sounds, body language, olfactory communications, social defecating, play, and other communicative and social activities.

Scholars of hyenas are coming to appreciate that, as with Africa’s rock pythons, hyenas are another animal species in which forced insemination of mature females appears to be absent. Female child molestation does not occur. While female dominance among hyenas has been attributed to their high level of testosterone, other factors are being recognized. Taking the male as the norm, the female spotted hyena has been said to possess a “pseudo-penis.” However, their organ actually only superficially resembles the male hyena’s penis. Female hyenas give birth, accept semen, and urinate through this organ. They use it in greeting rituals. Recent suggestions that the female hyena’s organ should be called a “macro-clitoris” or “external vagina” are an advance on calling it a “pseudo-penis,” but they only capture some of the organ’s complex character, much as the intricacies of hyena matri-clan life have yet to be fully appreciated.

Views about hyenas must be looked at more closely to see whether they apply to hyenas in general, to male hyenas, or to females. In contemporary Kenya, as in several other parts of the world, hyenas have featured in the discourses relating to both national and sexual politics. Shortly before his death on 23 August 2000 – a death that some Kenyans believe to have been another “arranged suicide” at the hands of the regime of Daniel arap Moi, which he had criticized – Fr. John Kaiser, wrote, “I want all to know that if I disappear from the scene, because the bush is vast and hyenas many, that I am not planning any accident, nor God forbid, any self destruction” (www.johnkaiser.net). In 2001, Wangari Maathai, a Gikuyu ecofeminist, and mother of the Greenbelt Movement, used a hyena metaphor to protest the plans of Moi’s regime to “excise” (or clear) forests and put them to use for its own purpose. Maathai’s censure was harsh. She asserted that asking Moi’s government “to stop the logging . . . is like asking the hyena to give you back the goat” (*Carte Blanche Interactive* 28 October 2001). Maathai also used a gendered hyena metaphor to castigate the Moi regime. She observed, “In my community they say that as greedy as a hyena is, it has never eaten its own puppies. Our so-called leaders have the level of greed that surpasses that of the hyena, for they destroy their own children, take food from their mouths, and eat it” (*Sunday Nation* 27 January 2002). Maathai’s background as a scientist is biology, and her comment can be seen to reference female hyenas as mothers. Field biologists describe female hyenas as “wonderful mothers.” It is male hyenas

that may seek to “cannibalize” their young, an effort stymied by the larger, fiercer, mother hyenas.

As with many peoples around the world, the Luo of Kenya have associated hyenas in general with gluttony. Luo “Hare and Hyena” folktales tend to display the Hare as a clever trickster who triumphs over the Hyena, an inconsiderate glutton who thinks with its belly rather than brain. Women are the cooks in Luo society. They show agreement with the general assessment that “leopards and hyenas are ever hungry.” However, when asked what animals they used as terms of abuse against men, several women affirmed the term hyena was apt because “men eat a lot.” They added that a woman was likely to call a husband a hyena out of his hearing, recognizing that in most but not all Luo marriages dimorphism is not in women’s favor and that most women are not as large or as physically strong as their husbands.

Luo folklore contains tales in which a woman is married to a hyena at the outset of the tale, or finds out too late that a husband or paramour, who appeared to be human enough, was actually a male hyena. The tales tend to show women using their wits to escape from men who are seeking to harm the woman, her natal kin, or their children. Ayodo sees their message being about women’s “enormous inner strength” (1994: 123). Luo recognize that female hyenas also display great strength, so the tales need not be interpreted as a repudiation of all hyena qualities.

In “Marriage in the Sky,” a tale-type found in many places in Africa, Hare takes a group of animals to the Sky, where Hare is seeking the hand of the chief’s daughter. There is a test – either Hare or the other animals must refrain from eating. When Hare cannot control his appetites, and eats a ram he is not supposed to eat, Hare makes Hyena his scapegoat. Hare cleanses himself of the blood from the feast by wiping the blood on Hyena, who is punished for Hare’s transgression. Having been turned into a scapegoat, Hyena feels wronged. Kenya Luo present the spotted hyena’s vocalizations as the way hyenas are seeking “to tell the world” that Hyena “did not kill the first ram” (in Odaga 1980: 86). Hare is blamed for having given Hyena the idea to steal and eat people’s goats, sheep, and other animals. The ecological message of this etiological tale seems to be that hyenas are not to be blamed for any enmity humans have toward them.

The Luo narrative “*Anyango Nyar Gwasi*” (Anyango, the Daughter of Gwasi) is about a woman who turned into a hyena and ate men. Luo women were adamant that Anyango Nyar Gwasi never ate her “sister-women.” They

told me the men devoured by this hyena-woman were men who had done Anyango Nyar Gwasi or another woman wrong, men who had “troubled women excessively,” men who had gone off wandering from their homes, men who were “sex crazy.” Some contended Anyango Nyar Gwasi transformed herself into a hyena through the use of indigenous medicine. Others claimed she was an emissary sent by Nyasaye (God), who had given Anyango Nyar Gwasi the power to transform herself into a female hyena to punish men. Some Luo women insisted a dream about a hyena could have nothing to do with night-witches, but rather was about getting “more power” from one of the “power animals” Luo culture presented to them.

Marilyn Zuk has contended that “human views on charisma are nothing more than biases” (2003: B13). Too many accounts of spotted hyenas have been biased against them. Some hyena figures, like Anyango Nyar Gwasi, have indeed been “charismatic megafauna” for some people.

Nancy Schwartz

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Ibn Al-cArabi, Shaykh Muhyiddin (1165–1240)

Abu Abdullah Muhammad Ibn Al-cArabi is called Muhyiddin (rejuvenator of religion) and Al-Shaykh Al-Akbar (the Greatest Master) in recognition of the strong influence of his teachings throughout the Muslim world. Born in Murcia (Al-Andalus), now a part of Spain, he traveled extensively in North Africa and what is now Saudi Arabia, Syria, Egypt, Iraq, and Turkey, before settling in Damascus. Ibn Al-cArabi lived an extraordinary spiritual life, studied under numerous scholars and mystics, acted as a spiritual mentor to innumerable disciples, and produced some of the most sophisticated treatises on Islamic mysticism, cosmology, psychology, and metaphysics. Ibn Al-cArabi was essentially a sage, who expressed the contents of his spiritual “unveilings” or “openings” by using all the rhetorical and theoretical tools at his disposal, including poetry, while grounding his insights in the Qur’an and Sunnah. The most famous of his several hundred works include *Al-Futuhat Al-Makkiyyah* (The Meccan Openings), *Fusus Al-Hikam* (Bezels of Wisdom), and *Turjuman Al-Ashwaq* (The Interpreter of Ardent Desire).

Ibn Al-cArabi has been a controversial figure in Islam, revered and criticized with almost equal zeal. Much of this controversy can be traced to the inherent complexity of Ibn Al-cArabi’s writings; unable to study him directly, opponents have often formed hasty views based on misleading secondary sources. While this tendency crept into early Orientalist approaches, more recent Western scholarship on Ibn Al-cArabi is yielding increasingly refined understandings of his visions, insights, and intuitions.

One facet of Ibn Al-cArabi’s thought is what came to be known as *Wahdat Al-Wujud* or Unity of Being. Despite superficial resemblances, Unity of Being is very different from Pantheism, Panentheism, or Monism. It is a highly sophisticated and subtle exposition of the meaning of *Tawhid*, or divine unity. According to Ibn Al-cArabi, God is sheer Being, Absolute Reality, the only being that truly exists. Everything other than God is in an ambiguous state, halfway between Being and nonexistence. The perceptible universe consists of the manifestations, reflections, or modalities of Being.

According to a divine saying often quoted in the Islamic tradition: “I was a hidden treasure and I loved to be known, so I created the creation in order that I might be known.” For Ibn Al-cArabi, the universe may be seen as

countless mirrors in which the one true Being is reflected, and through which it becomes known. Since all the reflections in the mirrors cannot exist without what they reflect, each reflection can be taken as divine in its essence; at the same time, each reflection is nothing more than a mere image that has no independent reality. The mystery of existence is a paradox between affirmation and negation – everything is God/not God – a paradox that cannot be resolved in either direction without falling into error.

Ibn Al-cArabi’s ontology is rooted in his epistemology. Human beings have been endowed with two “eyes” or ways of knowing. Each provides a valid but limited view; both have to be taken at the same time in order to arrive at truth. Where the eye of intellect and reason (*aqal*) sees multiplicity and difference (*takthir*), the eye of imagination and unveiling (*khayal* and *kashf*) finds unity and sameness (*tawhid*). The former can affirm God’s distance and transcendence from creation, but the latter experiences God’s nearness to and immanence in creation. Full realization of truth requires balance and harmony between these two epistemic modes; yet the latter enjoys a degree of precedence.

Ibn Al-cArabi’s ethics revolve around his view of human nature. For him, the foremost ethical imperative is the actualization of the entire range of potentialities inherent in the human being’s primordial nature (*fitrah*). These human potentialities correspond to divine attributes, and the imperative to actualize them is based on the saying of Prophet Muhammad: “Assume the character-traits of God.” The Islamic tradition provides ninety-nine divine names, each of which describes an attribute or character-trait of God. These names are often divided into “names of majesty” (e.g., Mighty, Inaccessible, King, High, Wrathful, Slayer, Harmer) and “names of beauty” (e.g., Beautiful, Near, Merciful, Compassionate, Forgiving, Life-Giver, Bestower). These two categories of divine names are sometimes seen as “masculine” and “feminine,” terms that should not be understood as having any direct or necessary link with biological gender.

Since human beings have been created in the “form of God,” they must develop their inherent divine character-traits in the most appropriate and harmonious manner, thereby becoming increasingly better “mirrors” in which God may be reflected and thereby known. While every creature or phenomenon of nature reflects a limited configuration of a few attributes of God, the human being has the unique capacity to reflect all of God’s attributes in their fullness – to reflect God as God. This also means that

human beings are not apart from nature; there is a certain kinship between the two, for the same God who is manifested in the created universe is the one who is revealed in the human being, the latter representing the universe in miniature (microcosm). This perspective can have a sobering effect on the human sense of separateness from and superiority over nature.

The writings of Ibn Al-cArabi have hardly lost their value during the last seven centuries. They have probably acquired new and unforeseen relevance in view of the increasingly apparent contradictions of the modern age. In this regard, the environmental crisis can be analyzed in thought-provoking ways when approached from a perspective that is informed and inspired by Ibn Al-cArabi's works. There are many ways to undertake this project; one would be to see the environmental crisis as rooted in modernity's tendency to view reality with only one eye, that of intellect and reason. The environmental predicament can therefore be viewed as coming out of a partially valid but incomplete epistemology that sees multiplicity in nature but is blind to its underlying unity. For Ibn Al-cArabi, the realization that God is not identical with nature and that everything has its own reality is only one side of the truth. The equally important other side is that everything is a mode of God's self-disclosure through which God becomes known, and that the reality of everything is in essence God's Reality. To grasp this side of the truth, human beings must bring about a basic change in their way of knowing – they must open the other eye. Only then will human beings know that they cannot treat nature as their eternal "other" without becoming alienated from God and without betraying the most sublime aspects of their own primordial nature. Only then will they realize that the humanly caused extinction of a single plant or animal species is tantamount to shattering a divine mirror.

Ibn Al-cArabi's ethics provides another possible way of approaching the environmental crisis. The roots of the crisis may be traced to the fact that human beings have become dangerously unbalanced in their self-actualization. Anthropocentric hubris results when human beings give an abnormal amount of emphasis to the traits of majesty, while ignoring the traits of beauty. Modern culture emphasizes the "masculine" side of the human self at the cost of its "feminine" side. Consequently, the human attitudes toward nature have been characterized more by domination and control and less by love and compassion. Ibn Al-cArabi's prescription would be to reverse this trend.

Ibn Al-cArabi believes that God's "feminine" aspects have a greater reality than the "masculine" aspects. In the final analysis, divine names of beauty enjoy precedence over divine names of majesty, in accordance with the divine saying: "My Mercy precedes My Wrath." In other words, God is more merciful than wrathful. This precedence of beauty over majesty, or "femininity" over "masculinity," in the case of God must also reflect in the

character-traits of human beings striving for perfection. In other words, the element of love and compassion in the human attitude toward nature must precede the element of domination and control, as a necessary requirement for self-realization.

In order to actualize Ibn Al-cArabi's relevance to the environmental movement, his extensive writings will have to be approached and appropriated from an ecologically informed perspective; the resulting insights will have to be made the basis of ecological education among those mystical and intellectual traditions in which Ibn Al-cArabi is revered as the greatest master.

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- See also: Islam; Islam and Eco-Justice; Islam and Environmental Ethics; Islam on Man and Nature; Islamic Basis for Environmental Protection; Muhammad, The Prophet of Islam; The Qur'an; Tawhid (Oneness of God).

Ifá Divination

Ifá is a sophisticated and complex system of divination developed by the Yoruba people of today's southwest Nigeria, Benin, and Togo. Ifá is based on 16 major *odù*, or chapters, and 240 minor *odù*, making a total corpus of 256, which is known as *odù Ifá*. The *odù Ifá* is comprised of literally thousands of stories, myths, verses, songs, prayers, proverbs, ritual sacrifices and offerings (*ebo*), cultural history, social and cultural taboos, medicinal preparations, and dietary recommendations, among other themes. The repository of this literature, which nowadays is frequently in written form but in the past was entirely oral, is in the hands of priests of Ifá called *Babalawo*. They and other adepts of Ifá believe the entire literary corpus to be the message of the creator God, *Olodùmare*, as witnessed by the all-wise, all-knowing deity (*Òrìshà*) named *Òrúnmìlà* or *Òrúnla*, who presides spiritually over the

system. Ifá encompasses the entire spectrum of human experience, and as such it exhibits extraordinary diversity and complexity. However, the interconnecting thread that weaves the entire Ifá corpus is nature. Indeed, in virtually every *odù Ifá* there is at least mention of some bird, mammal, fish, reptile, insect, plant, tree, mineral, or geographic location.

The origins of Ifá in Yorubaland are shrouded in myth and cultural history. However, it is fairly certain how Ifá came to be known in the “New World” or in Diaspora, which nowadays unofficially boasts of having hundreds of thousands of practitioners. Along with millions of other Africans who were brought to the Americas via slave ships, hundreds of thousands of Yoruba were brought to the Caribbean islands of Cuba, Trinidad, and Hispaniola, as well as Brazil. A large contingency of these Yoruba were brought in the late nineteenth century to Cuban shores. Undoubtedly among those captured Yoruba were *Babalawo* versed in the literature and knowledge of Ifá. The names of these *Babalawo* are maintained orally and recalled frequently in ceremonial settings by many present-day diviners in the diasporic hubs like Cuba, Miami, Puerto Rico, and New York where Ifá and other *Òrishà* traditions and practices are vibrant. Many of the same stories, myths, verses, songs, proverbs, etc. relating to nature that have been recorded in recent studies on Ifá in West Africa have been preserved by present-day *Babalawo* in the Diaspora. Since there is little difference in the flora of the Caribbean there has been little alteration to core religious practices. However, in several U.S. cities, which do not have a tropical climate, practitioners generally import needed herbs from Miami, Southern California, or other tropical areas.

Ifá priests are not only versed in the literature of Ifá but also in ceremonial procedure and practice. Their training is lifelong but typically most concentrated in the first seven years after initiation into the priesthood. Aside from knowledge of the *odù Ifá* itself, priests attain a thorough understanding of herbs (including fruits and vegetables), animals (domestic and wild), and geographic locations such as rivers, lagoons, oceans, hills, and forests. From the aforementioned the most attention is usually focused on herbs and animals. Proficient *Babalawo* are well versed in the medicinal as well as spiritual use of leaves, barks, roots, and fruits. They know their cultivation, locations, indications, and contra-indications. There are *Babalawo* who specialize in herbal medicine both physical and spiritual. These are often called *Olu-Òsayin*, after *Òsayin*, the deity of herbs and healing.

Ifá priests who are herbalists usually also have shrines dedicated to *Òsayin*. The priesthood of *Òsayin* is a separate but integral aspect of Ifá. *Òsayin* is an *Òrishà* who inhabits forests and wooded areas. He is lord over all flora. He is said to kidnap adepts in the woods and return them to society with a vast knowledge of herbs. This deity is also

said to have part of one leg, one arm, and one ear missing, as well as a grossly disfigured eye. However, his ability to heal and make spiritual magic is said to be unsurpassed. One of his praises says, “*Òsayin*, the one who skips along with a single leg but who is more powerful than those with two.” He is a constant ally to *Òrúnmilà* and in fact taught him the importance and efficacy of herbal medicine.

Most important ceremonies in Ifá in the Diaspora and Yorubaland begin with the collection and ritual preparation of many herbs called “*ewe’Fá*” or the “herbs of Ifá.” In Yorubaland most coronation and initiation ceremonies employ an array of selected herbs. Prior to annual festivals, shrines and emblems of the different *Òrishà* are often ritually washed with specific herbs. Sometimes shrines are decorated with these herbs and branches from selected trees. Palm fronds woven and dried in the form of a curtain are frequently seen demarcating shrines.

There is also a group of trees that are believed to be the abode of a variety of *Òrishà*, spirits known as *Ebora*, and ancestors, or *Ègun*. These trees are generally seen in the forests as they are often quite large and usually quite old. Sometimes shrines are established at the base of these trees and designated with a wrapped piece of white cloth, especially when these sprout around populated areas. Some of the trees include *Àràbà* (Silkcotton, or Ceiba), *Ìrókò* (African Teak), *Akòko* (Newboldia Leavis), *Òshè* (Baobab), and *Òpè’Fá* (Oil Palm).

Another common and important feature in the Ifá divination corpus is the role that animals play. Most *odù Ifá* have some story featuring animal symbolism. Usually these animals include birds such as the hawk, eagle, falcon, woodpecker, toucan, and African Grey parrot; and domestic animals like the rooster, hen, goat, sheep, cow, dog, and cat. Many verses also speak of wild animals like the elephant, lion, leopard, hyena, water buffalo, fox, monkey, turtle, and aquatic species like the Electric mudfish and the Snapper. It is common to see in the divination verses any of these animals anthropomorphized. Often-times a specific characteristic of an animal; such as its ferocity, or its cunningness, or its sheer strength, its ability to survive adversity, and even its physical characteristics like fur, teeth, eyes, feathers, or even sound, is fused and paralleled with human characteristics, feelings, habits, and desires. These projections serve as metaphors for ethical and moral lessons, for survival strategies, for acceptable behavior within society, for methods of worship, and/or taboos.

Some animals are considered sacred to certain *Òrishà* and are forbidden to be killed or eaten, usually due to a circumstance in which a particular deity was in dire straits and the animal saved its life. The deity, it is said, citing eternal gratefulness, pledges never to eat the animal or its kin. Some animals are emblematic of the worship of particular deities. These animals, usually domestic farm animals, are sacrificed to the deities, then butchered,

cooked, and finally eaten by the worshippers and community at large. In traditional Yoruba society, when a hunter captured and killed a wild animal such as a leopard, bush rat, antelope or deer, the animal was customarily butchered and divided among the hunters' kin. If the animal was very large (an elephant, for example) the meat was divided among elders and chiefs, as well as the hunters' family. However, in modern society and in the Diaspora these practices have become less common because of deforestation in Yorubaland and the scarcity of such wild animals in the African Diaspora.

Several *Òrìshà* have natural environments and phenomena associated with them. There are deities who inhabit particular rivers for which they are named (e.g., The *Òshun*, *Obà*, *Ògún*, and *Yewa* rivers located in southwestern Nigeria). Although The *Ògún* river is not inhabited by *Ògún*, *Yemojá*, one of his consorts and the spirit of the seas, there begins her fluvial tour that eventually leads to the ocean – her actual dwelling. There are also important deities who are associated with natural phenomena (e.g., *Shangó* with fire, thunder, lightning; and *Ọya* with wind and tornadoes). Notably, these two deities are characterized as volatile and hot-tempered. The stories of how these sites and phenomena came to be associated with these deities are also in *odù Ifá*. There are a host of other less popular deities associated with hills, farms, lagoons, and certain trees, as well as particular spirits who inhabit caves, river banks, desolate beaches, and even ant hills.

Practitioners of Ifá believe everything in nature is a manifestation of *Olodumare*. And since every creation is imbued with a portion of the Creator, then every creation has a portion of his spirit. *Babalawo*, and indeed practitioners of the *Òrìshà* religion in general, believe that some small portion of *Olodumare* exists everywhere in nature – in herbs, trees, rivers, oceans, lagoons, hills, birds, mammals, fish, in all their variety and color, and this divine power is accessible through ritual and prayer. Ifá priests believe that through certain words contained within *odù Ifá* the essence of nature can be summoned. And even though *odù Ifá* uses words to color its metaphorical landscape, clearly nature provides the canvass to convey sacred messages for the betterment of humanity.

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See also: Candomblé of Brazil; Santería; Umbanda; Yoruba Culture (West Africa).

Incas

To understand the religious ideas of the Andean peoples under the Inca in the sixteenth century, one must first look beyond the physical manifestations of empire, so dominant and lauded in the literature. To be sure, the elaborate road system that united the area of southern Colombia, Ecuador, Peru, northwestern Argentina, and half of Chile; the hundreds of storage silos that dotted the landscape; the pyramid structures and sacred centers of Tumibamba, Huanuco Pampa, Incawasi, and the like; the terraced Andean slopes; and the extensive irrigation networks that turned dry valleys into fertile oases all deserve mention. But to comprehend why these were built and maintained so assiduously requires delving into Andean notions of origins and life. In short, it requires readers to contemplate the role of the dead in the lives of contemporary Andeans on a continuing and daily basis.

The peoples of the Andes, whether we are dealing with individual lineage, with the ethnic groups that they made up, or with the dozens of ethnicities that fell under Inca rule in the sixteenth century, believed that they owed their existence to an identifiable ancestor, who was, in turn, either synonymous with or the direct offspring of a celestial being, body, or force, like the sun, the moon, the stars, or thunder/lightning. Lineage (*ayllu*) members, to start with the smallest social, political, and religious unit, told and retold the stories of their creation in songs and verse. Many preserved the mummified body of an apical ancestor to whom their creation was attributed. The mummy was kept in an open tomb or cave. On sacred occasions the mummy was visited, re-dressed in fresh attire, “fed” through sacrifices of animals, corn, coca, and maize beer, and sometimes removed for a period of celebration and worship that involved dancing, singing, and feasting. In the seventeenth century, the Spanish sometimes found such a mummy sitting on a stool or throne in his tomb, surrounded by the preserved bodies of hundreds of his deceased descendants, who could be named and identified by the living. Individual lineage members could and did recite their genealogies back to this founding hero.

This apical ancestor was worshipped as a god, who, often with a sister, begot the lineage and either was the first to cultivate the Earth, was the first to introduce an important subsistence crop, or was the first to dig the irrigation system. Their myths and legends told how the first ancestor had traveled across an untamed landscape. When their ancestor sat down, usually on an elevated place, like a mountaintop, he brought order to chaos and civilized the uncivilized. The living believed that their first ancestor and his deceased descendants could and did continue to influence their lives. The ancestors could affect their health and fertility and that of their animals and

fields. For this reason, they received the peoples' thanks and acknowledgment through sacrifice and celebration. Living descendants also worshipped the spot where their first ancestor originally appeared and locations where he was known to have stopped or frequented during life. This is the origin of colonial references to the native reverence for a sacred spring, a tree, or a mountaintop. If the living did not adequately remember and propitiate their forebears for their blessings, the ancestors sent signs of their wrath and disfavor. An illness or plague; a frost, drought, or flood; even the infertility of a couple could be attributed to and explained as the result of the ire of one ancestor or another.

Andean peoples saw evidence of divine largess and power throughout nature. At harvest time, peasants separated and saved the highest yielding and fertile corn plants (*mates de maíz*) to dress as women and revere as the wives of their idols (*saramamas*). Miners preserved unusually pure pieces of ore to venerate also as gifts of their gods. Peculiarly colored or shaped stones and boulders also served as objects of local devotion.

The same ideas were prevalent among the dominant ethnic group, called the Incas by the Spanish, although the scale and elaborateness of worship were proportionately greater. The Inca or king claimed descent from the sun, his father, and the moon, his mother, the sun's sister and wife. The Incas who were alive at the time of the Spanish invasion in 1532 preserved the mummies of their forebears and brought them out on ritual occasions as proof of their direct descent and right to rule. Each mummified king had a palace and attendants, their own descendants, who clothed and fed them, answered questions for them as if they were still alive, and kept the flies off their preserved remains. The Incas built centers of sun worship throughout their realm, each patterned on the first, complete with hospitality centers and residences for the "chosen" women. Rich ceremonies were celebrated at these centers as the Inca moved from one to another, dispensing favors and justice, celebrating the sun, moon, and stars, and reinforcing the personal relationships that proved the basis of his terrestrial power. On such occasions, Inca feats and achievements were recalled. Such events marked the calendar and provided occasions for peoples of the various ethnicities to participate in the adorations, learn the traditions, and identify with the greatness of their past.

These ancestor-gods, known as *huacas* (a generic expression for anything sacred) provided a paradigm for Andean rulership, of a lineage (*principal*), a larger ethnic group (*curaca*), and nation (king or emperor). The apical ancestor, either as a mummy or its representation (an idol or a mask), was carried from place to place on ceremonial occasions. An extended family might designate one of its members to carry great (great, great, great . . .) grandfather on his back for the dancing and singing during a celebration. A larger ethnic group might carry their fore-

bear on a more or less elaborate litter. They, as mentioned above, were dressed afresh for such occasions and "fed."

Andean leaders, from lineage leaders to emperor, were treated in much the same way. Each ruler was carried "on the shoulders of Indians," seated normally on a low stool, atop a litter. He moved from one ceremonial center to another surrounded by his personal retainers, who served as pages, musicians, entertainers, and guards. Women followed his procession, carrying toasted corn and maize beer to dispense to the onlookers. As he passed, subjects pulled out their eyelashes and eyebrows to blow in his direction and put their hands to their lips, which they smacked as in a kiss, as the palms of the hands were thrust outward and upward, as an outward sign of reverence (known as the act of the *mocha*). Like the gods who moved from place to place, the leader remained mum and mostly motionless as he was carried about. The Inca's person was sometimes shielded from view by a curtain or cloth and a spokesman answered direct questions in his stead.

Ancestral gods were believed to take an active role in choosing the successors to rulership. At all levels, candidates for leadership were screened by divination. In a ceremony, called the *calpa*, the ancestors indicated their choice from among the candidates. Once chosen, the lord-to-be fasted and went through purification rituals. The inauguration ceremony involved investing the lord with the insignia of rule and sitting the incoming authority on a stool. Once thus enthroned, his followers worshipped him. The *mocha* has been interpreted as symbolizing the investiture of the wisdom and power of the past on the living authority at the moment he took his seat. Once seated above everyone else, he could mandate and control the labor and fate of his followers and bestow justice, including the recognized right to condemn to death for serious infractions of group customs or affronts to the gods or his person.

The authority's legitimacy was based on his direct descent from a hallowed creator. The balladeers and record-keepers (*quipucamayocs*) recited the history of the group as a royal genealogy. The Incas recalled the rule of about a dozen previous god-kings, going back to a mythical man named Manco Capac. Lineage leaders in the central Andes in the seventeenth century recited a genealogy of authorities going back up to eleven generations to an apical ancestor. Even the bestowal of a plot of land in sixteenth- and seventeenth-century Lamabayeque (Peru) required the recitation of a list of ten previous holders, back to the person who presumably was the first to clear and cultivate the plot.

One task of each ruler was to accomplish, if possible, something extraordinary to be sufficiently noteworthy to be remembered. For some individuals, conquest established his reputation while at the same time gaining the vanquished as persons on whom to impose labor service. Other rulers mobilized their followers to terrace

the hillsides or extend an irrigation system to create additional resources for exploitation. Presumably, production could then increase. More surpluses might be warehoused for distribution at the sacred rituals, where dancing, singing, and feasting were the order of the day. Individuals from other lineages might be recruited to his service because the ancestral god showed favor on his descendants. Prosperity and good government reinforced and were the manifestations of their ancestral belief system. The reputation of the local leader and his cult increased. Marriage alliances extended the cult. In sum, either through successful waging of war or the execution of a major engineering feat, a lord could gain a place in the collective memory stored in songs and verse. This increased the chances that he would be remembered and adored generations after he died, and began the process of turning him into a generous and good folk hero.

It was another of the tasks of such leaders to serve as mediator between the god(s) and his followers. The principal at the lineage level, the *curaca* at the ethnicity level, and the Inca at the imperial level were responsible for propitiating the spirits of the dead with food and drink. He also directed the cultivation of certain plots of lands that were worked to produce the items used in sacrifice. He assigned people to herd and care for the animals that were raised for ceremonial purposes. He sometimes appointed persons to care for the tombs. Maidens were chosen to make the maize beer and weave the cloth for ritual acts. He also was believed to have the power to communicate directly with the gods. In this way, he served as a mouthpiece for the ancestors, who answered important questions of concern to individuals and the group as a whole. Thus, reciprocity reigned between the gods and authorities, as between the authorities and their peoples.

Should the living lord prove remiss in his duties, as evidenced by difficulties and disaster (including natural ones), his subjects would judge him a failure and flee. It then became incumbent upon the lesser lords to take action. If hardships persisted, lesser lords were known to murder their lord, believing that he had lost the favor of the departed and, therefore, his legitimate right to rule.

The power of the gods was not considered to be static. Their power, like that of men, could change over time. In times of war, descendants carried the ancestor's mummy or its representation into battle to help defeat the enemy. The victor's god was believed to be more powerful than the vanquished side's hero. It was accepted custom for the vanquished to accept defeat as proof of relative power and accept service to the victors and their ancestors. One scholar believes that the purported aid of the sun god explained the victory of the Incas against the Chancas under the Inca Pachacuti. This victory moved the sun into the primordial and most powerful position of the pantheon, displacing the thunder god as the most revered.

Because lineage leaders were related to *curacas* and

curacas were related to the Inca through multiple marriages and the practice of polygamy, polytheism was the order of the day. One individual might worship the sun and the moon, the ancestors of the *curaca*, his own grandfathers' grandfather, and his father and mother. Likewise, one family, all its relatives, and all the relatives' relatives might travel in pilgrimage to a regional ceremonial site to participate in a ritual honoring the sun on the occasion of the presence of the living Inca himself.

There was, in short, a hierarchy of gods. The Spanish chroniclers write that the Inca evaluated ethnic and lineage gods, who were required to be presented before him once a year, on the basis of their predictions. Those who foretold correctly were lauded and rewarded; those who failed to predict accurately were demoted to the point of oblivion. In a culture that depended primarily on oral traditions for its historical sense of self, to lose adherents and followers was to be forgotten.

The multiplicity of gods and the absence of detailed historical texts led to the historization of the landscape as a memory aid. Unique and notable features of the countryside – the highest peak, a lake, a spring, a boulder, or a very old tree – might be rendered sacred by this association with a heroic ancestor. A person would hear in childhood the stories associated with each landmark, thus learning to “read” or “recall” the history of the group. These would be manifestations of the interdependence of the living and the dead; the future depended on the past through the advocacy of the living. Roads were extended to unite a people, made one by marriage and blood with the most powerful of the sacred ancestors, the sun. In times of crisis, one looked to the strongest and most powerful for aid. The hundreds of storehouses of the Inca guaranteed subsistence to people who lived on lands that periodically trembled and shook and who suffered from periodic frost, floods, and drought. The pyramids and other monumental architecture, the ceremonial complexes, the irrigation networks, and the terraced mountainsides were evidence of a powerful past, legacy to the living and the future. In worshipping their ancestors and the places they rested and inhabited, and the origins of their origins, Andeans were worshipping the sun, the moon, the thunder and lightning, the Earth (the *pachamama*), life and themselves, for they were children of the gods.

Vestiges of this native belief system are still seen in the Andes of today. Inhabitants of small towns (e.g., Racchi) still name the surrounding peaks as objects of devotion. There and elsewhere, entire families spend All Saints' night in the cemeteries, leaving gifts of food and drink at the tombs of their dead. An old aglarrobo tree is still the object of veneration and sacrifice in the Poma forest of inland Lambayeque (Peru), although no one will say why it is considered a holy spot. It is in some ways ironic that all over the Andes, people, like those of Ucupe (north coast of

Peru), are increasing their protection of ruins and setting aside tracks of forests and jungles (e.g., Manu) as nature preserves for the potential they symbolize of bringing in tourist revenues. In this sense, the ancestors are still providing for their descendants.

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- See also: Andean Traditions.

India

The natural landscape in India is extremely varied, from the deserts of Rajasthan and the flat eroded landscapes of the Gangetic valley to the green tropical forests of Kerala, the tree-covered hills of Madhya Pradesh and the snowy mountains of the Himalaya region. Similarly varied is the religious history of India is best understood as an interplay of several major religious traditions and many minor ones. Hinduism, Buddhism, Jainism and Sikhism arose in India; Islam and Christianity have had a significant presence here for more than a thousand years. India has been politically unified only a few times but has had rulers supporting Buddhism (Mauryans, 324–187 B.C.E.), Hinduism (Guptas, ca. 320–500), Islam (Mughuls, founded 1526), Christianity (British, 1757–1947), and secularism (1947–present). Jainism and Sikhism have been supported by regional rulers. In addition, India contains a large number of tribes with their own religious traditions. These religions have influenced each other in innumerable ways and none of them should be identified with India. Nevertheless, the Hindu religious tradition has had a particularly great impact on the religious culture of India. More than 80 percent of the population is usually reckoned as Hindus and more than 90 percent of the Hindus of the world live in India. However, because of the immense plurality of cultural and religious traditions of India, it is impossible to speak of a single Indian vision of or attitude toward nature.

Since the nineteenth century, India has experienced unprecedented environmental degradation. This degradation has been caused by the rapid expansion of the industrial capitalist mode of production and consumption and has led to deforestation, erosion, water and air pollution,

exponential population growth, urbanization, and increasing poverty. Use of old technology in industrial production and transportation is a major cause of pollution. Polluting industrial production has been moved from Europe and North America to countries with low labor costs such as India. The combination of exponential population growth, urbanization and small technological changes such as water closets and plastic bags have had devastating environmental effects. Environmental legislation has followed. However, the Indian government's lack of funds and the poverty of the majority of the population have been, and continue to be, an obstacle to improvements. Religion is to a large degree irrelevant to these new problems, as large-scale environmental problems seldom or never are caused by religious practices as such. Likewise, the goals of environmentalism are usually peripheral to the purpose of religions. Nevertheless, traditional religious practices and inherited interpretations of the meaning of nature and the human–nature relationship can provide a critique of contemporary environmental attitudes and behaviors. In India, starting in the 1970s, certain aspects of the religious heritage have been used to promote a mobilization against further environmental degradation and to initiate healing of the environment.

The oldest religion in India known through texts is the Vedic religious tradition. Vedic religion developed from a religious tradition that was brought to India by a seminomadic people who spoke an Indo-European language. Its most sacred texts, the Vedas, composed between ca. 1200 B.C.E. and 300 B.C.E., bear witness to the worship of divinities, many of whom are personifications of nature. Central in the Vedic religion was the notion of obligation and the duty to give to the gods as a response to what has been received. The sense of obligation linked humans and the divine beings in a circle of ritual giving and receiving. Since many of the gods and goddesses manifested themselves in natural phenomena, humans were linked to nature in a religious sense and in a holistic relationship. This sense of duty was codified in a number of Law-books (*Dharmasutras* and *Dharmashastras*) and summarized in the concept of *dharma* (right, duty, order).

In the centuries after 600 B.C.E., the center of the Vedic culture had moved from the northwest of India to the Gangetic valley. In this region other religions (among them Jainism and Buddhism) arose and the Vedic religious tradition was transformed into Hinduism. Many of the dominating concepts in Indian religious thought, some of which had consequences for the understanding of the human–nature relationship, became popular in this period. The concepts of rebirth (*punarbhava*), *karma*, and *moksha* were central in the new religions of Buddhism and Jainism, and these concepts were also developed in the Vedic tradition.

Hinduism has continued the Vedic tradition of seeing the world as a manifestation of the divine. But especially

in the philosophical and theological texts, the world has often been given a secondary value compared to the divine principle itself. In the *Upanishads*, and in the philosophical and theological interpretations of them by the *Brahmasutra* and the Vedanta schools, a principle called *brahman* was accepted as the ultimate reality and the source of the phenomenal world. Many of the gods inspired by the natural phenomena now received less attention while the gods Shiva and Vishnu were elevated to ultimate principles identified with *brahman*. Around 500–600, the Goddess was given the same status. The divine power to create was assigned to the Goddess who became the creative power of the male god. The male gods Shiva and Vishnu were identified with the formless, unmanifest and transcendent ultimate source of the world. The Goddess was thought of as the power of manifestation (*shakti*) and also identified with the manifest world as such. In the theologies of the Goddess, therefore, the material world was not of secondary value. The Goddess was also called *prakriti*, a word that came to mean both nature and woman, and which later was chosen by the speakers of the languages of North India to translate the English word “nature.”

According to Jainism, all living beings have souls (*jivas*). Some Hindu traditions believe that all living beings are part of the same divine principle (*brahman*) and others, that all living beings have separate souls (*purushas*). In Buddhism it is emphasized that animals and humans are part of the same rebirth realm. Since the cycle of rebirth (*samsara*) includes not only all human beings, but also all animals (and, in the case of Hinduism and Jainism, also plants), animals (and plants) are included in the moral order. Treating animals well gives religious merit and leads to a good rebirth and treating them badly gives demerit and a bad rebirth. A good rebirth means a rebirth as a human or rebirth in one of the divine worlds; a bad rebirth means rebirth as an animal, ghost or in various hells. Most religions have an ethics of *ahimsa* (non-injury), but in many religions this is often formulated as a prohibition to kill humans. A consequence of the inclusion of animals and plants in the doctrine of *karma*, *samsara* and *moksha*, or in the divine unity, is that the doctrine of *ahimsa* in India includes also the non-killing of animals and plants. *Ahimsa* entered the religious tradition of India as a criticism of the institutional killing of animals in sacrifice. The emperor Ashoka (268–239 B.C.E.), a famous proponent of *ahimsa*, prohibited animal sacrifice in his capital. *Ahimsa*, therefore, came to be accepted not as a reaction to war, but as a statement about treatment of animals and of the human–nature relationship. However, slaughter of animals has usually not been prohibited in India and animal sacrifice has been common in some styles of Hindu worship, especially in the worship of the Goddess. Several religious traditions in India such as Jainism, yoga traditions, and traditions

of Krishna worship, however, condemn the killing of animals.

Moral behavior is not expected from animals since they usually are not thought to produce merit and demerit, but just to experience the result of past acts. However, the Buddhist *Jatakas*, stories of the previous lives of the Buddha, tell that the Buddha was building up religious merit through altruistic behavior in rebirths as various animals. The *Jatakas* use animal stories to teach ethics. The device of using animal stories to convey wisdom is part of Indian culture. Several other such collections are known, the most famous being *Hitopadesha* and *Panchatantra*. Animals manifest various human characteristics: the parrot is wise, the deer and the antelope are affectionate and delicate, the monkey is intelligent, the elephant powerful, the jackal is cunning, the tiger fierce but easily tricked by the jackal, and the serpent is secret, vicious and powerful.

The natural parks in India, however, did not grow out of such anthromorphic ideas, but out of the early twentieth-century Western idea of “wilderness” as a protection of hunting reserves. However, an Indian tradition of hunting reserves for the feudal elite had existed already from the time of the Muslim Moghuls.

Animals have also been incorporated into the divine world. Several of the Hindu gods such as Ganesha and Hanuman, have animal forms and most of the major gods and goddesses have animal vehicles (*vahanas*). These animal vehicles often symbolize attributes of the gods and goddesses. Some gods have particularly friendly relationships to animals. Krishna grew up in a cow-herding community while Rama spent 14 years in the wilderness. Rama’s sense of justice was admired also by the animals in the forest who became his helpers. Krishna is often depicted in contemporary god-posters next to cows, while Rama is depicted hugging animals, either his monkey friend Hanuman or the bird Jatayu, showing the solidarity between the gods and the animal world. Some animals in India such as cows, snakes and elephants have been given an almost divine position. They may be worshipped as divine beings.

Many Indians, especially Hindus and Sikhs, have warm feelings for the cow. The cow is decorated during religious festivals and is celebrated for its ability to give. India is the biggest milk-producer of the world and all the five products of the cow (*pancagavya*: milk, ghee, yoghurt, urine and cow dung) are considered pure and are used in a variety of rituals. The cow is a symbol of the Mother, both as the Earth and the Goddess. The sacredness of the cow is closely related to the doctrine of *ahimsa* (non-injury) but the relationship to the cow of many Indians can also be compared to the relationship Europeans or Americans have to the dog. To them the dog is like a member of the family and would of course never be eaten. Even Hindus who eat meat would therefore not eat meat from the cow.

Protection of the cow is an ancient custom in India. Muslims and Christians slaughter and eat the cow but this is sacrilegious to many Hindus and has been a source of conflict. After the Muslim invasion of India in the eleventh century, the sacredness of the cow became a focus for the resistance of the spread of Islam in India. Several of the Muslim rulers such as Akbar's son Jahangir (d. 1627) had a great love of nature, but they were eaters of beef. Some Muslim rulers such as Babar and Akbar, however, are supposed to have banned cow slaughter, and the Sikh kingdom in Punjab made cow slaughter a capital offense. Slaughtering of cows nevertheless continued to cause tensions between Muslims and Hindus. Slaughtering of cows and eating of beef were used by the Brahmins to generate opposition to Islam. The rulers of the Hindu Maratha kingdom of the seventeenth and eighteenth century who fought the Mughal empire saw themselves as the protectors of the cow. Muslims on the other hand used the propagation of beef eating as a way to spread Islam. With the coming of the Western colonial powers in India, the sacredness of the cow was again used to mobilize people against the British beef eaters.

The Hindu reform movement, Arya Samaj, founded in 1875 by Dayananda Sarasvati, established cow-protection societies in different parts of India. One wing of the movement favored laws for the protection of the cow and prohibition of commercial slaughterhouses dealing in beef. This anti-cow-slaughter agitation led to large-scale rioting between Muslims and Hindus in 1892–1893. Anti-cow-slaughter has been a recurrent phenomenon in India and has often been anti-Muslim, with mostly Muslims as the victims.

One cause of the great Indian Mutiny of 1857 was the accusations that the British were using cow's fat as grease for the maintenance of military equipment. Accusation about the use of cow's fat continues to arouse strong feelings. In 2001, when it was revealed that the American food chain McDonalds used fat from the cow to add taste to their french fries, it caused an uproar among diaspora Hindus. The hamburger chains in India serve meat only from sheep and goat.

In societies in which humans suffer, animals usually suffer even more, and, like humans, animals in India often have had and continue to have difficult lives. Even if religions encourage treating animals well, animals are no doubt often treated badly. However, the principle of *ahimsa* has generated a great tolerance of animal life. Animals such as rats and sparrows, who compete with humans for food, are not exterminated but their right to eat and live is generally accepted. Being good to animals gives religious merit, but is not a religious goal in itself, although it might be a sign of deep religiosity. Places to feed animals such as birds and fish are often found in sacred compounds since feeding them gives religious merit. Some Jains run places for discarded animals, called

animal hospitals, while some Hindus run *goshalas*, places to take care of unwanted cows. Animal hospitals and *goshalas* are important as symbols of the ideal human-animal relationship.

The world is characterized by a fundamental disharmony since species depend on killing each other in order to stay alive. Perfection in the practice of *ahimsa* is impossible while living; only in the released state (*moksha*) is absolute non-injury conceivable. This is one motivation for attempting to attain *moksha*. According to Jainism and Buddhism and some of the Hindu traditions, some practice of *ahimsa* is a necessity for attaining release from rebirth. Monastic orders have been established for persons interested in performing the religious restraints necessary for attaining release. Since killing or having others kill for you is a necessity, but prohibited for the monks, lay people provide the food and other necessities to the ascetics. The custom of vegetarianism is more widespread in India than in any other country of the world. Vegetarianism is a way to deal with the fundamental disharmony of the world and a consequence of the awareness that humans harm themselves (because of karma) by causing pain to other living beings. It is an adaptation of the principle of *ahimsa* and the inclusion of animals and plants into the moral order.

Restraint is one of the significant ideals in the religious cultures of India and is often formulated as a relationship to nature. Monks and renunciants are the foremost representatives of this ideal, but most religious persons admire it. Restraint might have been part of the preparation of the priest for the Vedic sacrifice, but it is a primary value in Jainism and Buddhism and is of great significance also in the Hindu tradition, especially in the institution of renunciation. When the Hindu orthodox renunciant took the vow of renunciation, he gave the gift of "safety to all creatures." He said: "From me no danger (or fear) will come to any creature." He promised that all living beings may go to sleep and wake up without fear from him and swore never to injure any living being. He abjured even his own self-protection against wild animals.

Ascetics are supposed to be able to almost develop perfection in *ahimsa* and, interestingly, animals are believed to be able to recognize such ascetics. Animals therefore seek their company and even wild animals become peaceful in their vicinity. In their presence, natural enemies such as cat and mouse give up their animosity. To attract animals is a sign of spiritually advanced persons. Animals recognize their peaceful nature. Ascetics often live or wander in wilderness areas. The Himalayas are known as a place of yogis, but many mountains, hills and forests in India have been and are homes for ascetics. The *Shvetashvatara Upanishad* 2.10 says that the practice of Yoga should be performed at a charming place and a place the mind does not consider ugly. Since yoga should be performed at a place of natural beauty,

ashramas or meditation centers of ascetics are often places of striking natural beauty with the enchanting sound of water flowing, the melodious song of birds and the pleasant scent of flowers. Many descriptions of their beauty are found in the classical Indian literature.

Jainism and some Hindu traditions believe that plants also have souls (*jiva*, *atman*). Some plants are even considered divine. In the *Garuda-Purana* it is stated that "By growing, nurturing, sprinkling, saluting, and extolling the *tulasi* plant, the moral impurities of a human being accumulated in various births are wiped off" (2.38.11). In other words, the *tulasi* plant is a manifestation of God, and by worshipping such a plant salvation is attained. *Tulasi* is sacred especially to the worshippers of the god Vishnu, but several other plants and trees are sacred to the worshippers of Shiva. Tree worship is common in the whole of India. An ancient institution in India called "sacred groves," perhaps of pre-Vedic origin, kept patches of original forest uncut. The Buddha was probably born in such a sacred grove. Many villages in India have sacred groves in which plants and animals receive absolute protection. But already in the 1880s, the inspector general of the forests in British India lamented the loss of sacred groves and this destruction has continued unabated since. However, there is also a tradition in India of defending trees and forests from being cut down. In about 1750 the famous Bishnois in Rajasthan protected the tree *Prosopis cineraria* from being cut down by letting themselves be killed by soldiers. Even today Bishnoi villages are green islands in a desert-like environment.

In India there is an ancient tradition of wandering in the forest, traveling to rivers or beaches or climbing to the top of hills. The purpose is to visit sacred places. In several of the religious traditions of India, place as such is a source of religious power. Millions of Indians regularly visit sacred places. Traditionally the pilgrims walked alone or in small groups, but these days crowds travel together in buses, trains and cars. The landscape of India is plotted with sacred sites: Hindu temples, Sufi shrines, Sikh *gurudwaras*, mosques and churches. Many are places of local or regional pilgrimage but quite a few centers attract pilgrims from all over India. At the Kumbha Mela festival 2001 during the most sacred days, between 20 and 30 million people gathered at the confluence of the rivers Ganges and Yamuna to bathe at this sacred place of natural beauty. A unique feature of the Hindu concept of the power of place is the idea that the places as such can be reduplicated. Reduplication means that the power of one sacred place can be represented and thus be made available also at other places. In other words, the power of place can be abstracted and transferred to other places. Sacred places have the power in themselves to give *moksha*, and dying at a sacred place such as the riverbed in Varanasi brings release.

Many places of pilgrimage are next to rivers and rivers play a significant role in the religion of the Hindus. They are believed to be sacred, are personified as goddesses and have the power to cleanse the individual from moral impurities. The ashes of the dead are usually placed in the river. The idea of the sacredness of places and rivers may be drawn on to generate a respect for the land, but it may also obscure environmental degradation such as pollution. The environmentally polluted state of the rivers Yamuna and Ganges is easily observable, but the rivers are nevertheless still considered pure from the ritual point of view by devotees.

In general, greed for the products of nature is probably a much greater cause of environmental degradation than a lack of appreciation of her. Ascetic values and traditions that consider human restraint as an ultimate virtue in the relationship to nature have had a great impact on contemporary environmentalism in India. This is to a large degree due to the innovative reinterpretation of the ascetic values of Mohandas Karamchand or Mahatma Gandhi. Gandhi, although he lived before environmentalism and the environment was not his main concern, is nevertheless recognized as the father of the environmental movement in India. There are several reasons for this. Gandhi's life had a deeply ecological foundation. He practiced vegetarianism and thought of animals as having the same dignity as humans. His various methods of nonviolent resistance, *satyagraha* ("holding on to the truth"), have become models for environmental action. Gandhi is also a model for the plain material standard of living celebrated by some environmental movements. Gandhi's famous statement that "the Earth has enough for everyone's need, but not for anyone's greed" is a slogan for contemporary environmentalism. Disciples of Gandhi, such as Mirabeen and Saralabeen and leading Gandhians such as Sundarlal Bahuguna (a disciple of Vinoba Bhave) and Baba Amte, have played central roles in the Indian environmental movements. Gandhi's thoughts and methods have had a great impact on several international environmental movements such as deep ecology.

Since the 1970s the destruction of the environment has been met by the establishment of a large number of environmental organizations and environmental legislation. Sometimes religion has played a role in this development. The most significant environmental movements in India have been concerned with forests and water. The movements have protested against destruction of forests and the construction of big dams. Their main issue has been environmental injustice. A consequence of providing industry with raw materials and electricity has been the impoverishment and displacement of local people. Several modern environmental movements in India have concentrated on protecting trees. The origin of environmentalism in contemporary India goes back to 1973 when the Chipko movement of the central Himalayas

successfully stopped commercial timber felling. The Chipko managed to prevent loggers for a sports company from the city of Prayag from felling trees by hugging or sticking to the trees. The Indian Forest Act had restricted the access to forests of tribals and peasants who had customary rights, and this created a deep feeling of injustice. Scientific forestry also proved to be ecologically harmful and a cause of erosion and flooding. Increased deforestation, shortages of fuel, fodder and timber for local communities led to conflicts with the interests of industry. Deforestation continues to be a grave problem in India and several other organizations such as the Appiko in Karnataka confront this same problem. Another celebrated environmental movement in India is the Narmada Bachao Andolan ("Save Narmada Movement"). This movement has protested against the building of the dams of the Narmada river that will displace 100,000 persons, mainly tribals. Protests against the Tehri Dam has been led by Virendra Saklani. Chandi Bhatt, a former Chipko leader, fronts the opposition to a smaller dam at the Alakananda River. Chipko, the Narmada Bachao Andolan and several other movements have been catalysts for the opposing interests of, on the one hand, subsistence-oriented peasants and forest dwellers and, on the other, big industry and the better-off urban population.

Religion has played a role in several of the modern environmental movements. Chipko originated in the watershed of the sacred river Ganges, and the river Narmada is as sacred as the Ganges for the people who live in central India. Environmentally concerned individuals have attempted to mobilize against the recent environmental degradation by bringing attention to traditional religious concepts and views, and highlighting texts of the religious traditions of India in which humans are perceived as an integral part of nature, protectors of nature or worshippers of her. As a response to the challenge of environmentalism, Indians have brought attention to the celebration of the sacredness of nature in the Vedic tradition and to responsibility for the welfare of the whole world (*lokasamgraha*) implied in the concept of *dharma*. The concept of *seva*, social service, important to Gandhi and many twentieth-century Hindu religious thinkers and organizations, has put a greater demand on religious organizations to contribute to social welfare. Methods of protest such as nonviolent opposition, a creative reinterpretation of the principle of *ahimsa*, and fasting, inherited from the religious traditions of India, have found new applications.

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See also: Ahimsa; Amte, Baba; Appiko Movement (India); Art of Living Foundation; Athavale, Pandurang Shastri; Aurobindo, Sri; Auroville; Bahuguna, Sunderlal; Bhagavadgita; Bishnoi (Rajasthan, India); Buddhism; Chipko Movement; Dharma – Hindu; Domestication; Gandhi, Mohandas; Goshalas (Home for Aged Cattle); Harris, Marvin; Hinduism and Pollution; Hinduism; India; India's Sacred Groves; Jainism; Jataka Tales; Krishnamurti, Jiddu; Prakriti; Ralegan Siddhi; Re-Earthing; Santal Region (India); Sarvodaya Shramadana Movement (Sri Lanka); Seeds in South Asia; Shakti; Shiva, Vandana; Sikhism; Swadhyaya; Tantra; Tantrism in the West; Tehri Dam; Theosophy; Yamuna; Yoga and Ecology.

Indian Classical Dance

In any culture, dance both reflects and embodies the central values associated with civilization. In the case of India, a series of “classical” dance styles share a basic worldview that expresses, in symbolic terms, humans’ relationship to nature in the broadest sense of the term “nature.” In Vedic philosophy and practice (the oldest systematized foundational basis of what we now refer to as Hinduism), nature or *prakriti* encompasses not only the external manifest universe but also the processes of the body, mind, and evolution of all creatures, including humans. Therefore the dominant Hindu worldview is theoretically monistic and denies any ultimate duality, or radical division between humans and nature. Nonetheless, a basic dualism appears (whether such appearance is given the status of reality depends upon the particular school of Hindu philosophy) in all creation as gender differentiation: the world is envisioned as the interplay or “dance” of male and female energies. In this dance, the feminine comes to play the role of “nature” while the masculine is associated with the transcendent function, or “spirit.” It is this interplay that has provided both the structure and content of Indian classical dance in its myriad variations and for this reason, throughout its history, erotic themes and elements have been dominant.

The oldest continuous forms of Indian dance are those practiced in the South where thanks to entire communities and unbroken lineages of artists, the basic language and vocabulary of various classical styles are still governed by Bharata’s *Natya Sastra*, a dramaturgical text which dates to the first century. Other, more localized texts called *agamas* fine-tuned the principles and application of the art form to regional specifications, for the temple complexes of South India, both small and large, were, until the early part of the twentieth century, the religious, political, and economic headquarters of regional kingdoms – centers which through ritual of various kinds once defined and upheld both the social and cosmic universe. Today’s Indian classical dance styles are largely the modern-day survivals of the dance forms which played a central role in these temple centers.

Prominent among these were the *devadasis* or “servants of the God,” young women dedicated to the temple from an early age to fan, sing and dance in front of the deity at midday mealtime, at night before closing the temple, and in procession during festivals. They also served as sexual partners to the priests and elite clientele of the temple who patronized both them and the temple. While debate continues regarding the exact nature and function of such “divine prostitution,” it is clear that the sexuality of the devadasis was a central part of their religious role and sacred status. In their ritual function the devadasis’ dance embodied the erotic element of life associated with fertility – life-giving rains, increase of crops and vegetation as

well as its inhabitants – in short, the auspicious properties of nature both *invoked and brought under the transcendent order and control of human civilization*.

Embodying auspicious nature, devadasis were symbolically regarded as *chalanti devi*, or “moving goddesses,” manifestations of the Great Goddess married to the God-King or ruler. The importance of this role played by the devadasis cannot be underestimated in a worldview where the divine is gendered and no major male deity stands alone without his *shakti* – his female consort or “power.” The question which may be raised is whether nature, or the feminine in this equation, is more invoked or more controlled. Does Hinduism display an unambiguously positive attitude toward nature?

To begin to answer it, we must explore goddess myth and symbolism which is rich with elements of *tantra* – systematized esoteric beliefs and practices which provide a relatively more positive and embracing attitude toward nature and the manifest world than mainstream Vedic Hinduism. A feature of the goddess traditions is that feminine deity (symbolic of nature) is not sentimentalized. She is rather portrayed in both her benign and formidable aspects, in destructive as well as erotic forms. In its embrace of all aspects of nature, the dark as well as the light, the low as well as the high, the Tantric, goddess-centered traditions contrast with the more strictly hierarchical and polarized Vedic worldview which, however Earth-centered, holds asceticism (renunciation) as its highest value.

What complicates the picture is that the Tantric and Vedic streams within Hinduism are so highly interwoven and overlapped that it may be misleading to radically distinguish them. Nonetheless, dance, a primarily feminine activity, has traditionally come to embody eroticism and the invocation of nature, while yoga, primarily male, embodies asceticism and control *over* the same for the ultimate purpose of transcendence. Tantrism embraces both elements and became the means by which the Hindu tradition was able to maintain a creative tension at the center of its ritual, myths, and various philosophies. As the myths, symbols, and sacred techniques of dance and yoga demonstrate, both disciplines contain elements of the other: while dance is performed primarily inside temples, inscribing the heart of culture with the power of nature brought under social control, yogis transcend the social to enter into a mystical union with nature and transcendent cosmos. Ultimately, the goal for both the yogi and the devadasi is to realize both immanence and transcendence, to balance and unite male and female energies within to attain a kind of divine androgyny or mystical state of non-dual unity. Although the dancer projects this state outwardly in her performance, in the Hindu worldview, the key to nature, whether it is being invoked (celebrated and embraced), or controlled, lies “within.”

Today, more than fifty years after the abolishment of

the devadasi institution under British colonial influence, dance in India is primarily (although not exclusively) performed by and centered on women who continue to inscribe and embody a basically Hindu worldview. Dance scholarship points out that the reformation of Indian classical dance traditions in the post-colonial and post-independence period reinterpreted the meaning and harnessed the energy of the dance within the context of Indian nationalism. “Bharata Natyam,” South Indian temple and court dance reinterpreted by Indian-born Theosophist Rukmini Devi, in particular, became synonymous with Indian culture and, not long after, other regional styles were reformed in similar fashion. Today, Indian dance is in the process of being reshaped again, this time within the context of global internationalism and its associated spiritual multiculturalism. This is happening both in India and within the Indian diaspora, and includes the increase in the number of non-Indian performers of the art both in India and abroad.

Although they no longer perform in the sanctums of temples, today’s Indian classical dancers continue to embody eroticism – the auspiciousness, fertility, and life-enhancing qualities of nature within a new secular context. Following the dramaturgical rules of the *Natya Sastra*, all classical dance styles involve a language of the body, facial expressions, and hand gestures called *hasta-s* or *mudra-s*. This language reflects both *natya dharmi* (idealized and abstracted representational form) as well as *loka dharmi* (a representation of observable life). *Loka dharmi* reflects the “natural” world that presents itself to the senses; for example, the use of a hand gesture to suggest the shape of a cow or deer, or a young woman walking with a water pot on her head. In contrast, *natya dharmi* transforms nature into culture – hence the “sacred” geometry (circle and square) of the body in the basic dance stance. In either case, classical dance and drama treats life as food for reflection on the nature of existence – hence the “spiritual” nature of this art.

Both a profound respect for, as well as a desire to control nature for “higher purposes” pervades the art and is reflected straightforwardly in the myths and symbols of the dance. Siva Natraj, the patron deity of the dance is portrayed as a cosmic deity whose five activities govern the origin, preservation and destruction of the created universe and whose dancing feet stamp out cadences which divide eternity into time. His iconographic image incorporates the *panchatattvas* or four elements – Earth, water, fire, air – and his intoxicated dance represents his complete and blissful control over these processes. Most significant is that under his feet he tramples a dwarf, a representation of our collectively shared notions of “lower” nature.

In contrast, the most popular stories enacted through the dance are much more “down to Earth,” centered on Krishna, the cowherd Lord who playfully romps with the

Gopis (cowherdresses) on the idyllic banks of the Yamuna in Brindaban. In countless dances and dramas throughout India, the myths and rites of Krishna celebrate the rich eroticism of nature and raise it up as a vision of transcendent beauty. Yet Krishna, as an incarnation of Vishnu the protector who takes birth in various ages to rescue the world from demons, must also subdue the aspects of nature which are anathema to *dharma*, the socially constructed, transcendent order of civilization. Therefore, as portrayed in various classical styles, Krishna dances on the hood of the snake Kalika who emerges from the primal waters just as Siva dances on the dwarf. In the more commonly portrayed dances, where the focus is on the erotic relationship between Krishna and Radha (or one of his other consorts) the female consort represents the human (nature) while the Lord represents the divine (culture reflecting the transcendent). It is especially noteworthy that classical dance dramas, now as throughout history, center on two archetypal themes – the subduing of demons (the lower forces of nature) and the *hieros gamos* or sacred marriage representing the union of opposites. Of the two, the latter is by far the most popular, especially today, a trend which may reflect an archetypal nostalgia at the heart of Indian culture – a universal human longing for wholeness reflected in the harmony between nature and spirit.

In India the now “secular” art form of classical dance is still primarily performed at the time of religious festivals, weddings, and the openings of various institutions which are usually calculated astrologically (in tune with nature as defined by Vedic “sciences”). Likewise, it is arguably the “spiritual” aspect of Indian classical dance, the combination of eroticism and transcendence, which speaks most profoundly to contemporary international audiences. While embodying the transcendently erotic aspects of Indian culture, today’s Indian dancers still preface their dance with *bhumi namaskar*, a simple gesture wherein the dancer bends to prayerfully touch the Earth and to ask the Earth’s forgiveness for stamping on her. Similarly, Puspunjali, the offering of flowers to the stage, the breaking of a coconut and the lighting of the sacred lamp before the start of a program, all continue to be observed, demonstrating what Ananda Coomaraswamy called “the transformation of nature in art,” the sanctification of time and space by offering up the bounty of the Earth to a “higher” spiritual purpose.

Indian classical dance, in an entirely new global context, still speaks to the human desire to contemplate the relationship of spirit and nature, a relationship that continues to be engendered as masculine and feminine. Typical of all art and philosophy in the postmodern period, this changed context calls for a constant reevaluation of the meaning of all terms involved. As Indian classical dance moves further away from its land of origin, it will undoubtedly reflect a transformed understanding of

"nature" in keeping with humanity's own relationship to inner and outer realities.

Roxanne Kamayani Gupta

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See also: Dance; Ghost Dance; Hinduism; India; Lakota Sun Dance; Planetary Dance; Prakriti; Tantra; Tantrism in the West; Yoga and Ecology.

Indian Guides

The Indian Guides is a youth program sponsored by the Young Men's Christian Association (YMCA). Through activities themed around "Indian Lore," the program aims to use young people's interest in the "romance," "beauty," and "color" of Native American cultures to provide occasions for fathers and sons and fathers and daughters to work together on costumes, rituals, and related projects. The YMCA works from a traditionally non-denominational Protestant religious orientation, and the Indian Guides add to that base a generic nature-based "spirituality" thought to be common in American Indian cultures.

The first "tribe" of Indian Guides was created by Harold S. Keltner, a leader in the YMCA of St. Louis, Missouri. Based on his experiences in Canada, Keltner brought a Canadian "Ojibway," Joe Friday, to address a father and son banquet in 1925, and Keltner saw immediately that the interest of the boys and men present could be the basis for a movement involving fathers more directly in the social, physical, and moral development of their sons. The movement began as a very loosely organized, decentralized program emphasizing the autonomy of the local "tribe" and, eventually, the groups of tribes called "nations." By 1925, however, the movement had spread to enough YMCA offices that the National Council became an official sponsor of the program. A few years later, the official name of the program became "The Father and Son 'Y' Indian Guides." Eventually girls were admitted to the movement ("Indian Princesses") and, even later, the "Y" created "Indian Braves and Indian Maidens" as programs for mother-and-son and mother-and daughter-pairs. In 1988 a manual entitled *Friends Always* (the motto of the program) consolidated the program materials of the four separate programs.

From the outset, the movement acknowledged the

important work of Ernest Thompson Seton (1860–1946), the artist, naturalist, and writer who created his own youth movement based on Indian Lore (the "Woodcraft Indians," 1903) and who was one of the small group of founders of the Boy Scouts of America in 1910. Seton drew upon the Darwinist ideas of the age and his knowledge of the Native Americans of North America to provide both concrete instruction in "Indian Ways" (e.g., from his 1903 book *Two Little Savages* to his 1937 *The Gospel of the Redman*) and a general philosophy of nature-based spirituality.

"Y" leaders have always emphasized to the fathers and mothers that the use of Indian Lore in the program is a means to the end of parents' greater involvement in their children's lives. Changing public sensibilities about Native American cultures in the late twentieth century – spurred in no small part by Native American civil rights and political social movement organizations, such as the American Indian Movement (AIM) – brought negative publicity to the uses of "Indian Lore" by mainly white youth organizations and sports teams. By 1990 the National Advisory Committee was attempting to promote more "responsible" use of the "native American theme" in the movement, and a 1991 initiative with the Smithsonian Institution's planned National Museum of the American Indian signaled a new sensibility about the theme. Responding to public criticism, the national office of the YMCA of the USA decided in late 2001 to revise and rename (as "Friends Forever") the program, eliminating all references to Indian Lore. The new program material will eliminate references to the "Great Spirit" and substitute the "Creator." The heavily decentralized nature of the Y-USA, with local YMCAs enjoying considerable autonomy, means that some "tribes" and "nations" might resist this plan.

The religious or spiritual content of the Y-Indian Guides program has always been slight and rather inconsequential. The program, though, brought thousands of children and parents together as part of the larger historical effort by which mainly white, middle-class youth-workers and children attempted to use their own, somewhat limited understanding of Native American nature-based religion to revitalize and energize their own, more conventionally Protestant understanding of how to lead a religious life.

Jay Mechling

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See also: Indigenous Religions and Cultural Borrowing; Religious Environmentalist Paradigm; Scouting.

Indian Shaker Religion

The Indian Shaker religion began around 1882 in Washington Territory, at Mud Bay on Puget Sound, near what is now the state capital, Olympia. Taking its name because of the physical movements of the worshippers (similar in some aspects to the Shaker Religion brought to America by Ann Lee in the late eighteenth century), the faith was inspired by a native who reportedly died, then came back to life, relating apocalyptic visions of the afterlife. John Slocum, a Squaxin tribal member living on Puget Sound, fell sick and apparently passed away. But while the mourners were waiting for his coffin to arrive from Olympia, the “corpse” sat up, astonishing his family and friends.

Unlike traditional native religions, however, Slocum’s new faith considered itself a branch of Christianity reserved for Indians, and it focused on personal renewal and piety, rather than on the rejection of agriculture or other European-American practices. Slocum revealed that he had gone to heaven, been admonished that his sinful ways had made him “unworthy” to enter, and had then been sent back to warn his people to live their lives in accordance with holiness and purity.

The religion quickly spread from southern Puget Sound, gaining converts and influence on reservations such as Neah Bay on the Strait of Juan de Fuca, the Siletz on the Oregon coast, the Klamath in northern California, and the Warm Springs, Umatilla, and Yakama Reservations east of the Cascade Mountains. The Yakamas consistently provided leadership and healthy numbers of believers to other growing native churches, and they maintain an active Shaker presence today.

The faith gives Native Americans in the Pacific Northwest a viable alternative both to traditional native spirituality, and more orthodox expressions of Christianity as brought by missionaries in the nineteenth century. Since its inception, Shakerism has been known for its eclectic nature, borrowing certain rituals from Protestantism, Catholicism, and the Drummer Dreamer faith, but forging its own tradition, based on healing and moral self-examination.

The Shaker faith also allows a more Western idea of virtue and piety to combine with more traditional indigenous attitudes toward the environment. The tradition’s insistence that worshippers practice personal holiness, combined with the expansion of virtue to include environmental respect has resulted in a syncretistic idea of piety that frowns on environmental degradation – not as a personal insult against the order of things, but as a vice to be rejected. Thus, speaking in terms of pragmatic agreement on environmental public policies – especially on local land issues on reservations – Shakers and believers in more traditional native spirituality often present a united front. Given that both traditions do not

thrive by adhering to extensive and exclusive doctrines, such agreement is not surprising. However, since natives comprise a minority on many reservations, this unity on environmental issues is an essential component in letting a native voice be heard.

Michael McKenzie

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See also: Yakama Nation.

SP India’s Sacred Groves

Interest in sacred natural elements, such as groves and plants, has grown remarkably in the past decade, particularly in relation to biodiversity conservation (UNESCO 1996). Scholars from numerous fields, including ecology, botany, and anthropology, have attempted to establish the importance of these sacred natural areas, suggesting that sanctifying forests and groves may have been traditional ways to conserve biodiversity. These writings rightly draw attention to sacred areas and traditional systems of conservation; however, village-level studies suggest first that not all sacred groves are biologically diverse, and second, that the biologically rich groves, in many cases, were protected for reasons other than conservation of biodiversity. Sacred groves and other sanctified natural elements may need to be better understood from the local perspectives.

Study in the Kumaun region in the northern state of Uttarakhand (India) illuminates local perspectives on the sacred and sanctity of natural elements, and demonstrates that merely keeping areas sacred is not sufficient for conservation given the nature of change in religious behavior taking place in many rural areas. Instead, it is critical that we understand the beliefs that have led to the sanctification and conservation of these elements in nature.

No single word in the Hindi language captures the various meanings of the word “sacred;” however, the Hindi language has multiple words capturing the different meanings of this English word. The numerous meanings of the word are, in turn, reflected in multiple kinds of local relations with sacred elements in the biophysical world.

Table: Multiple reasons for sanctity of natural elements.

Reason for sanctity of objects	Forms of natural elements	Example
Dedicated to the divine	Sacred landscapes, sacred groves, other sanctified forests	Most hills, rivers
Belonging to the divine	Sacred groves	Badrivan (surrounding temple of Badrinath in northern India)
Associated with a sacred place	Particular trees not otherwise considered sacred	A <i>Pinus roxburghii</i> (Chir pine) tree in temple vicinity
Auspicious (associated with mythology and/or ascetics)	Sacred groves, species of flora/fauna	<i>Ficus religiosa</i> (Fig), most species of snakes
Ecological benefits	Sacred groves, floral species,	<i>Ficus religiosa</i> (Fig) (ground water retention)
Medicinal properties	Floral species	<i>Betula utilis</i> (Birch)(used in treatment of snakebites)
Aesthetics	Floral species	<i>Cedrus deodara</i> (Cedar) (the conical shape of tree)
Symbolic meaning	Floral species	<i>Ficus bengalensis</i> (Banyan) (longevity)
Social significance	Floral species	<i>Ficus bengalensis</i> (Banyan) (shade and shelter)

For instance, rural Kumaunis refer to the hill regions of Kumaun as *dev bhumi* (god's land), marked by the presence of the gods. Yet, features of the biophysical world considered more sacred are described by other concepts of the sacred. For instance, mountains and local hilltops are considered especially sacred in Kumaun, for as in many other parts of the world, they are thought to be the abode of the gods and as belonging to the gods. According to local mythology and villagers' conceptions of these areas, these represent places where the divine showed its presence to the human world. These places are, therefore, dedicated to the divine, and temples are built to honor the deity that showed its divine presence.

Special significance is also accorded to rivers, and confluences of rivers for similar reasons. Likewise, certain species of wild fauna are considered sacred, and are therefore traditionally protected due to the direct association with mythical characters.

When the term sacred is used in relation to particular species of flora, the meaning and conception of the sacred is slightly different from the above. Not all species of flora considered sacred are associated with the divine, neither are they considered sacred *per se*, but these floral species are viewed as auspicious (*shubh*). The conception of sacred in this context, however, is related, as in the case of sacred sites, to a feeling of reverence. Most people, including priests, typically tend to be unaware of the precise reasons for the sanctity of certain flora. It is generally assumed that since these species were referred to in religious texts, and were favored by ascetics and sages of the past, who were especially knowledgeable about flora (especially the medicinal properties), and hence meditated under carefully selected trees, they must have beneficial properties. The numerous sacred and secular reasons for the sanctity of particular flora are provided in the table above.

Also embedded in these notions of the sacred is the

concept of relative sanctity, and the recognition that not all sacred places or entities are equally sacred. In such a continuum of relative sanctity, the highly sacred species are believed to be sacred in themselves, and are protected regardless of the sanctity of areas adjacent to them. Species that are relatively less sacred are not necessarily protected unless associated with a sacred area. These lesser sacred plants are, nevertheless, commonly planted in sacred areas such as groves. Through this, these particular plants or trees (and not the species) move up the continuum among the highly sacred floral species, and hence are locally protected.

Sacred groves in the Kumauni context ascribe to yet another conception of the sacred. In Kumaun, these groves are typically associated with a temple, and are generally referred to as *dev van* (god's forest). These groves are not merely associated with the divine, as in the case of many sacred sites and sacred flora, nor are they always designated or dedicated to the divine; rather, they are often taken simply to *belong* to the divine.

Although the meanings associated with sacred flora (*shubh* or auspicious) and sacred groves (*dev van*) differ, local reasoning on the existence of sacred groves in Kumaun overlaps with reasons for the sanctity of the specific floral species. The most common explanation of sacred groves, provided by local priests, is simply aesthetics, broadly seen as enhancing the spiritual integrity of these places. Other explanations include shade and shelter for the deities, especially on the hilltops, and ecological benefits such as retention of ground water.

While the biophysical is, and has been, protected due to association with the spiritual world, or at times *consciously* used as a means of addressing secular concerns of conservation, protection of the biophysical environment may not always follow from such association with the sacred. Numerous examples exist where religious practices

and beliefs in the sacred have resulted in environmental degradation.

In Kumaun, as in other parts of India, environmental degradation due to association with religion is primarily related to the changing views of contemporary religion itself. There is an increasing emphasis in contemporary religion on the Vedic rather than the animistic traditions. Not only are local deities increasingly being associated with the Vedic deities and recognized as alternate forms of these deities, but natural elements of worship are being replaced by deities of the Vedic tradition. Thus, the traditional use of sacred stones, typically collected from river-beds and placed in temples for worship in the more animistic traditions, are today being replaced by elaborate humanized Vedic idols. There is also increasingly a separation between nature and religion, with greater importance being placed on the material aspects of religious culture in place of the natural and the supernatural. As a result, even the Vedic gods and goddesses that were traditionally associated with certain natural elements, such as rivers, are being dissociated with the natural elements and increasingly being worshipped as idols. Finally, contemporary notions of aesthetics in many of these rural areas are placing greater significance on the material rather than on natural elements. Thus, in rural Kumaun, many sacred groves are being replaced by large temples and temple complexes. Emphasis on the temples and temple structures rather than the groves is leading to intensive grazing pressures on sacred groves. In some instances, the rising popularity of specific temples, religious mass tourism, and resources used in large ritual ceremonies is leading to the depletion of the once-remote sacred groves.

Thus, given the changing conceptions of religion and religious behavior in contemporary times, merely keeping areas sacred is insufficient. By understanding local perspectives on the sacred and the changing local relations with sacred natural elements, we can see that building on local views of the sacred and reestablishing the link between nature and religion may be crucial for the protection of these natural areas.

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See also: Cathedral Forests and the Felling of Sacred Groves; Hinduism; India; Re-Earthling; Sacred Groves of Africa; Sacred Mountains; Wenger, Susan – Yoruba Art, and the Oshogbo Sacred Grove.

Indigenous Activism and Environmentalism in Latin America

Many indigenous spiritual and philosophical traditions express ethics of respect for nonhuman life, for particular places and landscape features, and for the Earth itself. These approaches illuminate the extent to which Western modes of understanding the world authorize or excuse environmentally destructive practices. They provide insight into other ways of representing and interpreting nature and humans' relation to it and point the way to solutions to human-caused environmental crises.

As the historian Richard White notes, "[p]erhaps the most important decision Europeans made about American nature in the centuries following Columbus was that they were not part of it but Indians were" (White 1999: 132). The Spaniards brought with them a stock of ideas about "wild men" and savages, which were early although not universally applied to the inhabitants of the Americas. Foundational categories of European thinking, expressed in oppositions between savage and civilized, or nature and culture, were central to Spanish thinking, yet images of nature as Eden, the landscape of a prelapsarian state of grace, also shaped their understandings of the land they colonized.

The same categories underwrote different phases of nationalism in Latin America. Early post-Independence nationalisms were characterized by conflict between conservatives and liberals, the latter of whom favored dispossessing the Church and indigenous communities of lands. The liberal view typically saw Indians as obstacles to progress; their disappearance would be an important achievement for the consolidation of the liberal nation. In contrast, some early twentieth-century nationalists lionized their indigenous heritage in their efforts to forge a mestizo nation. The distinctiveness and superiority of Latin American culture was explained as the sum of the best parts of both the Spanish and Indian heritage

presumed in the ideology of *mestizaje*, or race-mixing. Most famously expressed in the Mexican José Vasconcelos's ideas about the Latin American "cosmic race," accounts of *mestizaje* that celebrated its indigenous component looked to a glorious indigenous past rather than contemporary Indians, who were typically poor and marginalized and regarded as hindrances to progress.

Thus, two contradictory but constantly intertwined modes of imagining indigenous peoples recur in the last five hundred years of history in the Americas. One portrays Indians as inferior people and prescribes assimilation; the other celebrates the traditions, knowledge, and history of indigenous peoples. These complex and shifting valences of respect and disregard characterize representations of Indians that convergence in regarding indigenous people as radically and fundamentally different from non-Indians. Such images shape the ways both non-Indians and Indians understand what it means to be indigenous, and influence contemporary issues involving indigenous peoples, including indigenous rights in international law, Indian land claims, and debates over bilingual education. They have also been fundamental in the relationship between indigenous peoples and environmentalists over the last thirty years.

Maya scholar and activist Victor Montejo affirms that indigenous peoples' worldviews encourage environmentally sustainable practices, pointing out that

concern for the natural world, and the mutual respect this relationship implies, is constantly reinforced by traditional Mayan ways of knowing and teaching. [A] holistic perspective of human collective destiny with other living creatures on earth has a religious expression among indigenous people (Montejo 2001: 176).

Montejo draws on the teachings of the pre-Columbian Mayan text *Popol Vuh*, as well as his lessons he learned as a child, to show how Mayan beliefs foster humans' respect for the rest of creation. An origin myth in which an earlier race of humans were destroyed for the disregard they showed animals and inanimate objects cautions people to respect the natural world, while humans' relationship of dependence on a Creator who is embodied in the unity of sky and Earth reinforces the sacredness of the world.

Montejo's work points to one of the central aspects of contemporary indigenous identity: the identification of Indian religions and worldviews as emphasizing respect for nonhuman life and providing a holistic approach to understanding humans and nature. This is often expressed in the figure of Mother Earth. Mother Earth spirituality (whose historical roots among indigenous Americans is disputed) poses environmental protection as an issue of central concern to indigenous peoples for religious reasons. This lends legitimacy to activists' claims about

the ecological superiority of indigenous worldviews; it also provides weight for some territorial claims. But Mother Earth spirituality has also become a central concept for the pan-indigenous identity asserted by political and social activists, expressing a certain sensibility and helping to foster solidarity among diverse indigenous traditions. Prayers to Mother Earth commonly lead off indigenous organization meetings and public events; references to Mother Earth were prominent among indigenous-oriented events at the 1992 Rio Earth Conference.

For the Maya and other Mesoamerican peoples, spiritual links to nature are clearly expressed in beliefs and traditions relating to maize. The first humans were made of corn, according to the *Popol Vuh*, and corn cultivation remains central to the lives of rural people throughout Mexico and Central America. In western El Salvador, peasant farmers choose to sow corn on at least some of their land even when it will be less profitable than other crops and even if they have insufficient land and will have to buy most of the years' corn in any case. Javier Galicia Silva notes the same preference for corn in Mexico, reporting that for contemporary Nahua small-scale farmers there are still "mythic criteria that motivate agricultural practices" (Galicia Silva 2001: 321).

Culturally specific appraisals of the importance of particular crops and forms of agricultural production clearly inform indigenous peoples' understandings of and interactions with the natural world. In Mesoamerica, indigenous farmers developed myriad varieties of corn, while Andean farmers have produced an astonishing number of potato varieties. Andean farmers' preference for a high diversity of crops is expressed in an ethic of cultivation that outlines what constitutes a satisfactory livelihood. This preference for diversity has been particular to peasant or non-elite farmers since before the arrival of the Spaniards: Inca state-run agriculture, like the *hacienda* production of Spanish colonial rule, was dedicated to the cultivation of large quantities of relatively few species and varieties. Commoner or peasant farmers, in contrast, identify a wide diversity of both species and varieties as fundamental to a satisfactory life, and their work has produced and preserved an astonishing array of potato and corn types.

Notable in these examples is the importance of culturally specific, often religious, guidelines that address both connections to "nature" as a general realm of nonhuman being and to agriculture. Although many indigenous traditions distinguish between cultivated spaces and a more distant place of spirits and beasts, both terrains are addressed by belief systems that provide guidelines for human interactions with the nonhuman. While it is by no means uncontested, there is evidence for the claim that many American indigenous traditions do not make the fundamental distinction between "wild" and

“civilized” or “humanized” landscapes that predominate in Western approaches to nature.

Indeed, much of what has been regarded by Westerners as “wild” landscapes in the Americas has indeed been produced by human activity, in some cases over thousands of years. This is true not only for regions like those in the Andes or the Mesoamerican highlands, but also for the lowland forests like the Amazon, many of whose inhabitants – long regarded as “hunters and gatherers” – have long traditions of gardening and cultivating medicinal plants. Selective slash-and burn (swidden) cultivation in lowland forests appears to have increased biodiversity in many areas; ancient Maya and Aztec societies maintained gardens and protected areas.

In Latin America (as in the U.S.) dominant elites have often labeled land inhabited and tended by indigenous peoples as not only “wild” but also “empty,” particularly in cases of land not occupied by peasant farmers. In many countries (including Mexico, Peru, Ecuador, Guatemala, and Brazil) governments have encouraged highland Indians to colonize “empty” or “unused” lowland forests to relieve pressures on highland land concentrated in large estates and expand the agricultural frontier, and in some cases to strengthen national claims to disputed border areas. Highland peasants moving into lowland areas can cause tremendous ecological damage, often burning large tracts of land for cultivation and ranching or opening mining claims, and are a major threat to lowland groups in several countries.

There is evidence that anthropogenic environmental change in pre-Columbian Latin America contributed to degradation in some areas, and may have caused significant damage. The most widely cited case is of damage wrought by widespread deforestation and agricultural intensification, which is thought to have contributed significantly to the collapse of Classic Maya civilization.

For the most part, anthropology, ecology, and other disciplines remain ambivalent about the links between spirituality or religion and ecological sustainability in indigenous communities. While many indigenous traditions express respect for nonhuman life or “the environment,” the extent to which these expressions predict ecologically wise and sustainable practices is uncertain. Understanding the natural world as sacred does not necessarily call for an ethic of environmental protection or stewardship. Indeed, a powerfully sacred landscape may well be outside the boundaries of human influence by definition. Specifically religious responses may not address ecological problems in some cases, and the “ecological balance” that many see expressed in indigenous religious traditions may be the result rather than the cause of particular practices that are ecologically sustainable and sensible.

Skeptics assert that the sustainability of many indigenous societies can more plausibly be explained as an out-

come of particular technologies, ecological conditions, or levels of population density than as the result of religious attitudes about nature. Some assert that Indians with access to environmentally damaging technologies are no less likely than non-Indians to destroy their environments. In a less extreme but still cautious appraisal of the relations between indigenous religious traditions and ecological sustainability, other observers note that spirituality as well as everyday practices are created in particular historical and ecological conditions. They contend that attributing primary causal weight to religious beliefs oversimplifies complicated historical, cultural, and environmental factors, and that stark contrasts between Indian and Western worldviews neglect the impacts of five hundred years of Western presence in the Americas.

One recent study based on ten years of field research among indigenous and non-indigenous farmers in the lowland Petén forest of Guatemala provides suggestive evidence in favor of cultural explanations of environmental practices while also addressing the contingent quality of culturally specific variables. The Itza’ Maya, who have lived in the Petén for centuries, plant more crops and tree species than do neighboring Q’eqchi’ Maya (who moved to the forest from the highlands) or non-indigenous Ladinos. Itza’ also farm in ways that are less harmful to the soil and more productive, and show a more sophisticated understanding of forest ecology than do the other groups. One factor in Itza’ agricultural and forestry practices is a belief that spirits act as intermediaries for particular forest species, and these must be cared for and respected, while the intimate local knowledge of the Itza’ – inextricably linked to their worldview and spiritual traditions – guides sustainable management and farming practices.

Notably, nearby Ladinos engage in less damaging practices than do immigrant Q’eqchi’ Maya. Ladinos’ social organization favors learning from Itza’ practices, while Q’eqchi’ social organization does not. In addition, cognitive models of ecological relationships brought by Q’eqchi’ Maya from their highland places of origin seem not to favor the environmentally sustainable (or less-damaging) practices engaged in by Ladino and Itza’ farmers.

These findings point both to the importance of culturally specific and religious understandings of nature and to the transferability of those understandings. Yet they also show that culturally specific values of an indigenous people may predict environmental degradation and hinder learning ecologically sustainable techniques.

While social scientists may be unable to agree on the relative ecological wisdom of indigenous peoples, many environmentalists and indigenous activists assert with conviction that indigenous peoples are better able to live harmoniously with their environments than non-Indians, a belief that is fundamental both to political platforms and

to social identities. Romantic images of ecologically superior Indians are employed to combat virulent racist representations. Such images are essential to the relatively recent importance of environmental issues to the political platforms of indigenous peoples as well as the alliance between international environmental organizations and indigenous groups. Some observers see the link between indigenous and environmental activists as a decisive shift in the practices of both groups, noting that earlier encounters were marked by tension and competition. Key features of this shift include the increasingly transnational sphere of indigenous activism as well as the new prominence of discourses and symbols associated with Indians' spiritual and traditional ties to nature.

The roots of indigenous rights activism in Latin America go back to debates over the treatment of Indians in the early Colonial period, as well as a long history of Indian revolts. Contemporary indigenous mobilization draws on this heritage, yet is more directly linked to doctrines of universal human rights and national sovereignty developed in the wake of World War II.

Abuses associated with colonization of lowland forests by miners and rubber tappers prompted the creation of some of the first international indigenous rights instruments, including the International Labor Organization Convention on the Protection of Indigenous Populations (ILO no. 107). Issued in 1957, ILO 107 was assimilationist in its basic logic, yet it marked the emergence of indigenous rights in the realm of international law and provided a baseline against which subsequent advances would be defined.

The 1960s and 1970s saw the establishment of seminal indigenous rights organizations including the International Working Group on Indigenous Affairs, Survival International, and Cultural Survival. The 1971 Declaration of Barbados (issued at an international meeting of mostly Latin American anthropologists) called for the recognition that indigenous peoples have rights that precede those of other national groups, including collective and territorial rights, thus articulating the fundamental distinctiveness of indigenous rights in universal human rights doctrine.

Also viewing indigenous rights as properly the domain of international law, the United Nations has been an essential ally in the development of indigenous rights doctrine. The U.N. sponsored NGO conferences in 1977 and 1981, and in 1982 established its Working Group on Indigenous Populations, which issued the Draft Declaration of the Rights of Indigenous Peoples (DDRIP) in 1989. In 1989, the ILO issued Convention 169, an updated version of the earlier 107 that calls for constitutional recognition of cultural difference within nations as well as support for indigenous territorial claims. It has been ratified by ten Latin American nations.

The human rights focus of the movement expanded to include environmental concerns in the 1980s when

environmentalists and indigenous rights organizations found common cause in the Amazon. Environmental activism underwent a period of rapid growth and internationalization in roughly the same period as did indigenous movements, and by the 1980s environmentalists were looking beyond national borders and taking an active interest in international issues such as tropical deforestation.

Opposition to World Bank-funded development projects in the Amazon galvanized the alliance. Beginning in 1982, the Brazilian government paved a road through the Amazon, using Bank funds. Millions of colonists followed the road, damaging the forest and threatening indigenous communities. Northern environmental groups pressured U.S. politicians and the Bank, which suspended funding for the project in 1985 and subsequently modified the terms of the loan to include mitigation of environmental damages, protection of indigenous lands, and local participation in decision making. (The World Bank and other international lenders continue to fund road building in the Amazon and other lowland forests, where the presence of a road is the single most significant variable predicting deforestation. The Bank itself is a complex institution, and the impact of reforms like OD 4.20, described below, are uncertain.)

In another campaign, environmentalists joined the Brazilian Kayapó to fight a Bank-supported hydro-electric power project that would flood indigenous territory, including inhabited villages. A meeting convened at one of the proposed dam sites in 1989 included a performance by the rock star Sting. The publicity drew international attention and linked forest conservation with cultural survival. Once again the Bank suspended its loan pending revision of the project.

Responding to the protests, the Bank issued Operational Directive 4.20 (OD 4.20) in 1991. OD 4.20 calls for the mitigation of negative impacts on indigenous peoples caused by Bank projects (although it does not prevent projects anticipated to have such impacts). OD 4.20 formalizes the close association of indigenous rights and environmental concerns. Evaluation of threats to indigenous peoples is subsumed in the environmental impact assessment previously required of Bank projects.

The successful protests against the projects in Brazil helped to consolidate indigenous/environmentalist alliances in the Amazon. They also helped publicize indigenous issues as preparations were underway for two pivotal events of 1992: the UN Conference on Environment and Development in Rio and the continent-wide protests of the planned celebration of Columbus' arrival in the Americas five hundred years earlier.

Latin American and Spanish officials planned to celebrate the five-hundred-year anniversary in 1992 of what they called the "encounter of two worlds." Indigenous activists did not consider the event anything to

celebrate. Under the banner of “500 years of resistance,” indigenous groups throughout the Americas organized protests. In Ecuador, thousands of Indians marched from the Amazon to Quito (with support from NGOs including the Rainforest Action Network) to demand territory and indigenous management of a national park – demands that were soon met. The anti-quincentenary campaign galvanized indigenous groups throughout the Americas, and international networks grew substantially. Largely responding to the protests and pressures from indigenous activists, the UN declared 1993 the International Year of Indigenous People and later extended the year to a decade, 1995–2005.

Brazilian indigenous groups, working with environmentalists, had received significant publicity in the five years before the UNCED. Indigenous leaders had toured the U.S. and Europe to mobilize international support and had generated a great deal of media attention. The Kayapó had successfully challenged the World Bank dam project and gained territorial rights, while the Yanomani were fighting for territory in the form of a national park that would protect their traditional lands. Environmentalists, human rights and indigenous rights organizations, and the UN Secretary-General pressured the Brazilian government to grant the Yanomani demands, using the upcoming UNCED as a point of leverage. The Yanomani were granted territory in November of 1992.

These successes, combined with years of diligent organizing, placed indigenous activists in a good position to take advantage of the political space opened by the Rio Conference. They attended a parallel NGO meeting and organized an “Intertribal Village,” a gathering of Indians that generated publicity and helped them achieve a meeting with the head of the UNCED. Their influence, along with the legacy of their alliance with environmentalist groups, is evident in the various provisions addressing indigenous peoples in the policies and recommendations made at the UNCED.

The main UNCED program (Agenda 21), the Convention to Combat Desertification (CCD), and the Convention on Biological Diversity (CBD) make special note of indigenous peoples’ relations with their environments. These policy statements recognize that many indigenous peoples have sophisticated understandings of local environments and natural resources – commonly called indigenous knowledge (IK) – that contribute to the sustainability of indigenous peoples’ economies, ecologies, and communities.

Indigenous knowledge has contributed to Western scientific knowledge, and many industries see a potential for IK to point to new products and technologies. Industry calls the search for new resources “bioprospecting” while many indigenous activists regard the process as “biopiracy.” They protest the patenting of traditional technologies and resources by Western scientists and firms.

They note that patenting rewards Western corporations and scientists for exploiting indigenous knowledge without recognizing the creation of that knowledge by indigenous peoples or the centrality of that knowledge – its production and its use – to indigenous belief systems.

(A related issue of growing concern to indigenous as well as peasant activists is the spread of genetically modified crops and seeds. The use of GMO seeds dramatically increases local farmers’ dependence on agroindustry. Another potential negative impact of GMOs is the reduction of the extraordinary diversity of corn, potato, and other cultigens developed by indigenous Americans. Many indigenous activists argue that GMO and seed patenting threaten their ways of life and their very identities by controlling crops and dramatically impacting agricultural practices central to indigenous spiritual traditions.)

Agenda 21, the CBD, and the CCD all encourage the dissemination of IK. Yet critics argue that indigenous knowledge is meaningful and workable in specific social contexts. The approaches to nature that are understood as IK may, for the people who developed them, be tied to complicated cosmologies and spiritual understandings of the natural world, as in the case of the Itza’ Maya. For indigenous peoples, stripping indigenous knowledge of the worldview and religious traditions within which that knowledge operates is yet another example of outsiders’ failure to respect their beliefs and values. Furthermore, the environmental sustainability of indigenous societies is not reducible to a single factor like IK. Access to Western technologies and market economies, population density, and settlement patterns, all affect sustainability. This complexity suggests that institutionalizing and disseminating IK within a Western development framework may be disappointing.

The interest in IK (and, more generally, the association of indigenous peoples with environmental protection) has contributed to increased support for programs that encourage community management of natural resources. In several cases, notably in the Amazon, Panama, and Costa Rica, participatory management and conservation plans have dovetailed with indigenous peoples’ territorial claims. Agenda 21 includes provisions for territorial rights, as do ILO 169 and the DDRIP. At smaller scales, community forestry and agroecology initiatives that draw on IK have given indigenous peoples greater control over natural resources and local autonomy, including religious freedom. In highland Guatemala for example, including sacred sites identified by local religious leaders in forest management plans, these initiatives have contributed to more successful conservation.

In some cases, indigenous peoples have sought to exploit non-traditional resources within their territories in ways that are unsustainable and environmentally destructive. The Amazonian Kayapó have sold logging rights to tracts of forest under their control, and Amazonian

Guajajara Indians took hostages in 1989 in order to force the government Indian affairs agency to let them sell timber. The image of Indians clear-cutting their forest is jarring for some observers, including some environmentalists and indigenous activists. Yet as indigenous communities seek to achieve higher levels of economic development and social well-being, they may often be faced with the same kinds of decisions regarding environmental quality that non-Indians must confront.

The tremendous diversity of Latin American indigenous peoples is reflected in the heterogeneity of their religious beliefs and relations to nature. Yet Indians throughout the Americas share a basic experience of colonization and social, political, and economic marginalization in which assimilationist efforts to eradicate indigenous belief systems have persisted from missionary colonists through post-Independence education policies, as have the dispossession and destruction of Indian lands by outsiders. For many indigenous peoples religion as an expression of a unique identity and a philosophy of connections to particular territories and places is central to their struggles to secure and protect their rights as distinct peoples.

Brandt Gustav Peterson

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- See also: Aboriginal Environmental Groups in Canada; American Indians as "First Ecologists"; Indigenous Environmental Network; Maya Religion (Central America); Maya Spirituality (Guatemala Highlands); Mother Earth; Native American Languages; Noble Savage; Religious Environmentalist Paradigm; Traditional Ecological Knowledge; United Nations' "Earth Summits"; World Conference of Indigenous Peoples (Kari Oca, Brazil).

P Indigenous Environmental Network

This relationship to the sacredness of our Mother Earth and all her children, defines our spiritual, cultural, social, economic, and even, political relationship we have with each other and with all life (Tom "Mato Awanyankapi" Goldtooth, Indigenous Environmental Network 2002).

The Indigenous Environmental Network was born in 1990 from a national gathering of tribal grassroots leadership and youth to discuss common experiences regarding environmental assaults on our lands, waters, and communities and villages. At that time, a significant number of our tribal communities were targeted for municipal

and hazardous waste dumps and nuclear-waste storage facilities.

Indigenous activism seeking justice on environmental issues was new to many tribal members and tribal governments in the early 1990s. Such activism was quickly connected with an indigenous treaty rights agenda, namely, a commitment to strengthen the cultural and spiritual traditions that have sustained us since time immemorial. Within the U.S., by the early 1990s, a new “environmental justice movement” recognized that minority and low-income communities in the U.S. bear a disproportionate burden of pollution in our society. This movement was especially relevant to our subsistence-based communities. Many indigenous communities in North America are affected through a traditional cultural and spiritual relationship to the ecosystems in which we live, including subsistence on fish, game, traditional agricultural practices, livestock, and gathering of plants for baskets and medicinal purposes. This relationship is deeply integrated into spiritual and cultural beliefs and practices, the disruption of which constitutes religious intolerance and violates basic principles of human rights.

Following the 1990 gathering, indigenous activists, youth and concerned tribal community members continued regularly in North America to put our minds, heart and spirit together for a common course of action as a means to restore our homelands to environmental health and harmony. From these initial gatherings, the idea of the formation of a network of indigenous peoples, with a commitment to respecting our spiritual traditions, was born – an idea born of hope, courage and common vision. This network was named the Indigenous Environmental Network.

Guiding Principles

We endorse the following principles as a statement of our beliefs and a guide to our actions:

Mother Earth, Father Sky, and all of Creation, from microorganisms to human, plant, trees, fish, bird, and animal relatives are part of the natural order and regulated by natural laws. Each has a unique role and is a critical part of the whole that is creation. Each is sacred, respected, and a unique living being with its own right to survive, and each plays an essential role in the survival and health of the natural world.

As sovereign peoples and nations, we have an inherent right to self-determination, protected through inherent rights and upheld through treaties and other binding agreements. As indigenous peoples, our consent and approval are necessary in all negotiations and activities that have direct and indirect impact on our lands, ecosystems, waters, other natural resources and our human bodies.

Human beings are part of the natural order. Our role and responsibility, as human beings, is to live peacefully and in a harmonious balance with all life. Our cultures are based on this harmony, peace and ecological balance, which ensure long-term sustainability for future generations. This concept of sustainability must be the basis of the decisions and negotiations underway on national and international levels.

The Creator has given us a sacred responsibility to protect and care for the land and all life, as well as to safeguard its well being for future generations to come.

Indigenous peoples have the right and responsibility to control access to our traditional knowledge, innovations and practices, which constitute the basis for the maintenance of our lifestyles and future.

The Need for Indigenous Organizing

The need for IEN arose due to increasing political and social pressures. The U.S. has been increasing efforts through its federal agencies and with energy legislation and through its corporate energy partners to push more mineral and resource-extraction development within tribal lands. Ten percent of U.S. untapped energy-related resources are under Indian lands. The U.S. energy plan calls for more oil and gas development, the construction of more coal-fired power plants, the potential for construction of more nuclear power reactors and the buying of electricity from large hydro-dam projects in Canada. All of these development initiatives are being planned within our tribal reservations and traditional territories, and they threaten tribal sovereignty. Such challenges need to be weighed when addressing environmental injustices related to American Indian and Alaska Natives.

Due to Western forms of development, the world is in a compounding crisis from greenhouse gases of the fossil fuel industry that is causing climatic changes and global warming. Many indigenous peoples with close relationships to the culture, language and environment have the most to lose when the land/water is contaminated, and when severe weather changes occur, which can disrupt their traditional, subsistence food systems and cultural practices.

Indigenous peoples in the U.S. and Canada continue to be confronted by many threats to their environment, whether they live on larger reservations or in smaller isolated communities and villages, or in Indian neighborhoods within urban areas. In addition to minerals, our lands hold natural resources that the industrialized world and corporations want to develop, own, and trade, such as water and timber, and forest products. Environmental problems are compounded by the increasingly toxic nature of industrial, agricultural and extractive industries.

Our tribal lands are viewed as places where municipal, industrial, federal and military toxic and radioactive waste can be dumped, burned, stored or reprocessed. In certain regions, toxic chemicals disproportionately contaminate tribal communities. These chemicals bio-accumulate and bio-magnify in the food chain, affecting both processed and indigenous traditional food systems. Our children are especially vulnerable. In some areas, health problems have resulted from decades of radioactive and toxic exposure. These are some of the reasons underlying the formation of IEN and they have taken environmental justice issues into the global issue-area concerning trade and globalization.

History of U.S. Indigenous Peoples and Colonization

Congress must apprise the Indian that he can no longer stand as a breakwater against the constant tide of civilization . . . A . . . thriftless race of savages cannot be permitted to stand guard at the treasure vaults of the nation which hold out gold and silver . . . the prospector and miner may enter and by enriching himself enrich the nation and bless the world by the result of his toil (United States Senate, Congressional Globe, 27th Congress, 1846.)

As many as 15 million indigenous peoples lived in North America when Europeans first arrived in the late fifteenth century. By 1890 there were less than 500,000; the population decimated by European diseases and warfare. By the early twenty-first century, indigenous numbers had grown to over two million. The indigenous peoples of the U.S. are tribally diverse with over 500 different tribes and over 400 federally recognized tribal nations, each with its own tradition and cultural heritage.

In spite of the historical policies of the U.S. government of military campaigns, removal of indigenous peoples from traditional homelands, outlawing traditional indigenous cultural and spiritual/religious practices and forbidding speaking of language at governmental-imposed schools, indigenous peoples of the U.S. have been able to retain a commitment to maintain and restore language and culture, as well as interweaving modern technology into everyday life.

Since the colonization of North America, control of land has always been the central political and economic issue. Those who control the land are those who control the resources. Social control and all the other aggregate components of power are fundamentally interrelated to the control of the land. To gain control the U.S. government signed more than 400 treaties with indigenous tribes. In exchange for land and agreements to cease resistance, tribes were promised protection, material goods, services, and sometimes cash payments. By entering into treaties with the tribal nations, the U.S. government acknowledged their sovereignty, although with restrictions. The colonial leaders recognized that land is essential to the

survival of indigenous peoples and that a denial of indigenous peoples' right to land is racial discrimination. Land is central to the spiritual and physical well-being of indigenous peoples.

Within the U.S., tribal reservations – or “reserves,” as they are called in Canada – constitute a small but crucial “piece of the rock.” Approximately one-third of all western U.S. low-sulfur coal, 20 percent of known U.S. reserves of oil and natural gas, and over one-half of all U.S. uranium deposits lie under the reservations. Energy companies, logging and mining interests, and publicly owned utilities, driven by industrialization and accelerating demands for energy and natural resources and materials are disproportionately affecting indigenous peoples. These developments build dams that flood indigenous lands; for example, like those of the James Bay Cree in Canada and the Standing Rock Lakota (Sioux) in the United States.

Such developments have forced tribal peoples to relinquish their culture and economies and claims to their traditional homelands. These developments have disrupted habitat and have thereby limited the ability of tribal people to carry on traditional subsistence practices such as hunting, gathering and fishing rights. Unsustainable development has made indigenous peoples dependent on government-subsidized housing and “non-traditional” diets.

Biological Diversity and Indigenous Languages

The world's biological, cultural and linguistic diversity are imperiled. Over 80 percent of the world's remaining biodiversity is found within indigenous peoples' lands and territories. Although globally there are an estimated 350 million indigenous individuals, our cultures constitute about 90 percent of the world's cultural diversity. Our distinct ways of life vary considerably from one location to another. Of the estimated 6000 cultures in the world, between 4000 and 5000 are indigenous. Approximately three-quarters of the world's 6000 languages are spoken by indigenous peoples. Of the nine countries in which 60 percent of human languages are spoken, six also host exceptional numbers of plant and animal species unique to those locations. When looking at the global distribution of indigenous peoples, there is also a marked correlation between areas of high biological diversity and areas of high cultural diversity. This link is particularly significant in rainforests, such as those found along the Amazon, and in Central America, Africa, Southeast Asia, the Philippines, New Guinea and Indonesia. Wherever we live, we use our highly specialized, traditional knowledge to care for and conserve the interconnected web or Circle of Life known as “biodiversity.”

In November 2000, the World Wide Fund for Nature (WWF International), in collaboration with the international NGO Terralingua, published a report entitled

Indigenous and Traditional Peoples of the World and Ecoregion Conservation: An Integrated Approach to Conserving the World's Biological and Cultural Diversity. The report reveals that 4635 ethnolinguistic groups, or 67 percent of the total number of such groups, live in 225 regions of the highest biological importance. The study reported that languages spoken by indigenous and traditional peoples are rapidly disappearing. Since the ecological knowledge accumulated by indigenous peoples is contained in languages, and since in most traditional cultures this knowledge is passed on to other groups or new generations orally, language extinction is leading to loss of ecological knowledge, and with that loss cultural and spiritual knowledge also disappears. It is widely accepted that biological diversity cannot be conserved without cultural diversity.

It has been said that languages are the foundation of peoples' intellectual heritage and the framework for each society's unique understanding of life. Given the rate of language extinction, cultural diversity is threatened on an unprecedented scale. In the twentieth century the world lost about 600 languages. Nearly 2500 languages are in danger of immediate extinction; an even higher number are losing the "ecological contexts" that keep them "living" languages. At current rates, 90 percent of the world's remaining languages will be lost in the twenty-first century, most of them belonging to indigenous peoples (World Wide Fund for Nature: 2000: Executive Summary). We are concerned that these languages, and our traditional ecological knowledge, are increasingly being lost. The expansion of market-based economic systems, communications, and other aspects of globalization, which promote dominant languages, do so at the expense of our indigenous languages.

The link between culture, spirituality and environment is clear to indigenous peoples. All indigenous peoples share a spiritual, cultural and economic relationship with our traditional lands. Indigenous traditional laws, customs and practices reflect both an attachment to land and a felt responsibility for preserving it for future generations. In Central America, the Amazon Basin, Asia, North America, Australia, Asia, Pacific Islands and South and North Africa, the physical and cultural survival of indigenous peoples is dependent upon the protection of our land and its resources – among a technological society that does not value these links.

Clash in Sustaining Values

The source of this world's collective social, economic and environmental crisis can be traced to the long historical processes by which people have become increasingly alienated from the Earth. This includes alienation from self, community and nature. This concept of alienation has roots in colonialism. Intellectually it is rooted in Western dualism, which sets humanity apart from nature and legit-

imizes the view that humanity has not only the right, but also the obligation to subdue nature to its own benefit. Institutionally it is rooted in the institution of money, which created a powerful illusion that people can live apart from nature, and are no longer dependent on her.

Ever since Pope Alexander VI's 1493 papal bull "Inter Caetera" called for the subjugation of the America's "barbarous nations," first colonial and then successor states have forcibly and violently destroyed indigenous peoples. To this day, the racist discrimination and cultural denigration established by Pope Alexander VI are engraved in the mentality of the Americas and continue to underlie the rationale for racial discrimination against indigenous peoples globally. The religious imperative of conversion and annihilation has been replaced by assimilation, "development schemes," international trade systems, privatization of land, and economic globalization as the most desirable end for indigenous peoples. The nation-state economic elites and transnational corporations have replaced the earlier conquistadors and colonists as the beneficiaries of indigenous lands, knowledge and resources.

The fifteenth-century papal bulls established a criterion for indigenous peoples which remains a part of established law in many parts of the world today, especially in the Western Hemisphere. The racist doctrine of discovery established in the later part of the fourteenth century continues to exercise influence. The 1955 Supreme Court ruling in *Tee-Hit-Ton Indians v. U.S.*, for example, based its decision against the land petition of the Tee-Hit-Ton on the Doctrine of Discovery (348 US 272 1955). These processes, policies, political and religious theories provided the basis for land takings in the U.S., South and Meso-America, and other frontiers.

Gross and massive, pervasive and persistent violations of human rights and fundamental freedoms, including genocide, ethnocide, forced removal and forced assimilation are somehow justified by the devaluation of indigenous peoples, our cultural and worldviews. Described as "stone age" by anthropologists, accused by dominant religions of being pagan or practitioners of black magic and witchcraft, our destruction as peoples has been taken by most dominant societies in the Americas as necessary for "progress."

Yet indigenous peoples seek only to be left alone, to be who we are, to remain on our lands, to practice and live our traditional cultures, languages and spiritual/religious practices. These are human rights and fundamental freedoms guaranteed by the United Nations' International Bill of Human Rights.

Many nation-states have policies that in effect if not intent forcibly assimilate indigenous peoples. Indigenous peoples continue to suffer forcible and violent mass relocations, as well as denials of their land rights and ruination of our environments. Forced relocation is also

found in the economic need to migrate to urban areas caused by the loss of lands and territories and means of subsistence.

In the U.S., institutional racism prevails throughout federal policies that fail to protect the environment, our natural resources, and the lands we hold sacred. Socially ingrained attitudes of racial superiority and inferiority, which were given birth during historical colonialist attitudes, are now buried into the very fabric of the Americas and the collective unconscious of all Americans. The continuing denigration of our cultures and traditions, sanctioned by the state, damage and destroy our identity, our children, our lands and our future. The persistent refusal of many nation-states to recognize the rights of indigenous peoples as “peoples” underpins and justifies the deplorable state of human rights of indigenous peoples.

Building Sustainable Communities

Youth and tribal leadership are just now beginning to develop dialogue and strategy for resisting these damaging realities, beginning with the effort to rebuild sustainable indigenous communities and villages. With strong, committed and knowledgeable leadership, IEN has come to understand the importance of coming to grips with internalized oppression, the role of the older generation and younger generation in leadership development, and the recognition and application of traditional ecological knowledge, and to provide positive and strong models for community change. The IEN understands our responsibility to provide a voice of reason and wisdom as a means to mend and repair the delicate fabric of life while restoring balance and harmony to our communities and villages.

Reevaluating Our Relationship to Our Sacred Mother Earth

The path of Western development has produced many technological advances, which many indigenous peoples have embraced. But technology has further separated all humans from our sacred relationship to Mother Earth. We have become alienated from the most fundamental basis of our human nature, our spiritual connection to the Earth and the living universe. Within our foundation of utilizing indigenous traditional knowledge in our work, IEN has consistently challenged nation-states, environmental organizations, faith-based groups and other non-governmental organizations that are doing environmental work to examine the spiritual aspects of this work. From the tribal perspective, water, air, ground-soil, and fire are sacred elements deserving of respect and protection.

In 1998, the IEN facilitated the participation of traditional elders and tribal grassroots members in the “Circles of Wisdom” Native Peoples/Native Homelands Climate Change Workshop. It was held in Albuquerque, New Mexico, in the traditional territory of the Pueblo

peoples of southwest United States. IEN brought to this meeting our profound concern for the well-being of our sacred Mother Earth and Father Sky and the potential consequences of climate imbalance for our indigenous peoples, our environment, our economies, and our relationships to the natural order and laws.

At this meeting, there was a strong statement that indigenous prophecy now meets modern scientific prediction. Indigenous peoples have known that the Earth is out of balance, which was a message that Western scientists were beginning to deliver. At this meeting, the collective mind and heart of indigenous participants from many tribal nations developed the following preamble that well reflects the cosmos vision of indigenous peoples of North America:

Preamble

As Indigenous Peoples, we begin each day with a prayer, bringing our minds together in thanks for every part of the natural world. We are grateful that each part of our natural world continues to fulfill the responsibilities that have been set for it by our Creator, in an unbreakable relationship to each other. As the roles and responsibilities are fulfilled, we are allowed to live our lives in peace. We are grateful for the natural order put in place and regulated by natural laws.

Most of our ceremonies are about giving thanks, at the right time and in the right way. They are what were given to us, what makes us who we are. They enable us to speak about life itself. Maintaining our ceremonies is an important part of our life. There is nothing more important than preserving life, celebrating life, and that is what the ceremonies do. Our instruction tells us that we are to maintain our ceremonies, however few of us there are, so that we can fulfill the spiritual responsibilities given to us by the Creator.

The balance of men and women is the leading principle of our wisdom. This balance is the creative principle of Father Sky and Mother Earth that fosters life. In our traditions, it is women who carry the seeds, both of our own future generations and of the plant life. It is women who plant and tend the gardens, and women who bear and raise the children. The women remind us of our connection to the Earth, for it is from the Earth that life comes.

We draw no line between what is political and what is spiritual. Our leaders are also our spiritual leaders. In making any law, our leaders must consider three things: the effect of their decisions on peace, the effect on the natural order and law, and the effect on future generations. The natural order and laws are self-evident and do not need scientific proof. We believe that all lawmakers should be

required to think this way, that all constitutions should contain these principles.

Our prophecies and teachings tell us that life on Earth is in danger of coming to an end. We have accepted the responsibility designated by our prophecies to tell the world that we must live in peace and harmony and ensure balance with the rest of Creation. The destruction of the rest of Creation must not be allowed to continue, for if it does, Mother Earth will react in such a way that almost all people will suffer the end of life as we know it.

A growing body of western scientific evidence now suggests what Indigenous Peoples have expressed for a long time: life as we know it is in danger. We can no longer afford to ignore the consequences of this evidence. We must learn to live with this shadow, and always strive towards the light that will restore the natural order. How western science and technology is being used needs to be examined in order for Mother Earth to sustain life.

Our Peoples and lands are a scattering of islands within a sea of our neighbors, the richest material nations in the world. The world is beginning to recognize that today's market driven economies are not sustainable and place in jeopardy the existence of future generations. It is upsetting the natural order and laws created for all our benefit. The continued extraction and destruction of natural resources is unsustainable.

There is a direct relationship between the denial of Indigenous Peoples land and water rights, along with the appropriation without consent of Indigenous Peoples' natural resources, and the causes of global climate change today. Examples include deforestation, contamination of land and water by pesticides and industrial waste, toxic and radioactive poisoning, military and mining impacts.

The four elements of fire, water, Earth and air sustain all life. These elements of life are being destroyed and misused by the modern world. Fire gives life and understanding, but is being disrespected by technology of the industrialized world that allows it to take life such as the fire in the coal-fired powered plants, the toxic waste incinerators, the fossil-fuel combustion engine and other polluting technologies that add to greenhouse gases. Coal extraction from sacred Earth is being used to fuel the greenhouse gases that are causing global climate warming.

Because of our relationship with our lands, waters and natural surroundings, which has sustained us since time immemorial, we carry the knowledge and ideas that the world needs today. We know how to live with this land: we have done so for thousands of years. We are a powerful spiritual

people. It is this spiritual connection to Mother Earth, Father Sky, and all Creation that is lacking in the rest of the world.

Our extended family includes our Mother Earth, Father Sky, and our brothers and sisters, the animal and plant life. We must speak for the plants, for the animals, for the rest of Creation. It is our responsibility, given to us by our Creator, to speak on their behalf to the rest of the world.

For the future of all the children, for the future of Mother Earth and Father Sky, we call upon the leaders of the world, at all levels of governments, to accept responsibility for the welfare of future generations. Their decisions must reflect their consciousness of this responsibility and they must act on it. We demand a place at the table in discussions that involve and affect our future and the natural order and natural laws that govern us (The Albuquerque Declaration, "Circles of Wisdom" Native Peoples/Native Homelands Climate Change Workshop/Summit, Albuquerque, New Mexico 1998).

Indigenous Peoples Working Internationally

The United Nations Conference on Environment and Development, held in Rio de Janeiro, Brazil, in June 1992, was an important development for indigenous peoples and our rights related to the environment. The Conference, or Earth Summit as it is called, recognized that indigenous peoples and our communities have a critical role to play in managing and developing the environment. The importance of indigenous peoples' traditional knowledge and practices was acknowledged, and the international community committed itself to promoting, strengthening and protecting the rights, knowledge and practices of indigenous peoples and our communities.

During the Earth Summit, indigenous peoples and non-governmental organizations gathered in Kari Oca, Brazil, to share concerns about the environment. The Kari Oca Declaration and the Indigenous Peoples' Earth Charter adopted at this meeting expressed the values of the world's indigenous peoples and recognized our distinct relationship with the Earth. The united voice of indigenous peoples helped influence the outcome of the Earth Summit.

Another important result of the Earth Summit was the adoption of the Convention on Biological Diversity. The Convention recognized the close dependence of many indigenous communities on biological resources and the desirability of sharing the benefits that come from using traditional knowledge, innovations and practices to conserve biological diversity, including species diversity.

Interest in the rights of indigenous peoples and the environment grew after the 1992 Earth Summit. Indigenous

and non-indigenous peoples are increasingly aware that traditional lands and natural resources are essential to the economic, cultural and spiritual survival of indigenous peoples. Some countries, such as Canada, Australia, Finland, Brazil and the Philippines, have adopted legal measures that acknowledge indigenous land rights or have established legal procedures for indigenous participation in land-related issues. A growing number of governments have amended their national constitutions to recognize the ancestral rights of indigenous peoples to occupy, own and manage their traditional lands and territories. Although some governments now consult with indigenous peoples on land rights and the environment, however, many nation-states have not introduced laws or policies that provide for indigenous land claims or promote full political participation by indigenous peoples.

Indigenous Peoples and the United Nations' "World Summit on Sustainable Development"

At the 2002 United Nations' "World Summit on Sustainable Development," held in Johannesburg, South Africa, the IEN coordinated with other indigenous non-governmental organizational representatives in the drafting of our own Indigenous Plan of Implementation for the next decade. This was based on the "Kimberley Declaration," which had been developed at the International Indigenous Peoples Summit on Sustainable Development that was held in Khoi-San Territory in Kimberley, South Africa, the month before the United Nations conference in Johannesburg. This was our contribution for achieving human and environmental sustainability in the world. One sentence of the Kimberley Declaration that stood out toward confirming our relationship to the Earth was, "Today we reaffirm our relationship to Mother Earth and our responsibility to coming generations to uphold peace, equity and justice."

Indigenous peoples from every region of the world recognized the Kimberley Declaration and we reaffirmed our spiritual relationship in the text of the Indigenous Plan of Implementation, which reflected the heart and mind of indigenous peoples as traditional caretakers of Mother Earth. This was a message that we reaffirmed to each other as well as a message to the world.

One section of the Indigenous Plan of Implementation well illustrates this message, and is found in the section on Cosmo vision and spirituality. It states:

We will direct our energies and organizational strength to consolidate our collective values and principles, which spring from the interrelation of the different forms of life in Nature. Therein lies our origin, which we reaffirm by practicing our culture and spirituality.

We will strengthen the role of our elders and

wise traditional authorities as the keepers of our traditional wisdom, which embodies our spirituality, and Cosmo vision as an alternative to the existing unsustainable cultural models.

Indigenous Peoples Will Continue to Seek Global Transformation

Since the United Nations' "Earth Summits" at Rio and Johannesburg, the world has heard voices from indigenous peoples and civil society demanding a need for a radical change of humankind's destructive mentality and actions toward nature in the modern world system. The global sustainability crisis is a direct consequence of how Western forms of development have continued a colonial – conquest of the sacred and have resulted in humans increasing separation from their spiritual connection to nature, Mother Earth, to their human communities, and; most important, to themselves. A global transformation on the dimensions of societal values, lifestyles, worldviews and life-interpretations is a necessary key for the solution of the problems that arise in complex patterns of technical, social and economic development.

Our elders have been telling us that humans have arrived at a moment of critical choice. Repeating previous choices will certainly lead to accelerating social, political and ecological disintegration. The alternative, a choice for spiritual transformational change, represents more than an act of survival.

As indigenous peoples, we will continue to learn to develop and support community-building initiatives and organizations with a focus of maintaining and sharing those principles and spiritual values that have sustained our communities for millennia. Global spiritual transformation of civil society is a necessity. Spirituality and community, not money, must define the threads that bind all people and all life together. The IEN seeks to open a constructive dialogue for mobilizing societal forces, within all cultures, to reevaluate what their relationship is to the sacredness of our Mother Earth.

All My Relations

Tom Goldtooth

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Indigenous Religions and Cultural Borrowing

Traditional indigenous religions tend to be intimately involved with the natural environments out of which they emerge. Indigenous peoples around the world have developed shamanic and animist belief systems that reflect their dependence on the environmental conditions directly affecting their communities. As social and economic circumstances have changed for indigenous peoples, religious practices have also been adapted and reshaped to accommodate new influences, desires and pressures. Likewise, traditional indigenous religions have had an influence on the wider world. They are often invoked, for example, as evidence of the connections that indigenous peoples are perceived to have with "Nature." As a result, elements of these traditions are frequently borrowed or appropriated by non-indigenous groups or individuals who want to strengthen or authenticate their own spiritual feelings toward natural landscapes.

Most cultural researchers acknowledge that the tendency to borrow ideas from others is a universal human practice, an inevitable outcome of interactions between individuals and cultural groups. This diffusion of beliefs and practices is evident in the development of cultural traditions throughout the world. Religious traditions in particular provide some of the most dramatic and widely recognized examples of cultural borrowing. Perhaps it is

for this reason that the study of religion has often included discussions about the significance and the implications of blending together elements selected from different cultures. The concept of syncretism, the attempt to reconcile or bring together diverse beliefs, conventions or systems, has frequently been applied in colonial settings to describe the ways in which indigenous peoples combined their traditional religious beliefs with those of the missionaries and colonizers.

"Syncretism" has acquired negative connotations in some places because it has been used to imply that religious traditions are somehow weakened or corrupted when they begin to incorporate practices drawn from other religious systems. This argument depends upon a set of culturally shaped ideas that assume "tradition" to be unchanging by nature and that therefore promote the importance of "purity" and "authenticity" within such traditions. It also reflects an understanding of cultures as essentially fixed and bounded entities, rather than overlapping and interacting systems of social engagement. These approaches fail to acknowledge that cultural traditions, religious and non-religious, indigenous and non-indigenous, are essentially dynamic; like all social practices they are repeatedly amended, altered and readjusted to meet the requirements of changing circumstances – even while they may maintain an appearance of unflinching stability.

Traditional indigenous belief systems tend to be directly and inalienably tied to specific places or sites; when indigenous peoples incorporate elements of other religious systems, both preexisting and incoming beliefs must be adjusted to accommodate new geographical and cultural contexts. Many indigenous groups who have been introduced to Christianity, for example, are faced with the challenge of reconciling their beliefs about the sacredness and centrality of land in their traditional religious practices with the "non-land-based" nature of the new religious system. Often indigenous peoples who take on one of the "world religions," by choice or by force, will find ways to incorporate their traditional beliefs about land and nature spirits, the spirits of place, into the new set of practices. Alternatively, the two systems of belief might simply coexist side by side.

One indigenous response to the "placelessness" of the Judeo-Christian tradition is evident in anthropologist Eric Wolf's 1958 account of the story of the Virgin of Guadalupe, a religious symbol of national significance in Mexico. Guadalupe appeared in a vision, in 1531, to Juan Diego, an ordinary indigenous man who had converted to Christianity. The shrine, built upon the hill where she appeared, became a major site of pilgrimage for indigenous Mexicans, who had, ostensibly, converted to Christianity. That same hill, however, was also an important pilgrimage destination before the Spanish arrived in Mexico, as the site of a temple dedicated to Tonantzin, the

indigenous goddess of Earth and fertility. This former association was maintained amongst indigenous pilgrims. In this case indigenous believers in a religious system that was intimately linked to a particular place managed, very successfully, to appropriate and integrate Christian imagery, with its distant geographic origins, to reflect local needs and purposes.

Likewise, when non-indigenous people adopt indigenous beliefs their meaning may also be changed to reflect the needs and priorities of the appropriating group. In places such as America, Australia and Britain, for example, "New Age" use of imagery drawn from indigenous religious traditions, imagery that originally emerged from and related very closely to particular landscapes, tends to become universalized, its local significance minimized in favor of its perceived wider relevance. In this new context indigenous beliefs and practices are employed to signify a symbolic link to land in general – to the whole of the Earth and to "Nature" in its broadest sense. This approach is clearly reflected in New Age interpretations of shamanism as a universal human tradition that can be employed without reference to specific places or spirits of place. Inversely, members of settler communities also occasionally invoke indigenous religious knowledge in order to assert the strength of their own connections to particular locations and their own feelings of "indigeneity."

Traditional indigenous religions have also provided inspiration for the international environmental movement. Because indigenous peoples are often perceived to have a strong spiritual connection to the natural environment they tend to be championed as the original ecologists. The famous speech attributed to "Chief Seattle," for example has become an important rallying cry for environmentalists around the world. In reality, this text was adapted by American professor of film, Ted Perry, in the early 1970s, from earlier texts produced by non-indigenous Americans (but inspired by a speech delivered in the Lushotseed language in 1854 by a Native American leader named Sealth). Elements of Native American and Australian Aboriginal religious traditions have also been incorporated into the ritual practices of the Deep Ecology movement as a means of emphasizing the importance of developing a strong spiritual commitment to the environment as a way of encouraging its protection. Within the context of Western tendencies to align men with "culture" and women with "nature," indigenous religious traditions are often linked with "feminine wisdom" and embraced by proponents of the ecofeminist movement as alternative of models for "being in nature" (Jacobs 1994).

Many scholars who have worked closely with indigenous cultures, however, debate the perception that indigenous traditions are intrinsically ecologically sound. Evidence, in some places, of overhunting and overuse of fire, for example, supports the argument that indigenous

peoples are not necessarily the "paragons of ecological virtue" (Ellen 1986) that they are often thought to be by Westerners keen to present an alternative model to the industrialism and consumerism associated with their own cultural tradition.

While some indigenous individuals encourage and benefit from the kind of interest in spiritual beliefs and practices described above, many now rigorously contest the borrowing or "appropriation" of their religious traditions. Some feel that their religions are trivialized and undermined when particular elements are removed from their original context and freely reinterpreted by others who are not part of their community and who may even seek to profit from the knowledge they have acquired from indigenous people. This situation is often exacerbated by social and economic inequalities that can only be understood by looking at the particular histories of indigenous communities, especially in relation to the long-term impacts of colonialism. Indigenous scholars and others also explain how romantic stereotypes about closeness to nature and heightened spiritual focus can undermine indigenous efforts, as minority groups encapsulated in nation-states, to gain political influence and support for the enforcement of basic human rights and social justice for their communities.

Indigenous peoples in all parts of the world have been persecuted for their religious beliefs, have been dispossessed of their traditional lands, and have had their personal and group identities further challenged and undervalued in numerous ways. As a result, many contemporary indigenous communities are trying to rebuild and revitalize their cultural traditions. Part of this complex process often includes reclaiming the rights to represent and control the use of their unique religious symbols and practices. In this context the large-scale borrowing, re-interpretation, and commodification of religious and cultural imagery by members of more dominant cultural groups may impact negatively on indigenous efforts to assert their own interpretations and uses of those same symbols. Their ability to benefit economically from the production of traditional arts and crafts and other business ventures that depend upon their unique cultural/religious heritage may also be impeded if the power to control commercial use of that heritage is overridden by members of other communities.

Some of the most well-known and extensively researched examples of religious belief systems that overtly combine indigenous traditions and "world" religions are Melanesian cargo cults and the African-derived traditions of Vodou (Africa, Haiti and USA), Candomblé (Brazil) and Santería (Cuba and USA). In each of these cases Christianity has been the major outside influence. The three latter cases are constituted primarily of indigenous African religions combined with elements of Catholicism, initially encountered through contact with

missionaries and colonists. These traditions emerged from the beliefs and practices of African men and women, many of Yoruban heritage, who were forcibly transported to Haiti, Cuba, and the Americas as slaves. Catholic prayers and hymns still have an important place in the contemporary Vodou ceremonies and many Vodou spirits of African origin have counterparts in the form of Catholic saints. Similarly, Catholic saints play significant roles in the Brazilian and Cuban traditions of Candomblé and Santería.

Melanesian cargo cults developed, in part, as a response to the enormous differential in access to material wealth between indigenous people and European colonizers in the Pacific Islands following World War II. In this sense, they are political as well as religious. Although many and varied, these innovative millenarian movements are generally based on beliefs that adherence to newly developed rituals and social practices will result in the ancestors of the indigenous islanders returning with unlimited material goods to distribute amongst the indigenous community (hence the term "cargo"). While some cargo cults are relatively short-lived, others have survived for several decades. Whitehouse explains, in relation to the Papua New Guinean movement that he studied, that its success was closely linked to the fact "... that it was firmly rooted in Indigenous cosmology, [thereby] restoring confidence and pride in local *kastom* [roughly, "custom"] and exploiting some of the most compelling and plausible assumptions of traditional religion" (1995: 178). While this religious movement also incorporates many Christian terms, concepts and personages, such as "sin," "absolution," "Satan," "Adam and Eve," "Paradise," "Jesus," and "God," it is essentially an anti-missionary discourse that seeks to even up the imbalance between indigenous peoples and the Europeans, who have greater access to power and wealth.

Each of these forms of cultural borrowing highlight the creative and pragmatic processes involved in the development or invention of religious and other cultural traditions. They provide valuable insights into the dynamism of culture in general and offer interesting pathways to understanding the vibrant and changing nature of religious traditions, indigenous and non-indigenous. At the same time it is also important to understand and respond respectfully to indigenous accusations of religious appropriation, the "theft" of ideas and symbols drawn from indigenous religious traditions by non-indigenous peoples. Acknowledging the potentially destructive outcomes of this form of cultural borrowing is a necessary step toward supporting indigenous efforts to maintain and revive traditional religious beliefs and practices in the face of misrepresentation and other significant social pressures.

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Indra's Net

The motif of Indra's net is used by the Huayan school of Chinese Buddhism as a metaphor for the notion of mutual

interpenetration of all phenomena in the universe. The image of Indra's net of jewels originally comes from the *Huayan Scripture* (also known as the *Avatamsaka* or the *Flower Garland*), one of the key canonical texts of Mahayana Buddhism. According to the scripture, in the heaven of the god Indra there is a sublime net which extends out infinitely in all directions. In each knot at the intersection of strands in the vast net there is a glimmering jewel; since the size of the net is infinite, there is a limitless number of jewels that together present a dazzling display of stunning beauty. The multi-sided and smooth surface of each jewel reflects all other jewels in the net, while each of the reflected jewels also contains the reflections of all other jewels, thus constituting a continuing process of infinite reflections.

During the Tang period (617–907) the Huayan school adopted the image of Indra's net as a symbol for a holistic vision of the world that stresses the causal relationship and mutual dependency among all phenomena in the universe. The Huayan view conceives of the totality of existence in terms of dynamic relationships among interrelated phenomena, which together constitute the whole cosmos, rather than in terms of distinct and separate entities. The interdependent web of causal linkages, which encompasses the relationship between the one and the whole as well as the relationship among individual entities, is predicated on the notions of mutual identity and interdependence. Both of these concepts are peculiar Huayan reinterpretations of the Mahayana doctrines of emptiness and dependent origination. According to this point of view, each and every individual/thing/phenomenon can be seen both as a conditioning cause of the whole and as being caused by the whole. By extension, every single phenomenon conditions the existence of each other phenomenon and vice versa. Therefore, nothing exists by itself, but requires everything else to be what it really is in a given moment. It is important to note that the Huayan interpretation of causality is not concerned with temporal sequencing and does not postulate causal processes that involve a progressive unfolding of events. Rather, the theory represents an attempt to elucidate the causal relationships that obtain among all phenomena in the universe at any given moment.

The Huayan doctrine can be interpreted as depicting a totalistic universe that is a self-generating organic body constituted by a limitless number of parts that are constantly interacting with each other. Recently there has been an increased awareness of possible parallels between the Huayan understanding of reality and an emerging ecological awareness of the interdependence of all living things, which is imbedded in larger theoretical models that stress the holistic unity of the world and view nature as an intricate ecosystem comprised of constantly changing

elements that interact with each other in a web of causal relationships. The Huayan view of existence as an intricate web of interdependencies is seen as representing a viable alternative to predominant notions of an anthropocentric world, even if the manifold intricacies and nuances of Huayan's complex theoretical model are not always fully taken into account.

Huayan's religious philosophy can readily be interpreted as implying that nature is not a mere background for the existence of humanity, to be manipulated and exploited for the satisfaction of human needs and desires. Rather, humans and all other beings are united together into an organic whole, with each and every thing and being related to everything else, each one of them occupying an important place in the total scheme of things. An example of contemporary application of Huayan ideas about Indra's net in ecological discussions can be found in Gary Snyder's conception of nature as community. By using the Huayan notion of interpenetration, Snyder sees the human relationship with nature as part of an ecological communion of beings that comprises Indra's net as a food web, which entails gift exchanges and can be embodied in a feeling of love that extends to all.

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Institute of Noetic Sciences – See Space Exploration (and adjacent, Institute of Noetic Sciences).

Interfaith Center on Corporate Responsibility

The Interfaith Center on Corporate Responsibility (ICCR), an independent coalition of religious institutional investors in the United States, coordinates and facilitates corporate responsibility among its members. In the late 1960s the Corporate Information Center (CIC), a project of the National Council of Churches of Christ, produced research reports on corporate issues. In 1971 six Protestant churches formed the Interfaith Committee for Social

Responsibility in Investments (ICSRI) with the intention of coordination, research and action. In 1974 the CIC and the ICSRI joined to form ICCR.

ICCR remains a coalition of seventy religious groups representing over \$100 billion in investments. Members include 22 Protestant denominations and agencies, two Jewish groups and over 275 Roman Catholic orders, dioceses, and health systems. Each is an active investor. ICCR has been one of the sparks of the social investment movement, a forerunner to the more widespread current interest in social investing.

Environmental issues have been a major theme of ICCR from its earliest days. In 1971 an ecumenical panel on copper mining in Puerto Rico convened to look at issues of a proposed mine. The mine was postponed partly because of information uncovered in the hearings.

In the early 1970s, strip-mining of coal was the subject of reports, public hearings and shareholder resolutions. Concerns about energy production and use led to resolutions calling for abandoning nuclear plant construction or examining the social, economic and health-and-safety issues of nuclear plants. These concerns became international when 22 ICCR groups in 1980 asked Westinghouse Electric to prevent export of nuclear plant components to the Philippines.

The discovery of toxic wastes at Love Canal near Niagara Falls in the late 1970s led to resolutions with the Occidental Petroleum Company. This situation, one of the first to receive widespread public attention, raised a continuing concern about toxic disposal practices of corporations. During the Vietnam War, Dow Chemical and other companies produced Agent Orange, a defoliant that caused health and environmental problems from a contaminant, dioxin. Several religious groups sponsored proposals with Dow and had forums with local churches in Midland, Michigan, Dow's headquarters.

In 1984 an explosion at a Union Carbide plant in Bhopal, India, killed thousands and left thousands more with injuries from breathing toxic fumes. ICCR shareholders sponsored proposals with Union Carbide, challenging the adequacy of its response to the disaster. In 1989 an Exxon oil tanker ran aground in the Valdez strait in Alaska, spilling much of its cargo into the water. Religious shareholders addressed Exxon for several years following the spill.

In 1989 social investors, public pension funds and environmental groups formed the Coalition for Environmentally Responsible Economies (CERES) and announced the Valdez Principles, changed in 1992 to the CERES Principles. Since 1989 ICCR groups as part of CERES have introduced many proposals, calling for environmental reports or endorsement of the Principles.

In recent years ICCR issues have included the irradiation of food, genetically modified organisms, and global climate change.

A periodic publication, *The Corporate Examiner*, is available by subscription.

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See also: Ethics & Sustainability Dialogue Group; Interfaith Council for Environmental Stewardship; National Council of Churches, Eco-Justice Working Group; Stewardship; North American Conference on Christianity and Ecology [and the] North American Coalition on Religion and Ecology; Wise Use Movement.

Interfaith Council for Environmental Stewardship

Intended as a challenge to the National Religious Partnership for the Environment's claim to represent Judeo-Christian thought on environmental issues, the Interfaith Council for Environmental Stewardship (ICES) was founded in April 2000 by Jewish, Catholic, and Protestant leaders promoting a theologically and politically conservative public religious agenda. These leaders argued that religiously informed moral action, rather than governmental controls, should guide behavior, and that the environment can best be sustained in a context of free market economics, strong property rights, and technological innovation. The ICES was conceived and established by the Acton Institute for the Study of Religion and Liberty, an advocacy and educational organization created in 1990 by Fr. Robert A. Sirico "to promote a society that embraces civil liberties and free-market economics."

The defining document of the ICES is the Cornwall Declaration on Environmental Stewardship, created in October 1999 at a conference center in West Cornwall, Connecticut. Largely a distillation of arguments made by E. Calvin Beisner in his 1997 book *Where the Garden Meets Wilderness*, the Cornwall Declaration minimized the threat of global environmental problems, such as "destructive manmade global warming, overpopulation, and rampant species loss," arguing instead that the greatest environmental threats were local in nature and typically confined to the developing world. Rather than depicting humans as "consumers and polluters," the Cornwall Declaration envisioned them as "producers and stewards" with the ability to "add to the Earth's abundance" and to "enrich creation" by "developing other resources" and by unlocking "the potential in creation." Humans were "given a privileged place among creatures" in the divine order and thus "the human person is the most valuable resource on Earth." Nature is not best when "untouched by human hands" but instead must be developed and brought to fruitfulness by humans. Humans are to exercise wise stewardship, "which must attend both to the demands of human well being and to a

divine call for human beings to exercise caring dominion over the Earth." A series of aspirations at the end of the Declaration envisioned a world in which "objective moral principles" and "right reason" unite with limited government, a free market economy, assured property rights, and technological advancement to produce a better environment for all creatures.

Though it was at odds with mainstream secular and religious environmental thought (even questioning some of its fundamental assumptions), the Cornwall Declaration represented the first acknowledgment of the need for environmental care by religious leaders combining theological with political conservatism. Among the prominent evangelical conservatives supporting it were Bill Bright (Campus Crusade for Christ), Charles Colson (Prison Fellowship Ministries), James Dobson (Focus on the Family), D. James Kennedy (Coral Ridge Ministries), Beverly LaHaye (Concerned Women for America), and Donald Wildmon (American Family Association). The Catholic and Jewish supporters included Fr. Richard John Neuhaus (editor of *First Things*) and Rabbi Daniel Lapin (Toward Tradition).

The ICES created a stir among Christian environmentalists in April 2000 when it sent the Cornwall Declaration to 37,000 religious leaders along with an introductory letter accusing the National Religious Partnership for the Environment of seeking to "redefine traditional Judeo-Christian teachings on stewardship" and claiming that "its agenda will have devastating, unintended consequences for humanity and our world." The Evangelical Environmental Network was forced to defend its evangelical credentials and policies in an open letter to its constituents and in a series of semi-public letters with ICES leaders.

The ICES provided an extended explication of its views in its book *Environmental Stewardship in the Judeo-Christian Tradition*, published in 2000.

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adjacent, What Would Jesus Drive)?; Christianity (7i) – An Evangelical Perspective on Faith and Nature; Evangelical Environmental Network; Religious Campaign for Forest Conservation; Stewardship; Wise Use Movement.

Inuit

Scattered around the Arctic regions from Siberia to Greenland, Inuit (including Yup'ik, Inupiat, Inuvialuit and Kalaallit) have often been described as religious people but without a real religion. The variety of the expressions used by Western observers to describe their spirituality or worldview reflects how difficult it is to grasp traditions that have lived for thousands of years in close contact with their environment. Nowadays, if Inuit are still very often considered as "naturalists" (the missionary Hans Egede was already using that notion in Greenland in the eighteenth century), it is again because of this very special relationship they maintain to their environment. However, like many other Western concepts, the notions of religion and nature are very problematic to understand Inuit traditions adequately. We may wonder why, for example, if Inuit are so respectful toward nature, they are often opposed to anti-harvesting campaigns led by Euro-American animal-rights groups and why collaborations with ecologists and environmentalists are not always easy.

According to the Inuit, nature does not exist as such. Human and nonhuman beings including non-living objects belong to one continuum of the same domain. Humans are in dialogue with their environment at all times, and all the entities Western observers call "natural" are often endowed with spiritual agencies, with an *inua* (an owner), and consciousness. The Inuit discourses about the Earth, their very rich mythology and cosmology, hunting and ritual practices, as well as their spirituality, always strongly emphasize interdependence between human and nonhuman beings.

In the past, when Inuit traditions were developed by small nomadic groups depending on local resources like caribou, fish, plants, etc., the old designation of *-miut*-like *Iglulingmiut* ("people from Iglulik") never meant that Inuit owned the land but only indicated the locality the group frequented. As a few anthropologists rightly put it, Inuit had to respect the land as they were in some manner possessed by *nuna* (the Earth) and *sila* (the air). Thus, people sharing a piece of the Earth with one another are said to be *nunaqqatigiit* and those sharing a piece of the air, *silaqqatigiit*. As the Earth itself was conceived as a living entity, camp leaders often warned their people that they should not stay in the same place indefinitely but move to another area to allow the place to cool and hence avoid sickness and starvation. In North Baffin, elders also explained to the youths that they should not pick up the eggs that grow in the Earth. Earth eggs (*nunaup*

manningit) are said to become *silaat* (big polar bears) or *pukit* (albino caribou) and "They are not allowed to be taken for the Earth will yearn for the lost eggs and cause foul weather." According to Kappianaq, "hunting *silaat* can shorten the life expectancy of the human who caught one" (in Oosten and Laugrand 1999: 192–3). Nowadays, a healthy environment (*avativut*) is depicted as a balanced one, not only regarding the proper numbers and types of living and non-living entities, but also one that has the ability to repair and heal itself.

From the viewpoint of contemporary symbolic anthropology, Inuit traditions fit into the universal – but very diverse – animist model. According to Inuit cosmology, as Fienup-Riordan indicated regarding the Alaskan Yup'ik, human and nonhuman animals possess a mutual awareness of each other's activities; the latter are considered nonhuman persons and cognizant beings with whom humans can communicate. In some areas human beings are also believed to be able to reincarnate into animals.

To varying degrees, depending on region and generation, Inuit still attribute anthropocentric qualities to many entities that most people in Western cultures regard as "natural." Though animals differ from humans in that they do not have a name (*atiq*) and that they are used for food, they are nevertheless thought to have a soul (*tarniq*) just like humans. This soul takes the form of a tiny bubble of air and blood but with the same shape of the outer body, the only difference being that its size is much smaller. According to various sources, it could be located in the gut, in the groin, in the bladder or in the joints. This conception of interdependence between humans and animals is deeply rooted in Inuit traditions from Siberia to Greenland. Quoting Ava and Ivaluarjuk, Knud Rasmussen suggested this was one of the major religious problems with which the Inuit had to deal:

The greatest peril of life lies in the fact that human food consists entirely of souls. All the creatures that we have to kill and eat, all those that we have to strike down and destroy to make clothes for ourselves, have souls, like we have, souls that do not perish with the body, and which must therefore be propitiated lest they should revenge themselves on us taking away their bodies (in Rasmussen 1929: 56).

Far from being seen as something to be dominated, the Inuit believe animals yield to hunters capable of winning them over. Animals have human feelings, the power of speech and the capacity to think (*isuma*). They have songs and, according to some stories, a spirit (*inua*) owning them. Animals can also see the conditions in which they will be captured and decide – if the hunter has failed in respecting them by certain ritual practices – not to give in or even to take revenge.

In the Arctic, shamanism thus appears to be a form of religion where shamans act as a mediator between human and nonhuman entities. In Alaska, the Yupiit performed many ritual acts, songs and masked dances to influence animals and affect "nature." In the Canadian Arctic and in Greenland, shamans (*angakkuit*) were often sent by their fellows to meet the biggest *inuat* – and especially the *inua* of the sea – to negotiate with them and obtain game, healthy conditions or good weather. Also, shamans would use their clairvoyance (*qaumaniq*) to see the unseen – the spirit world and the faults committed by humans when they break the rules – to restore order by addressing the ancestors and the *inuat*. Able to speak the language of their helping spirits (*tuurngait*) and shamanic incantations (*irinaliutit*), they would sometimes turn themselves into an animal.

With their conversion to Christianity these ideas evolved. Parts have survived while other parts have been reappearing in a new form. Nowadays, Christian Inuit no longer believe that animals are owned by the great spirits of the universe (*inuat*). However, if most of them acknowledge that God created the animals, they still maintain that animals can communicate with humans and need to be hunted and taken and shared as prey to reproduce themselves. Not to hunt an animal is the best way to make it disappear. Inuit also still experience a close connection between diseases or physical problems and spiritual issues.

Transgressing shamanic rules (*tirigususiit*) or Christian rules (to hunt or get plants on a Sunday for instance) or not respecting animals are very dangerous behaviors for the living community. In that respect, the only solution is often the collective confession (*anniarniq*). In 1999, Nutaraaluk, an elder from Iqaluit, considered the Quebec ice storm to have happened because God and nature wanted to discipline a society that has been misbehaving for a long time.

Similarly, while the concept of *inua* seems to be losing its meaning in many areas, it remains consistent to understand modern attitudes. Nowadays, the strong reaction of the Inuit after their dogs were killed by the Canadian Government, for instance (Inuit elders complained that it was a form of genocide), can only be explained in terms of the central position of dogs in Inuit society. Being the only animals to have a name and sharing their master's *inua*, dogs are clearly seen as close members of human society. Subject to various rules and prohibitions in the past, they are still considered as human companions, able to decipher the presence of any spirit.

In Inuit cosmology, many myths relate the origins of the great spirits (*inuat*) of the Inuit universe such as Sila, the spirit of the air and consciousness, or Aningat, the moon spirit who is said to have sexually abused his sister Siqiniq, the *inua* of the sun. From Siberia to Greenland, other myths relate the story of Sedna also known as Nulijuk, Nerrivik, Uinigumasuituq, depending on the

area. This myth of the *inua* of the sea explains how the entire human race (Inuit but also Whites, Indians and Ijirait spirits) was born after she coupled with a dog. Another episode of the myth tells how her finger-joints were transformed into sea mammals (whales, seals and walrus) after being cut off by her father, Anautalik. Interestingly, Sedna was considered the mother of the sea mammals and feared as such, being able to punish humans by provoking bad weather, starvation or infertility.

Nowadays, even if Christianity has been deeply incorporated by the Inuit, humans still respect many ritual injunctions and rules to avoid any bad relationship with spirits and animals. Under no circumstances, for instance, should a woman come into contact with game during her menstrual cycle, otherwise, warned an elder from Rankin Inlet, she might anger the spirits. Many people also tell stories about animals retaliating against humans who did not respect them, mistreated them or mocked them. In 1999, for example, Imaruittuq from Igloodik stated:

We were told to treat all wildlife with respect . . . If we did not do this they could take revenge on us . . . If I was toying with or mistreating an animal, the very person I love the most could suffer from what I did (in Oosten, Laugrand and Rasing 1999: 38–9).

The hunt and the relation to game imply discipline and specific procedures to avoid problems. Any mistake can be dangerous for the living person but also for their descendants. Thus hunters must be gracious about wildlife and share their prey. Obviously, the old Durkheimian opposition between the sacred and the profane becomes problematic in such a context, with Inuit connecting everything. Dreams, for instance still provide the best context for nonhuman persons to communicate with human beings.

The arrival of new Christian spirits such as God (Guuti), Satan (Satanasi) or angels (*ingilit*) has not dispelled most of the spiritual beings of the Inuit territory. Nor has it changed the integration of each person through its name in an extended community, consisting of ancestors, animals and spirits. Myths are full of stories of humans and animals turning into each other. In the Canadian Arctic, many hunters are still telling their experiences of encounters with nonhumans. Some of them talk of marriages between humans and *ijirait*, spirits that can be identified by the set of their eyes. Their whistling can make humans lose their memory. Others talk of bloody battles with *tupilait*, dead roaming spirits who are said to be responsible for spreading sickness among the living people. Others describe *tuurngait*, the helping shamanic spirits, as very dangerous entities. Some younger people have come up against *gallupiluit*, these sea spirits that kidnap children and wield a whip of seaweed. Then there are the *inurajait*, who can be recognized by their tiny

footprints, the *tarriasuit*, and many other spirits depending on the region. All these meetings are often ambiguous and indicate to living people that the utmost care must be taken to follow social rules and rituals given to them by their ancestors.

As the elders often explain it to the younger generation, when human and nonhumans share so many features and the same universe, bodily distinctions and attitudes become important markers. Thus, humans must be very careful and always share their spiritual experiences with others to avoid the risk of having bad thoughts as this is one of the most dangerous phenomena in such a widely connected universe.

With this background in mind we can now understand why there is no contradiction for the Inuit to respect “nature” and their opposition to ecologists, environmentalists and anti-harvesting campaigns. For Inuit, nature is not a specific and autonomous domain that should be managed. Inuit spirituality is closely related to the hunting life, to providing and sharing food. Each person is inextricably linked to his or her environment and there is no alternative. Inuit cosmology encompasses shamanism and Christianity. Humans are aware that a good life means to maintain good relations with animals, with the weather, the spirits and the ancestors, who can all always retaliate. Thus, humans have to follow specific rules and act accordingly to avoid entropy. Today, over and above the many changes wrought by Christianity and modernity, Inuit spiritual life thus displays considerable continuity by still attaching the greatest importance to harmony and mutual understanding rather than conflict.

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- See also: Animism (various); Traditional Ecological Knowledge among Aboriginal Peoples in Canada; Indigenous Environmental Network; Watson, Paul – and the Sea Shepherd Conservation Society; Whales and Whaling.

Ireland

Much of what we know of the religion of the first people of Ireland comes to us from myth and legend. There are no original texts and the first printed works – early Christian interpretations – are hotly contested.

It is thought that Megalithic people in Ireland practiced a cult of the sun. They had rites and rituals as evidenced by stone rings, forts and passage tombs with solar alignments and inscriptions dating from this period. For the diverse people we now know as Celts, the sun also embodied a supreme divinity. The estimates for their arrival vary from 1000 B.C.E. to 500 B.C.E. There is little archeological evidence of major conflict in the transition. Indeed, the cross-cultural meeting of Celts and Megalithic people seems to have been a two-way process which allowed a symbiosis of old and new.

For both the Megalithic and later the Celtic people of Ireland, the landscape itself was sacred, often reflecting aspects of divinity in the form of gods and goddess. Certain rivers, wells and hills gained significance because of their capacity to mediate or facilitate the breakthrough of the spiritual world or other world. These places called "Anima Loci" or places of soul are often associated with specific events like sunrise and sunset on significant days of the year, for example, Newgrange in the Boyne valley is associated with the winter solstice, and Lough Crew, Co. Meath, with the spring and autumnal equinox sunrises.

The *Dinsheanachas* (place-name stories) preserve the geomorphic tales and express a quality of ensoulment of certain places in the landscape. This information was very important as it detailed the connections that were a source

of inspiration and power in the minds of the listeners linking them to other realms. It was, in Jungian terms, the ground of being for the people out of which they constructed their universe.

The idea of the sacred landscape is reflected most potently in the early names for Ireland – Eire, Fodla and Banba. They describe the goddesses of the land as encountered by the Milesians, the mythical ancestors of contemporary Irish people. Eire became the primary name for Ireland and through her the Mother Goddess, connected intimately with the land, lived on in the Irish psyche.

The carriers of the nature religion tradition were the Druids, some of whom were poets – "bards" or "*filidh*." They were also judges, political advisors, teachers, musicians and entertainers. It is through their oral tradition that the early Irish nature poetry, perhaps the first of its kind to be written in Europe, has passed into the vernacular today. An example of this is to be found in the Hymn of Amerigen. For Amairgen, the primal God he worshipped could be felt within himself and it was embodied in the landscape outside. He could feel the movement of God in the universe and within his own soul:

I am the salmon in the water,
I am a lake in the plain,
I am a world of knowledge,
I am the point of the lance of battle,
I am the God who created the fire in the head
("The Hymn of Amerigen" in O'Donohue 1997: 128).

Water in particular was the providence of the goddess for the early Irish. In one early story the warrior hero Fionn Mac Cumhaill is traveling with Saint Patrick. He sees the flowing watercress as a manifestation of the goddess of the well and he intercedes to her on Patrick's (Christianity's) behalf.

The belief that the Spirit has been imbued in the water persists and is manifest in the presence of numerous healing wells. The cult of Aine, an aspect of the Goddess Anu, continues even into recent times when people gathered at Knockainey (Aines Hill) in Co. Limerick on Midsummer Eve to invoke the spirit of Aine na gClair (Aine of the Whisps) to guard them against sickness and ensure fertility. Traditions of taking an informal blessing from "holy water" on entry and exit from houses continues, and many Irish people still carry bottles of this water in their luggage and cars for protection.

Celtic Christianity and Celtic Culture

Christianity arrived in Ireland, probably in the first or second century. As it settled in Ireland and in the Irish psyche it was immensely influenced by and reflected the pre-Christian relationship to nature. Evidence suggests that there was a belief among these early Christian peoples

that God was fully present in the created, material world. The elements of the natural world, for example, were seen as a medium through which the glory of God shone. For these Christians as well as their pre-Christian ancestors, for whom the sovereignty myth was the central social tenet, loving God required living in harmony with the natural world.

Several stories from early Christian times tell of the intimate and mutual relationships between saints and animals, such as the one recounting how the sea otters dried St. Cuthbert after he had spent the night praying in the sea, and how his horse found food for him under the thatch of the roof. When St. Columba was dying, it was his horse that first knew about it and began the mourning. Other stories tell of how saints were led to their settlements by animals, Ciaran of Clonmacnoise by his horse and St. Gobnait by nine white deer.

In the early Christian period it is likely that Mass, following the pattern of earlier rituals, was celebrated out in the open and only later was it contained within churches. During the seventeenth and eighteenth centuries, under what is termed "penal law," Catholicism was effectively prohibited by British efforts to bring the Irish under control. The Mass was then celebrated on a network of secret "Mass Rocks" in the open. Commemorative outdoor Masses occur occasionally today to honor particular saints at their special sites or perhaps to remember the dead during the month of November in local graveyards. It may be argued from this that there is still a belief carried down from ancient times that one can be close to God and other "souls" when praying in the open air at these sites.

For the Celts the world was always latently and actively spiritual. In the Celtic world, and especially in the Celtic world of the senses, there was no barrier between soul and body. Each was natural to the other. The sun was the sister of the body, the body the sister of the soul (O'Donohue 1997: 81).

Religious rituals such as the pilgrimages to Croagh Patrick (the mountain of Saint Patrick) and Lough Derg also seek to narrow the distance between self and God, through exposure to the elements, walking barefoot, fasting and ritual walks with prayers.

This belief in the "sacramentality" of particular places where nature is regarded as a source or vehicle of spiritual power is one of the chief characteristics of primal religions throughout the world. Irish Christianity retained this primal sense of connection between nature and the divine remnants, which survives to the present day. The dates of the pilgrimage on Croagh Patrick coincides with the pre-Christian harvest festival of Lughnasad, and the route, with its large number of megaliths, suggest a pre-Christian origin for the still-famous walk. In addition to the primal

and pantheistic origins of the pilgrimage to the mountain, Low also points to the biblical and theological parallels in the incarnational theology of the New Testament and in Teilhard de Chardin's vision of the Cosmic Christ.

Ireland was the only Celtic country that was not invaded by the Romans. Christianity therefore came in contact with an intact druidic and Irish Celtic culture. In the transition to Christianity, it is clear that scholars and missionaries drew heavily on the earlier goddess and nature religions. As Mary Low, points out,

The old myths enshrined values and world-views which could not simply be discarded without threatening all that held the community together. Instead they were collected, modified and reinvented in an on-going myth making process (Low 1996: 25).

When in 431 the Christian movement, at the Council of Ephesus, made Mary officially the "mother of God," the Celtic people turned to her enthusiastically as their replacement "Mother Goddess," seeing in her the goodness of fertility, love and healing. For many scholars, therefore, it is difficult to distinguish between the pre-Christian goddess Bridget, the Christian saint she became, and the mother of God. In early Christian Ireland, Brigit was also known as Mhuire Na Gael (Mary of the Gaels). The historical figure of Brigit (455–525) is thought to have been a female Druid before converting to Christianity and she is intimately linked with the symbolism of the oak, which was sacred to the Druids. This is reflected in the name of her monastery at Kildare (Cill Dara – the Church of the oak).

Celtic Christianity and Brehon Law

The early church developed against a social and legal backdrop based on the clan system and codified under what is termed the Brehon Law. The integration of the new religion into this developed legal system set Celtic Christianity on a collision course with its Roman counterpart. Two factors were especially important in this conflict: the position of women and the ownership of land.

Women in the early Celtic Church continued to hold their pre-Christian positions of social and spiritual authority. Large numbers of women were involved in the early movement as missionaries and interpreters of the faith. A seventh-century poem tells of how Ethne, daughter of the Irish High King, questioned St. Patrick at length about the new Christian God asking "Who is God and where is his dwelling?" She was eventually converted and influenced her teachers, the Druids Mael and Caplaith, to follow.

The equality of women in Irish society meant that they continued to develop sexual relations within the context of the new religion. Mixed monastic settlements were common and children were brought up in religious service. This, combined with the communal system of land

ownership by the clan, severely limited the power that could be exacted by the Church and state.

The diocese of a bishop was essentially a clan boundary, with its own priests. The clan allocated land to bishops (some of whom were female) and other members of the Church who were elected from within their own family grouping. These clan families, grouping together, could counter power of both papacy and monarchy. Mael Maedoc (ca. 1094–1148), Archbishop of Armagh, was one of the key reformers in the efforts to enforce clerical celibacy. He was instrumental in getting a papal blessing and permission for Henry II to invade and conquer Ireland. This was given in the bull *Laudibiliter*, issued in 1155 by Nicholas Breakspeare, the only English man to have become pope. At the Synod of Cashel in 1101 the High King, in an attempt to stave off the Anglo-Norman invasion, exceeded his power under law, and agreed to hand over lands to the absolute ownership of the Church. Before then there was no concept of absolute private property. “Thus the first alienation of land from the people took place” (Ellis 1995: 167).

The destruction of the social status and religious standing of women was therefore essential for the enforcement of clerical celibacy and ultimately for the transfer of political power and land from the clans to a clerical hierarchy with an allegiance to the centralizing Roman Church. Women were therefore forbidden to take part in the celebration of the Mass and in the twelfth century had the dignities and honors of bishop removed from their title. Land was no longer held in community ownership but in the private estates of the British Ruling Class and the Church. The religious status of women in Ireland therefore was degraded not for theological reasons but to further the economic and political marriage between the Roman Church and the British state.

The result was an enormous change in the relationship between religion and nature during the tenth to the twelfth centuries. The traditional system of land ownership was overthrown through the mutually reinforcing actions of Church and state. Gender relations were utterly transformed and women began to take increasingly subservient roles. This period marked the beginning of the end for the Celtic Church.

Protestant Ascendancy and the Land

As Ireland became a colony of the Protestant British Empire, both colonists and native Irish used religion as a tool of resistance and oppression in the struggle to gain control of the land. An intensely political aspect of the connection of religion with nature in Ireland can be found in the complex history of the North of the country. One aspect of this history, which still carries a high political charge, relates to the movement of the mostly Scottish Protestant people onto the land in the North of Ireland in the sixteenth century. In this effort by Henry VIII to

colonize or “plant” Ireland, many indigenous Irish were displaced to marginal lands or overseas by the settlers who are popularly referred to as “The Planters.” Their relationship with the land and nature in their new home was intricately linked with religious and political wrangling.

The conditions upon which they got their land bound them to admit no Irish customs, never to intermarry with the Irish, and not to permit any Irish on their lands. Fintan O’Toole has described the way that the abhorrence of the Planters in the North to the Native Irish was echoed by the colonial project in North America.

The relationship was driven by the distinction between city and forest, on the fear of degeneracy which the intermingling of races would bring, on the contrast between civilisation and barbarism which the divide between town and forest or city and wilderness implies, in which the Irish became associated with the forest savage (O’Toole 1994: 63).

Thus a sense of superiority of the Protestant religion was used as a justification for the bringing “under control” of nature and people.

In the late seventeenth and early eighteenth century a series of “Penal Laws” were enacted by the British. These forbade Catholics to practice their religion, receive an education, and purchase land or own a horse worth more than £5. Ireland was conceived of as an important food source for the newly industrialized urban centers in England. Taxes were placed on arable land so that sheep became more profitable than small farmers tilling the land. Thousands of Catholic farmers were forcibly cleared and either emigrated or died of starvation in the famines of the eighteenth and nineteenth centuries. These policies also resulted in a period of immense forest clearance for export to the shipyards of Britain. The last wolf was shot in Clare in 1770. For some writers the demise of the woods and the fall of the Catholic people were linked. “*Cad a dhéanfaimid feasta gan adhmaid? Tá deireadh na gcoillte ar lár*” (“What will we do in the future without wood? The end of the forests has come”) (O’Corkery 1924: 35).

The potato famine in Ireland between 1845 and 1849 represented an important chapter in the story of religion and nature in Ireland. Before the famine, only 30 percent of the Irish attended Mass. By 1850, after hunger had run its five-year course, attendance had risen to over 90 percent. To the people, it appeared that nature had failed them, and they turned instead to the Church for forgiveness. Thus we can see that nature combined with certain colonial agricultural practices decisively influenced the development of Irish Catholicism after the famine. It gave the Catholic Church increasing political power in the period spanning the famine to the foundation of an independent Irish Republic with a particularly Catholic ethos woven into the Irish constitution of 1937.

Religion, Gender and Nationalism

The connection of female imagery and the land of Ireland had resonance for both nationalists and for the British colonizers. The political rhetoric on both sides used female imagery and religious affiliation to assert rights over land and nature. The oppression of Ireland was often described in the nationalist poetry as the oppression of a woman. The land was given female code names such as *Roisin*. Numerous laments were written about her plight. In this manner, the political content of a song or piece of prose avoided detection by the British army.

Drawing perhaps on the sovereignty myths of old where the health of the soil depended on the relationship between the king and the Goddess, nationalist writers and activists distinguished between the idea of land and soil, claiming that the connection with the soil could never be appropriated by the British who could only claim ownership of the land. Their campaign (simplifying the reality greatly) pitted the British Protestant elite, largely absent from the estates that they owned, against a Catholic peasantry who depended directly on the soil for their lives.

Although women were largely excluded from the power bases of either the rebel ranks or the Church, both freely used the image of the beleaguered woman as a symbol for the oppression of all Catholic Ireland. The image played an important part in the rallying of several mass movements of people, often with the support of the Catholic Church, to both peaceful boycotts and violent action from the seventeenth century onwards. It can be seen therefore that the Irish masses still had a powerful connection to the archetype of the feminine as a representation of the land and of nature. This connection did not however translate into a sharing of political and religious power, as the writings of the women in movements such as the Land League make quite clear (Ward 1983: 5). Political writings and journalism in nineteenth-century England also used female imagery but conceived of Ireland as "a recalcitrant harlot who needed England's John Bull to tame and civilize her" (Ellis 1995: 37).

The power and the influence of the post-famine Catholic Church grew among the peasant majority where it was seen as more of a church of the "soil" and of the people than of the landed classes. The growing identification of the Catholic Church with the nationalist cause established the priest as "a curious amalgam of spiritual leader, legal advisor and political organizer" (O'Tuthaigh in Duddy 2002: 251). On independence, the country was partitioned into a 26-county, primarily Catholic republic. The residents of the six, predominantly Protestant, counties which continued as part of the United Kingdom continued to experience political and violent struggle, divided on sectarian lines, over the control of land and nature.

Republic to Present

The government of the new Republic of Ireland initially rejected industrialization and sought instead to maintain a rural nation of small farmers who were in the words of its first president "satisfied with frugal comfort and devoted their leisure to things of the spirit" (DeValera in Breen et al. 1990: 31). Moral leadership was firmly rooted in the ethics of the Catholic Church and woven into the detail of the constitution.

The political and spiritual influence of the post-famine Catholic Church has been slowly undermined during the last quarter of the twentieth century by a rapid change in the values and lifestyles of Irish people. This was stimulated by the rapid expansion of the "Celtic Tiger" economy and accelerated by the exposure of serious breaches of trust in the senior ranks of the Church.

Alongside this rapid secularization of life in contemporary Ireland there has developed a quest for spiritual experiences outside of the Catholic Church. Some of the new movements link spirituality and nature in explicit terms, others in more implicit terms.

From within the orthodox Christian churches, new movements draw heavily on the Celtic roots outlined earlier. They look to the Iona Community in Scotland to revive interest, prayer and study in the Celtic tradition, and to the creation of a more ecologically informed vision for the Church. There is also a rediscovery and celebration of Celtic festivals, especially the Festival of St. Bridget, which has gained a strong following across Ireland. Symbols such as the rushes and the cow, and other stories that have been carried down from Brigid the Goddess, are freely used in the celebrations. An order of nuns dedicated to St. Bridget has relit her fire in Kildare.

Also from within the Roman Catholic Church, Sean McDonagh, a priest and former missionary, persistently criticized the Catholic Church's failure to address the ecological crisis. He asserted, for example, that "the Church has not responded in any effective way to environmental destruction" (McDonagh 2001: 40), calling for the development of prophetic witness from the Churches to support scientific information on climate change and other environmental problems. He has argued that "an authentic creation spirituality would help regenerate Irish Christianity" (McDonagh 2001: 50).

Best-selling author and priest John O'Donohue has also called for reclamation of this sensitivity to land and spirit. Significantly, in the 1990s through campaigning activity and direct action, he played a key role in the successful opposition to the development of a visitor center at the heart of the Burren national park.

Outside the mainstream Church, but with a following from within it, Dara Molloy, a "post-Catholic" priest, has been living since 1985 as a Celtic monk on the west coast Isle of Aran. He and his wife, Tess Harper run an important spiritual and ecological community and publish

an international magazine called *The Aisling*. The community is dedicated to the recovery of the Celtic Christian Church, and their spiritual vision includes the creation of sustainable communities.

The Creation-Centered Spirituality movement, spearheaded by American theologian Matthew Fox, has excited the spiritual imagination of many people throughout the country. Creation spirituality contains strong references to the story of the creation and evolution of the Earth as a unifying myth for our times and has found special resonance among the female religious.

There is also a strong and growing deep ecology movement in Ireland drawing on the work of Joanna Macy and John Seed. Organizations such as Sustainable Ireland and Feasta are not overtly spiritual but offer a vehicle which critiques the Western economic model as undermining our relationship with nature and with each other.

The long-running protest in the late 1990s against the destruction of a remnant of ancient oak forest in the Glen of the Downs in Co. Wicklow drew on creation spirituality and Celtic Christian philosophy such as that of John Scotus Erigena (ninth-century philosopher) to develop a moral platform and spiritual reference for their actions.

A motorway that had in principle the full support of local people was diverted in 2001 to avoid the destruction of a fairy tree known as the “sceach” near Newmarket-on-Fergus, County Clare. It was claimed that the sceach was a marker in a fairy path and the stopping place for fairies to bury their dead on their way from the great battles between the Munster and Connacht fairies. Local folklorist Eddie Lenihan warned that its destruction could bring misfortune to those using the new road. The power of the myth with which the hawthorn tree was associated was still sufficiently strong to ignite a furious national debate that resulted in its protection.

Only a few miles from the “sceach” is the Ceifin Institute for Values-Led Change, founded in 2001 and named after the Celtic Goddess of Inspiration. The institute was founded by Catholic priest Fr. Harry Bohan and seeks to “revitalize Irish society, give us a renewed sense of identity, sense of purpose and a shared vision that people can take forward” (from the Founding Statement 2001). Although it is not overly Catholic in its mission, it draws on the long tradition of integrating spiritual and religious concerns into the social and political debates. Its conferences represent a uniquely Irish contribution to the sustainability debate. Inclusion of the key figures in Gaelic sport (with its traditionally strong links to church and spiritual matters) has garnered wide support in a country with very shallow roots in the secular and a long memory for the formative influence that religious and spiritual concerns have played in changes in the land.

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- See also: Brigit; Celtic Christianity; Celtic Spirituality; Christianity (7e) – Creation Spirituality; Council of All Beings; Deep Ecology; Druids and Druidry; Faerie Faith in Scotland; Fox, Matthew; Macy, Joanna; Roman Britain; Scotland; Seed, John.

Ishimure, Michiko (1927–)

Michiko Ishimure became famous in Japan for exposing through various literary works the horrors of methyl mercury poisoning resulting from human ingestion of fish polluted by industrial discharges into the sea. Minimata disease, the neurological disease caused by such poisoning, became infamous the world over in part as a result of Ishimure's heart-rending portrayals of the 1956 epidemic that devastated the men and women of the coastal town of Minimata in Kyushu. *Kugai Jōdo*, published in 1969, was translated into English as *Paradise in the Sea of Sorrow: Our Minimata Disease* (1990) by Livia Monnet. As Monnet notes in her introduction, *Kugai Jōdo* became a bestseller not only for its achievement as a poignant exposé but also because of its innovative style. Ishimure creates a “new

literary genre, a mixture of authentic autobiography, fiction and journalism.”

From the title itself through the depictions of the spiritual lives of those afflicted, Ishimure emphasizes the moral and ethical dimensions of the religious beliefs and practices of traditional village people in opposition to the ruthlessness of corporate capitalism. In particular, she gives extensive attention to the Pure Land and True Pure Land sects of Buddhism, popular in that part of Japan. As Monnet explains, one popular interpretation holds that “the Minimata disease patients, purified by their suffering, attain enlightenment.” Throughout *Paradise*, Ishimure interweaves a cry for environmental justice, a statement of belief in Buddhism and local Shinto practices, and feminist praise for the women victims and activists in the struggle to expose the cause of the disease and seek an end to the pollution.

While Ishimure has devoted many years of her life to assisting the Minimata victims and making their plight and the price of pollution known to the world, she has also written numerous other works. Of these, only one other has so far been translated. *Tsubaki no Umi no Ki* was originally published in serial form from 1973 to 1976, then in book form in 1976, and translated as *Story of the Sea of Camellias* (1983) by Livia Monnet. While also addressing the disruption of traditional village life by capitalist development in the twenties and thirties, Ishimure focuses on the inner life of a young girl named Michiko growing up in the Minimata area. Only partly idyllic, this apparently autobiographical novel portrays the world as filled with suffering in the Buddhist sense of desire and illusion and the need for reincarnation. In deep empathy for the people around her who suffer and for the natural world she frequents, Michiko displays not a passive acceptance of this suffering but a profoundly active animistic spirituality in her own dealings with social reality and a supernatural world. At the book's end Michiko takes her long-suffering, insane grandmother to see the opening of the lotus buds and announces that in that instance, “something akin to enlightenment took place within me.” Out of this moment of both physical and metaphysical union of nature and spirit, a poem wells up inside of her. In *Story*, as in *Paradise*, the reader finds a unique vision of the interrelationship of the physical and the metaphysical, the immanent and transcendent, nature and culture, hope and sorrow.

Patrick D. Murphy

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See also: Autobiography; Buddhism (various); Japanese Love of Nature; Japanese Religions; Matsuo Bashō; Memoir and Nature Writing; Zen Buddhism.

Islam

Islam is a universal religious tradition claimed by over 1.3 billion people throughout the world at the end of the twentieth century. Muslim communities exist in virtually every country. The largest concentration of Muslims is in the region of South Asia, where they are fairly evenly distributed between India, Pakistan, and Bangladesh (with about 150 million Muslims in each), along with minority communities in Nepal and Sri Lanka. The nation with the largest Muslim population is Indonesia, with over 200 million inhabitants who adhere to Islam to at least some degree.

Islam originated in western Arabia in the early seventh century. Its founder, Muhammad ibn Abdullah al-Hashimi of Mecca (ca. 570–632) is believed to have begun receiving divine revelations in 610 at the age of forty. These revelations, which are collectively known as the Qur'an, continued up to the time of the prophet's death. Sometime during the following decade they were collected from various companions of the prophet who had memorized them, and written down. The Qur'an, which Muslims believe to be the word of God (Allah), is the basis of Islam and the foundation of all Islamic knowledge.

A supplementary source of guidance for Muslims exists in the form of reports about the words and deeds of the prophet Muhammad. Codified during the eighth century, these reports are known as *hadiths*. The Qur'an and the *hadiths*, together with the analogical reasoning (*qiyas*) of the classical jurists and the consensus (*ijma'*) of the scholarly community, constitute the four sources of Islamic law (*shari'a*), which were codified by the recognized schools of law by the tenth century.

The question of what constitutes the basis for religious authority in Islam has been a contested issue since the death of Muhammad. At that time the majority of his followers considered that the Qur'an represented the sole and adequate source of religious guidance for Muslims, while a significant minority felt that Muhammad had designated a successor in his nephew and son-in-law, Ali. Eventually the former group came to be known as “Sunnis” (“traditionalists”), while the latter were referred to as “Shi'ites,” or “partisans” (i.e., of Ali [*shi'at 'Ali*]). Shi'ites differ from Sunnis mainly in that they accept a different set of *hadiths*, and consider the teachings of Ali and certain of his descendents, known as *imams*, to be authoritative.

From the eighth century a third type of authority emerged in the form of charismatic leadership by Muslim mystics, called Sufis (probably because some of them wore garments made of wool, Arabic *suf*). Since in the Sunni world religious authority resided with the legal scholars who studied the Qur'an and the *hadiths*, the charismatic authority of Sufi teachers was often a source of contention. Many Sufi teachers, however, were also recognized legal scholars.

The intellectual tradition of Classical Islam (eighth to tenth centuries) was heavily influenced by that of pagan Hellenism. The Arabic term *tabi'a*, typically rendered in English as "nature," was used by medieval Muslim philosophers in the sense of the Greek *physis*. Following Aristotle, the Iranian polymath Abu Ali Ibn Sina, known to the West as Avicenna (d. 1037) identified *tabi'a* as "an essential first principle." The definition given in the tenth-century *Treatise* of the Pure Brethren of Basra, on the other hand, reflects Neoplatonic notions of emanation, referring to *tabi'a* as only one of the potentialities of the Universal Soul. Within the Neoplatonic hierarchy of creation as appropriated by many Muslim philosophers, only humans possessed all three attributes of *tabi'a*, intellect, and desire.

Yet for Muslims an important qualification is found in the Qur'an, where one reads, "In whose hand is the dominion of all things" (Qur'an 23:88). Ibn 'Arabi (1165–1240) found support for his concept of *wahdat al-wujud*, or "unity of being," in the Qur'anic verse (Qur'an 2:115) which states that "Whithersoever you turn, there is the Face of God." Although Ibn 'Arabi's monist metaphysics have been enormously influential on the thought of Sufi mystics in particular, especially in South Asia even to the present day, orthodox Islam has tended to reject the doctrine of *wahdat al-wujud* as verging dangerously close to pantheism. In the seventeenth century Ibn 'Arabi's popularity in India gave rise to a response by the conservative Sufi teacher Shah Waliullah (d. 1763) in which the latter attempted to substitute a concept he called *wahdat al-shuhud*, or "unity of witness," through which the boundary lines between the Creator and creation could be firmly maintained.

In recent years a number of Muslim writers, mainly living in the West, have published essays to the effect that based on the scriptural sources of the tradition, Islam is an ecologically oriented religion. Whereas the medieval philosophers, when they addressed issues of the natural world, were concerned primarily with constructing theoretical arguments about justice, Islamic environmental ethics as articulated by contemporary writers tend to be rooted in more practical terms, often by way of response to Lynn White's 1967 critique of Western Christianity. Iqtidar Zaidi, for example, is clearly paraphrasing White when he states that the ecological crisis is "a crisis rooted in moral deprivation" (Zaidi 1981: 35). Seyyed

Hossein Nasr actually anticipated White's critique in his own lectures given at the University of Chicago earlier in the same year as White's address.

It may be useful to restrict the term "Islamic" to that which can be derived from the canonical sources of Islam, as opposed to the activities or attitudes of Muslims, which may or may not be directly motivated by those sources. In other words, one may distinguish between *Islamic* environmentalism – that is, an environmentalism that can be demonstrably enjoined by the textual sources of Islam – and *Muslim* environmentalism, which may draw its inspiration from a variety of sources, possibly including but not limited to religion. Around the world today one can find increasing examples of both. For example, such organizations as the UK-based Islamic Foundation for Ecology and Environmental Sciences conduct environmental education programs around the world which are based on Islamic principles. On the other hand, the activities of international environmental organizations such as the IUCN and WWF in Muslim countries such as Egypt, Pakistan, and Indonesia, while carried out by Muslim staff members, tend to reflect Western notions of what constitutes environmental education and protection.

Muslims have always been culturally diverse, and never more so than today when they number a billion or more and inhabit every corner of the globe. Historically the one indisputable source of authority which all Muslims have agreed upon is the will of Allah as expressed in the revealed scripture of the Qur'an. Within the Sunni majority (perhaps 80 percent of all Muslims) there exist four accepted schools of law, which differ from each other in approach and in some details of their legal rulings. Shi'ites follow their own school of law. Though the classical legal traditions contain material dealing with the environment, such as forbidding cruelty to animals, regulating water distribution and establishing undeveloped zones (*himas*) for the protection of watersheds, to attribute to them an environmental ethic in the contemporary sense would be anachronistic.

Islamic environmentalists today have attempted to derive an environmental ethic based on the Qur'an and *hadith*, generally giving little attention to possible cultural contributions from the various societies in which Muslims live. This is because local or regional attitudes cannot form a basis for any kind of universal Islamic ethic, since they are almost invariably perceived by Islamists as "accretions," (*bida'* – literally, "innovation") and therefore un-Islamic.

The politics of environmental activism among Muslims, where present, have tended to be region-specific. For example, when Palestinians seek to assert territorial claims by planting olive groves, one cannot say that this is an "Islamic" issue, since many Palestinians are not Muslim. From an Islamist perspective, the mere involvement of Muslims does not make an activity or ideology "Islamic";

only a basis in the Qur'an and the *hadith* does. This is not to suggest that broader cultural contributions by Muslims living in diverse societies around the world will not be significant in addressing the environmental crisis.

For an idea to achieve anything approaching universal acceptance by Muslims as "Islamic," it must be convincingly demonstrated that it derives from the Qur'an, or failing that, from the example of the prophet Muhammad. Recognizing this, contemporary Islamic environmentalists have defined environmentalism as a facet of the Qur'anic concept of stewardship, expressed by the Arabic term *khalifa*. The following verses are cited: "I am setting on the Earth a viceregent (*khalifa*)" (Qur'an 2:30), and "It is He who has made you his viceregent on Earth" (Qur'an 6:165). Also, a *hadith* is cited which states that "Verily, this world is sweet and appealing, and Allah placed you as viceregents therein; He will see what you do."

The Qur'anic concept of *tawhid* (unity) has historically been interpreted by Muslim writers mainly in terms of the oneness of God (in contradistinction to polytheism), but some contemporary Islamic environmentalists have preferred to see *tawhid* as meaning "all-inclusive." It has been suggested that Ibn 'Arabi's idea of *wahdat al-wujud*, or "unity of being" can be understood in environmentalist terms. Ibn 'Arabi, however, has always been a highly controversial figure for Muslims, since many have accused him of holding pantheist or monist views incompatible with Islam's radical monotheism.

In support of the more inclusive interpretation of *tawhid*, a verse (Qur'an 17:44) is often cited which states that all creation praises God, even if this praise is not expressed in human language. Another verse (Qur'an 6:38) states that "There is not an animal in the Earth, nor a flying creature on two wings, but they are peoples like unto you." There would seem to be here a basis for tempering the hierarchical notion of stewardship implied in the concept of *khalifa*. The Qur'an also describes Islam as the religion of *fitra*, "the very nature of things." By extension, some contemporary thinkers have reasoned that a genuinely Islamic lifestyle will "naturally" be environmentally sensitive.

Traditional accounts of the deeds and sayings of Muhammad, which together with the Qur'an have formed the basis for Islamic law, emphasize compassion toward animals. Muhammad is believed to have said, "If you kill, kill well, and if you slaughter, slaughter well. Let each of you sharpen his blade and let him spare suffering to the animal he slaughters;" also, "For [charity shown to] each creature which has a wet heart (i.e., is alive), there is a reward." Muslims are urged to respect plant life as well, as in the prophetic saying, "Some trees are as blessed as the Muslim himself, especially the palm."

The Qur'an contains judgment against those who despoil the Earth (Qur'an 2:205): "And when he turns away [from thee] his effort in the land is to make mischief

therein and to destroy the crops and the cattle; and Allah loveth not mischief"; and (Qur'an 7:85) "Do no mischief on the Earth after it has been set in order." Wastefulness and excess consumption are likewise condemned (Qur'an 7:31): "O Children of Adam! Look to your adornment at every place of worship, and eat and drink, but be not wasteful. Lo! He [Allah] loveth not the wasteful." The Qur'an repeatedly calls for maintaining balance in all things (Qur'an 13:8, 15:21, 25:2, and elsewhere). Certain *hadiths* seem particularly relevant to contemporary issues of sustainability, such as, "Live in this world as if you will live in it forever, and live for the next world as if you will die tomorrow," and, "When doomsday comes if someone has a palm shoot in his hand, then he should plant it."

Direct application of these injunctions to contemporary environmental problems is a matter for interpretation by analogy (*qiyas*). Contemporary Muslim jurist Mustafa Abu-Sway has argued that *hadith* reports which enjoin Muslims from relieving themselves on public pathways or into water sources can be understood "to prevent pollution in the language of today." Since we now know that discharging toxic chemicals and waste into the water supply is harmful to human health, Abu-Sway reasons that, "by analogy, from the perspective of the *shari'a*, this is prohibited" (lecture at Belfast mosque, February 1998, published online at <<http://homepages.iol.ie/~afifi/Articles/environment.htm>>).

To date, Islam has not figured prominently in contemporary discussions on religion and the environment. For the most part contemporary Muslim writers on the environment have characterized environmental degradation as merely a symptom of social injustice. The problem is not, it is argued, that humans as a species are destroying the balance of nature, but rather that *some* humans are taking more than their share. If, in accordance with the Qur'anic prohibition of interest-taking (*riba*), the interest-based global banking system is eliminated, then there will be no more environmentally destructive development projects, and there will be plenty of resources for all. Overpopulation is usually dismissed as a non-issue. The problem is stated to be the restriction of movement; if visa restrictions are eliminated, then people will simply migrate from overpopulated areas to "underpopulated" ones.

In recent times global initiatives on birth control and women's reproductive rights have been most strongly opposed in Muslim countries. Such efforts are frequently met with accusations that "the West is trying to limit the number of Muslims." Warnings of starvation and deprivation from overpopulation generally elicit the response that "God will provide," which draws its support from the Qur'anic verse (Qur'an 11:6) which reads, "There is no beast upon the Earth for which Allah does not provide."

Yet unlike Roman Catholicism, in Islam there are no inherent barriers to practicing contraception. The

medieval theologian Abu Hamid Muhammad Ghazali (1058–1111), who has been called “the second greatest Muslim after Muhammad” and whose writings remain highly influential throughout the Muslim world today, argues in his book *The Proper Conduct of Marriage (Kitab adab al-nikah)* that birth control in the form of coitus interruptus (*'azl*) is permitted in Islam. He suggests, furthermore, that “The fear of great hardship as a result of having too many children . . . is also not forbidden, since freedom from hardship is an aid to religious devotion.” In response to the “God will provide” argument, Ghazali comments that “to examine consequences . . . while perhaps at odds with the attitude of trust in Providence, cannot be called forbidden” (Ghazali 1998: 79).

Despite these arguments, many Muslims still see arguments against having more children than one can afford as being symptomatic of unbelief (*kufri*), which to Muslims is quite a serious charge. Today, Iran appears to be the only Muslim country where an official policy of birth control and birth-rate reduction is backed up with Islamic rhetoric.

The traditional Muslim response to doomsday scenarios is that of *tawakkul*, or trust in God (Qur'an 5:23, 14:11–12, 65:3, 25:58, 26:217–218). This tendency, which is often perceived by Westerners as fatalism, recalls a *hadith* in which a companion of Muhammad neglected to tie up his camel, and the camel wandered off and was lost. The owner complained of his loss to the Prophet, saying, “I trusted in God, but my camel is gone.” Muhammad replied, “First tie up your camel, then trust in God.” In counter-balance to the familiar refrain of *tawakkul*, some Islamic environmentalists have, in the spirit of Ghazali, posited the concept of *'aql*, or rational intelligence, which according to Islam is a gift from God, given for a purpose (Qur'an 39:9). There would appear to be nothing un-Islamic about suggesting that the gift of *'aql* has applications in recognizing a crisis and finding ways to avert impending disaster.

Nevertheless, among Muslim ethicists today there is far greater interest in human-centered issues of justice than in the biosphere as an integral whole. This would seem to bear some similarity to attitudes in the West, which is not surprising given Islam's common heritage with Judaism and Christianity. Islam holds that the world is a passing phenomenon, created to serve God's purpose, which will cease to be once that purpose has been fulfilled. Islam likewise emphasizes the relationship between humans and God above all else, and has by comparison little to say about the importance of our myriad fellow creatures. Whether the “true essence” of Islam is pro-environment or not, in practice throughout most of its history Muslim theologians, philosophers, and lay-persons have been focused almost exclusively on the relationship between Allah and humanity.

Given the importance of the petroleum industry and the

widespread pursuit of materialistic, consumption-oriented lifestyles in numerous Muslim-majority countries, would appear that Muslims must now share with Christians and others some of the blame for the present and rapidly deteriorating state of environmental crisis. Some of the most severe environmental problems in the world today are found in countries where the majority of inhabitants are Muslim. Even accepting a degree of outside responsibility, these problems would clearly be less pronounced if large numbers of Muslims were shaping their lifestyles according to an interpretation of Islam which strongly emphasized *khalifa* as applied to the natural environment. The reality is that most are not, and this includes governments for whom development and economic growth are the top priority.

If Islamic sources do offer models for increased environmental responsibility among Muslims, the urgency of the environmental crisis implies a need to assess whether and to what degree the latent potential for Islamic models of stewardship (*khalifa*) is currently being realized anywhere in the Muslim world today. A possible starting point for this inquiry would be to analyze current environmental policy in countries where Islam is claimed as a basis for legislation by the government in power. The Kingdom of Saudi Arabia, The Islamic Republic of Pakistan, and the Islamic Republic of Iran are three countries that currently make this claim.

In 1983 the government of Saudi Arabia commissioned a group of Islamic scholars at the University of Jeddah to formulate an Islamic policy on the environment. A short paper was prepared and published in English, French and Arabic by the IUCN in Switzerland, but this paper has not been widely circulated or served as a basis for any government policy. Muslim environmentalists who have worked for Saudi government agencies have complained that environmental initiatives are not being adequately implemented due to lack of official interest.

The government of Pakistan, which began to adopt an Islamist platform in 1978, created a National Conservation Strategy Unit (NCS) in 1992 within the Ministry of Environment, Local Government and Rural Development. There are also several environmentalist NGOs active in Pakistan which have been striving to influence government policy toward the environment, including the Sustainable Development Policy Institute (SDPI) and a national branch of the IUCN, which together formulated the Pakistan Environment Programme (PEP) in 1994. These organizations have achieved some successes in bringing about environmental legislation in Pakistan, such as the Environmental Protection Act of 1997. However, specifically Islamic rhetoric has not thus far been part of their approach. Only as recently as 1998 did the government of Northwest Frontier Province begin to envision an “*ulema* [religious scholars] project” as part of the Sarhad Provincial Conservation Strategy (SPCS). This

initiative, in which religious scholars were urged to seek out and implement environmental teaching in Islamic sources, did not meet with success, as most of the scholars involved did not see the environment as a primary concern. In Pakistan, as indeed in many other Muslim countries, environmentalism is often seen as a "Western" ideology and thus dismissed if not actively opposed.

Developments in the Islamic Republic of Iran may offer the strongest evidence of an applied Islamic environmental ethic in the world today. Since the country's revolution of 1978–1979 which ousted the repressive, U.S.-backed Pahlavi monarchy, Iran has been led by an avowedly Islamist government whose legitimacy depends on its claims to be working toward an Islamic state. As such, Iran's government has had to face the hard realities of reconciling Islamic principles with the exigencies of contemporary statecraft. Among the most pressing problems that have vexed Iran's revolutionary government – subsequent to its eight-year war with Iraq in the 1980s – are pollution, environmental degradation, and overpopulation. In attempting to address these issues through Islamic discourse, Iranian Islamists have perhaps gone further than any of the world's Muslims today in deriving and articulating an Islamic environmental ethic that does not merely revert to pre-modern models, but rather expresses itself in terms of modern realities. Nevertheless, in Iran as elsewhere in the developing world environmental protection has taken a back seat to the exigencies of rapid industrialization and development, and environmental degradation there remains severe.

For many Muslims – as indeed for members of most religious traditions – the practical and active relationship between religion and the environmental crisis is not immediately obvious. Even so, some Muslims, recognizing that the environmental crisis is in some sense a spiritual issue, have begun to illuminate that connection through writing, activism, and policy making.

Richard C. Foltz

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See also: Gardens in Islam; Ibn Al-cArabi, Shaykh Muhyiddin; Islam, Animals, and Vegetarianism; Islam and Eco-Justice; Islam and Environmental Ethics; Islam and Environmentalism in Iran; Islam and Post-Anthropocentrism; Islamic Basis for Environmental Protection; Islamic Law; Islam on Man and Nature (and adjacent, *Hadith* and *Shari'a* on Man and Nature); Izzi Dien, Mawil Y.; Muhammad, The Prophet of Islam; Nasr, Seyyed Hossein; Nursi, Said; Pure Brethren; The Qur'an; Rumî, Jalaluddin; Sufism; Tawhid (Oneness of God).

SP Islam and Eco-Justice

Protecting the environment and all God's creation for Muslims is a duty and not a choice. This duty comes from its *Tawhid* (Unity) paradigm. Before addressing Islam's view of the environment, it is useful to clarify the sources of the Islamic tradition. Most Muslims would agree that the sources of Islam are the following: the Qur'an or the Holy Book which Muslims believe to be God's Word transmitted through the Angel Gabriel to the Prophet Muhammad; *Sunnah* or the Prophet's traditions; *hadith* or the oral sayings attributed to the Prophet Muhammad; *Fiqh* (Jurisprudence) or *Madahib* (Schools of Law); and the *Shari'ah* (paths of law). These sources are not considered to be of equal weight. Most Muslims regard the Qur'an as the actual speech of God revealed through the angel Gabriel and it is the most authoritative source of normative Islam.

Tawhid Principle and the Environment

To understand the place of protecting nature one has to understand the various levels of the *Tawhid* principle in Islam. The first level of *Tawhid* is one that focuses on the oneness of the divine, *Allah*. The Qur'an says: Say: "He is Allah, the One and Only. *Allah*, the Eternal, Absolute; He begetteth not, nor is He begotten; and there is none unto Him" (112:1–4). The Qur'an clearly states: "There is no God but He, the Creator of all things" (6:102). This Oneness of *Allah* frames the understanding of nature. *Tawhid* links nature to the divine, but does not make it divine. Nature stands as a sign of God Almighty's creation and must be protected for that reason. Many verses in the Qur'an speak of respecting and reflecting on God's glory in His creations

(50:6, 21:30, 13:2, 6:73). One verse clearly states this relationship between God the Creator and the creation: "The seven heavens and the Earth, and all beings therein, Declare His glory: There is not a thing but celebrates His praise" (33: 72). To attribute sacredness to nature is to associate other beings with God and that is against *Tawhid* and the Oneness of God (*shirk*).

The duality of the Creator and created renders the latter in Islam (e.g., nature, animals, humans and other creatures) a unified class of God's creation. This is the second level of *Tawhid*/Unity. The Prophet in regard to God's creation said, "all creatures are God's dependents and the most beloved to God among them is the one that does good to God's dependents." These dependents, though diverse, have five characteristics in common. First, all creation is a reflection of God's sacredness, glory and power. The Qur'anic verse notes about such creation, "Whithersoever you turn there is the Face of God" (11:115). Second, God's creation is orderly, has purpose and function. The Qur'anic verses say, "And the Earth we have spread out; set therein mountains firm and immovable; and produced therein all kinds of things in due balance" (15:19); "And look for his Creation for any discrepancy! And look again! Do you find any gap in its system? Look again! Your sight, having found none, will return to you humbled" (67:3-4).

Third, the created world is actualized to worship and obey God. Hence, the Qur'anic verse states, "See thou not that to Allah bow down in worship all things that are in the heavens and Earth, the sun, the moon, the stars; the hills, the trees, the animals; and a great number among humankind" (22:18).

Fourth, the created have all been created from the same element: water. The Qur'anic verse states, "We made from water every living thing" (12:30) and continues in another verse by stating: "And God has created every animal from water; of them there are some that creep on their bellies; some that walk on two legs; and some that walk on four . . . It is he who has created humans from water" (24:45).

Fifth, the unity of God's creation as a category is also exemplified in Islam in terms of the social structure. The Qur'an states that all God created he created in communities by stating, "There is not an animal (that lives) on Earth. Nor a being that flies on its wings, but (forms a part) of a community like you" (6:38).

Tawhid views only God, the Creator, as having the special quality of independence, while the created are interdependent on each other and dependent on God. In this relationship of interdependence among the created, Islam places the keeping of the Earth and heavens under the hands of humans, as the *Khalifah* (viceregents) on Earth. The Qur'anic verse states, "I am setting on the Earth a viceregent" (2:30). The *Khalifah* is a manager not a proprietor, a keeper for all generations. The Qur'anic verse (2:22) states, "Who has made the Earth your couch and the

heavens your canopy and sent rains from the heavens, and brought forth with fruits for your sustenance, then set not up rivals unto Allah when you know," clearly ends with a plural "you", carrying the message that the universe is not for one generation but for every generation past, present and future.

Humans were given the responsibility for managing the Earth according to the Qur'an (33:72) because the Heavens, the Earth and the Hills refused to shoulder the responsibility out of fear, but humans "assumed it, Lo they are tyrants and fools. For these reasons the universe is given to humans as a 'trust', [*ammanah*] which they accepted when they bore witness to God in their covenant of *Tawhid*, *there is no God but Allah*." According to the Qur'an this covenant was renewed throughout the years (7: 65, 69, 87, 10:73, 11:56, 61) until it reached Muslims in verses such as "Generations before you we destroyed when they did wrong" (10:13); "Then we made you heirs in the land after them to see how ye would behave" (10:14).

The Moral Burdens/Dilemma of Human Viceregency

The role of humans as *Khalifah*, viceregent, on Earth is to better it and improve it and not to spread evil and destruction. The Qur'an is full of injunctions concerning such behaviors and states clearly that this responsibility of improving the Earth will be checked by God to see how it has been accomplished, "And follow not the bidding of those who are extravagant" (26:152); "O my people! Serve Allah, and fear the Last Day: nor commit evil on the Earth, with intent to do mischief" (29:36); "But they strive to make mischief on Earth and Allah loveth not those who do mischief" (5:64).

The creation of humans on Earth in Islam is neither a "greater creation" (40:57), nor is it a punitive fall from the Heavens (2:35). The creation of humans was a fulfillment of the covenant to be custodians of nature. Faruqi emphasizes this protection of Earth as human destiny (purpose) to show their moral devotional abilities. Haq notes,

there is a due measure (*qadr*) to things, and a balance (*mizan*) in the cosmos, and humanity is transcendently committed not to disturb or violate this *qadr* and *mizan*; indeed, the fulfillment of this commitment is the fundamental moral imperative of humanity. (2001: 3)

It is this role of *Khalifah* that produces several moral dilemmas for humans. The first dilemma lies in the dread of "corrupting the Earth." The Qur'anic verse says: "Behold God said to the angels I will create a viceregent on Earth. They said will You place one who will make mischief and shed blood? While we celebrate your praises and glorify your holiness, He said, I know what you know not" (2:30).

Numerous Qur'anic verses repeat this question about whether humans are capable of protecting this Earth from corruption. Hence we read: "If any do good, good will accrue to them therefrom; and they will be secure from the terror of the Doom. And if they do evil, their faces will be thrown headlong into the Fire" (27:88–89).

This dilemma of not corrupting the Earth is harder to resolve because Islam is not an ecstatic religion commanding detachment from worldly goods. Muslims are left with the duty to enjoy and use the bounties of the Earth. Humans in Islam have a dual relationship with nature/Earth/universe. On the one hand they are nature's manager, but they are also its user. The Qur'anic verse notes, "Do you not see that Allah has subjected to your (use) all things on the heavens and on Earth, and has made his bounties flow to you in exceeding measure, both seen and unseen" (31:20); "It is He who made the Earth manageable for you, so traverse ye through its tracts and enjoy of the sustenance which he furnishes" (67:15).

Islam has a clear view that encourages the use of the bounties of Earth, and the engagement in other human pleasures. Islam does not tolerate abstinence, hence the absence of priests and nuns in the mainstream religious hierarchy.

There lies the dilemma. The subjugation of Earth to humans is always attached to a moral dimension of obedience and the fulfillment of the covenant to God. The Qur'an states: "He has made subject to you the night and the day, the sun and the moon and the stars – They are in subjection by His command: Surely, in this are signs for those who reflect" (16:12–13). This dual role of the *Khalifah*, viceregent, creature of God and user of Earth creates the moral burden/the test for Muslims. For Muslims the issue of maintaining the equilibrium between having been charged with managing the Earth and bettering it, and at the same time using its bounties for their fulfillment, is one of the important tests in reaching the Gardens of Heaven.

Paths to Resolving the Moral Dilemma

Islam did not leave its human adherents, the *Khalifas*, with an impossible task to perform as custodians of the Earth. At least three clear paths are recommended to fulfill the role well and eventually go to Heaven. These include justice, action and balanced use. Haq (2001:9) argues that Islam "promulgates what one can call a cosmology of justice" to deal with the dilemma of protecting and using the Earth. The Qur'an clearly addresses issues relating to the dignity of the disabled (80:1–9); the rights of the orphans (93 entire; 89:17–18); honesty in exchange and barter (83:1–13); condemnation of greed and hoarding of wealth (100:6–11); feeding the poor (89:17–23); just interaction (11: 85); abstention from usury (2:161); distributive justice through taxation, *zakat*, (2:267); just leadership (88:22–21, 18:29, 4:58, 5:8, 16:90, 42:15, 38, 49:9, 13);

and respecting differences as God's will (10:99, 99:18). The necessity for justice, of justice that attends to the vulnerable and that speaks to the powerful, is central in the Islamic vision. This message is clear in the Qur'anic injunction: "God intends no injustice to any of His creatures" (3:108–109). It is through this cosmology of justice that humans can fulfill their destiny as custodians of the Earth.

The second path for humans to follow in their journey as *Khalifas* of God on Earth is that of action. Some Muslims argue that the failure of humans to fulfill their eternal destiny is the will of God, it is predestined, and human action is of no consequence. Other believers disagree with this view of predestination in Islam and there has been a long historic debate within Islamic thought on human will and action. It is clear, however, from many Qur'anic verses and Prophetic traditions that action has a role in human destiny. Hence, in a *hadith* we hear the Prophet saying "Any one who witnesses evil should remonstrate upon it by his hand, his mouth or his heart; the last is the weakest of faith" (Sahih Al-Bukahri 1966: 1998). This action that humans are enjoined to take is not only one that negates evil, but is also one that involves good deeds. As such the Qur'an states, "let there be among you a group of people who order good, *al-maruf*, and prohibit evil, *al-munkar*" (3:104). To many readers the usage of this verse in relation to the environment is strange. However, in the golden ages of Islam the term *al-maruf* applied to all God's creation. Interpretations of the meaning of Qur'anic suras, and especially the application of God's word to contemporary conditions (*tafsir*), have varied considerably in the Islamic world. These good deeds are not differentiated between actions toward humans or other creatures of God. Within the perspective of *Tawhid* it is the good deeds of people that please the creator. As such a saying of the Prophet notes, "A good deed done to a beast is as good as doing good to a human being; while an act of cruelty to a beast is as bad as an act of cruelty to a human being" (Sahih Al-Bukahri 1966: 1027).

A third path that humans can follow in their role as viceregents on Earth is that of balance in behavior and use. The concept of balanced use is based on three principles. The middle path or balance is clearly stated in the Qur'an, "We have made you a community justly balanced" (2:143). The following story about the Prophet also indicates the importance of balance. Three believers came to the home of the Prophet to declare their piety and belief in and love of God. One of the believers said, "I want to show the extent of my belief in God by abstaining from food." The second one said, "I will show my belief in God by not sleeping nights." The third one said, "I will show my belief in God by not being intimate with my wife." The Prophet stopped them and recommended, "God does not tolerate the extremes of abstention and says that moderation is the best path to piety" (Sahih Al-Bukahri 1966: 484).

Population in Islamic Ecological Thought

Scientists have argued that overpopulation is a major contributing factor to environmental depletion. In the case of Islam the argument remains anchored in simplistic debates about population and reproduction (i.e., of family planning and abortion) as though these are matters connected only to teaching women about ways to avoid pregnancy. Although Islam is a pronatal religion, various Qur'anic verses favoring family planning outcomes were stressed in many Muslim countries in the 1960s. For example:

4:9 – Let those [disposing of an estate] have the same fear in their minds as they would have for their own if they had left a helpless family behind: Let them fear Allah, and speak words of appropriate [comfort].

8:28 – And know ye that your possessions and your progeny are but a trial; and that it is Allah with Whom lies your highest reward.

24:21 – O ye who believe! Follow not Satan's footsteps; if any will follow the footsteps of Satan, he will [but] command what is shameful and wrong; and were it not for the grace and mercy of Allah on you, not one of you would ever have been pure; but Allah doth purify whom He pleases; and Allah is One Who hears and knows [all things].

Still population growth rates in Muslim countries remain among the highest in the world. The root of the problem of population growth for many Muslim countries lies in the marginalized conditions of women. In most Muslim countries the patriarchal and misogynist conditions of local cultures prevail and debase women. Post-colonial policies, introduction of non-productive technologies (e.g., cellular telephones), focus on credentialing rather than education, and unequivocal focus on consumption rather than production are all cultural factors that have contributed to the taking on of various forms of debasing women that in many ways are in direct opposition to early Islamic history and the holy texts. It is important to remember that Islam, at its core path, offers women equity with men by stating,

Oh humankind! We created you from a single soul, male and female, and *made you into nations and tribes*, so that you may come to know one another. Truly, the most honored of you in God's sight is the greatest of you in piety (49:13). [my emphasis]

Islam sees Muslim women as part and parcel of the religious message. They are included in the revelations. They have privileges and responsibilities. The Qur'an

dictates that the penalties imposed on women are no less than those imposed on men (5:41, 24:2):

5:41 – O Messenger! let not those grieve thee, who race each other into unbelief: [whether it be] among those who say "We believe" with their lips but whose hearts have no faith; or it be among the Jews, – men who will listen to any lie – will listen even to others who have never so much as come to thee. They change the words from their (right) times and places: they say, "If ye are given this, take it, but if not, beware!" If any one's trial is intended by Allah, thou hast no authority in the least for him against Allah. For such – It is not Allah's will to purify their hearts. For them there is disgrace in this world, and in the Hereafter a heavy punishment.

24:2 – The woman and the man guilty of adultery or fornication – flog each of them with a hundred stripes: Let not compassion move you in their case, in a matter prescribed by Allah, if ye believe in Allah and the Last Day: and let a party of the Believers witness their punishment.

Islam does not prescribe the oppression of women as some interpretations suggest. Actually an accurate look at the Qur'anic directives and legal rights shows that polygamy is regulated in such a way that it could be very difficult to justify marrying more than one woman most of the time. Moreover, the veiling of Muslim women is not so clearly enforced as one is commonly led to believe from the images in Iran, Afghanistan and other Muslim countries.

The slowing of the population growth rates in Muslim countries and communities, and hence in the attendant ecological crisis, lies in the issues of social justice for women. Such forms of social justice as discussed above are very much at the core of the Qur'anic message and only require retrieval by those Muslims who want to do good deeds and avert corruption on Earth.

Summary and Conclusion

The Qur'an offers a blueprint for saving the environment, Muslims being called upon to strive to protect the latter as part of their devotional duties. With more than thirty wars devastating the Muslim world, the inexcusably violent responses of suicide bombing and terrorist attacks on non-combatants, the glaring difference between the rich and the poor in Islamic communities, and the extraction of oil with minimum controls on toxic emissions and hazards make the prevailing conditions today far from desirable.

Islam, however, is very clear and has an unequivocal response to the depletion (corruption) of the environment. God created nature in an orderly manner. This nature is given to humans as a trust (*ammanah*). Humans are the

Khalifas, managers of this *ammanah* and not its owners. To manage this trust, humans need to follow the social justice ethic of the Qur'an, actively negate evil and do good deeds; and utilize the resources of Earth in a balanced manner. The protection of the Earth is the responsibility of all Muslims, and on account of this responsibility every Muslim and every community claiming the faith ought to be more engaged in protecting nature and the environment.

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- See also: Abortion; Breeding and Contraception; Environmental Ethics; Islam and Environmental Ethics; Islam and Post-Anthropocentrism; Islam on Man and Nature; Islamic Basis for Environmental Protection; Islamic Law; Population and Consumption – Contemporary Religious Responses; Tawhid (Oneness of God).

Islam and Environmental Ethics

The growing literature on Islam and nature, ecology, and the environment includes many writings that deal with

ethics. Some work discusses how Islamic ethics bear upon environmental issues. Other studies proceed in the opposite direction, asking how modern environmental ethics intersect with Muslim faith and practice. Still other works strive for a dialogue among different religious and philosophical perspectives on environmental ethics. Although the late twentieth century witnessed a welcome increase in crosscultural communication on religion and environmental ethics, it was still the case that few works on environmental ethics gave close attention to Muslim contributions.

As Islam provides a comprehensive guide for human conduct, it might be thought that all writing about Islam and nature is, in some way, about environmental ethics. Although correct in a broad sense, that view does not shed light on specific environmental norms or on different ways of thinking about ethical obligations within the natural environments of different Muslim societies and traditions. Works on Islamic environmental ethics range widely across fields of human–environment relations from philosophy to ecology, landscape architecture, and geography. They link and sometimes conflate the closely related fields of ethics (*ahklaq*), law (*fiqh*), and justice (*'adl*) – a tendency that seems increasingly challenging as each of these fields develops its own specialized body of work on environmental problems.

One useful approach begins with the common doctrinal foundations for Muslim discourse on environmental ethics, which shed light on environmental norms in the Qur'an, *sunnah*, and *fiqh*, after which the historical contributions of groups like the *Ikhwan al-Safa* (Sincere Brethren of Purity; tenth–eleventh centuries), Sufi mystics such as Farid ud-Din Attar (d. 1220), and theologians from al-Ghazzali (d. 1111) to the present may be considered.

The term "environmental ethics" does not appear in revealed or prophetic sources of the Abrahamic religions. Scores of words and phrases in the Qur'an and traditions (i.e., the *hadiths*, which are authenticated sayings of the Prophet Muhammad or about him by his companions), denote aspects of the natural world and connote ethical obligations to them. The primary ethical relationship, however, is between the believer and Allah. The duties toward this world (*dunya*) – its airs, waters, creatures, and places – are part and parcel of fulfilling one's primary obligations to Allah, as are social ethics. Thus, much depends upon how one understands the relation between Allah and his creation, as a unified whole and in all of its myriad parts. To put it in overly simplified terms, an understanding of Allah as immanent in the creation can lead toward the mystical environmental ethics of Sufi theologians and orders from ninth-century Arabia to the modern U.S., which are ethics of love (Ernst 1997). An understanding of Allah's transcendent relationship with the creation can lead either toward a view of environmental ethics as one of several branches of applied moral

philosophy or toward ascetic philosophies that do little harm to but have little intrinsic interest in the natural environment, which are ethics of care (Izzi Deen 2000). But no simple dualism of this sort can sustain itself in the unifying context of Islam, as evidenced, for example, by the passionate asceticism of Majnun in the desert (as compiled by the poet Nizami in the twelfth century:

Two gazelles had been caught in snares, and a hunter was just about to kill the poor creatures with his dagger. "Let these animals go free!" shouted Majnun, "I am your guest and you can't refuse my request. Remove the nooses from their feet! Is there not room enough in this world for all creatures? What have these two done that you are bent on killing them? Or are you a wolf, not a human being, that you want to take the burden of such a sin upon yourself? Look how beautiful they are! Are their eyes not like those of the beloved? Does their sight not remind you of spring?" Never before had the hunter heard anything like this . . . he replied, "I have heard what you said. But look, I am poor, otherwise I would gladly obey you . . ." Without a word Majnun jumped out of his saddle, and handed the reins of his horse to the hunter who, well content with the exchange, mounted and rode away, leaving Majnun alone with the two gazelles (Nizami 1978: 85–6).

Thus, rather than begin with a partial perspective on the creation or the manifold relations that ensue from it (e.g., the sense in which human beings are viceregents [*khalifah*] in the creation, have responsibility for other creatures, or have the free will to obey or not), it is useful to survey a range of ethical perspectives, following the broad categories of Islamic ethics delineated by Majid Fakhry (1991).

Scriptural Morality – ethics revealed in the Qur'an and traditions (*hadith*) of the Prophet Muhammad; and as discerned in the fields of Qur'an interpretation and exegesis (*tafseer*), and in the science of the transmission of the *hadith* (*mustalah al-Hadith* and *rijal al-Hadith*).

Theological Ethics – ranging from rationalist theories of moral duties, including duties to fellow creatures, to voluntarist theories of human will in, and on, the world.

Philosophical Ethics – built upon antecedent Greek ethics, ranging from Socratic to Aristotelian, neo-Platonic, and neo-Pythagorean arguments.

Religious Ethics – situate ethics within the psychological and social contexts of religious life. Fakhry (1991) discusses ethical traditions, rules of conduct (*adab*), and religious traits.

Rather than recapitulate Fakhry's analysis, which offers a well-organized account of early and medieval Islamic ethics in categories meaningful to philosophers, but lacks close parallels with contemporary writing on Islamic environmental ethics, it is useful to survey how major bodies of contemporary environmental writing draw upon, extend, or depart from these four categories of Islamic ethics. We begin with a combination of scriptural and religious approaches, which illuminates the major structures of Islamic moral philosophy, proceed to thematic investigations that invite more theological and philosophical approaches, and conclude with the challenges of synthesis and an overarching view of the field as explored by Seyyed Hossein Nasr.

The source of all ethical approaches to environmental issues – from conservation to treatment of animals, reclamation [*ihya*], purification, protected areas, and pious endowments – combines scriptural and religious approaches in a well-structured way that parallels Islamic law (e.g., Hamed 1993):

1. *The Qur'an* – is the first and most authoritative source on any ethical question. Whatever the Qur'an does not directly or fully address may be illuminated by the:

2. *Sunnah* – which is the example of the life of the Prophet Muhammad, including the *hadith*. Whatever is not fully addressed by the *Sunnah* may be illuminated by:

3. *Ijma'* – the consensus of the community of believers (*ummah*). The authority of *ijma'* rests upon the Prophet's saying that, "My community will not agree on an error." Some Muslim environmental laws (*fiqh*) are the product of *ijma'*, as are some aspects of major schools of law (e.g., Hanbalite, Malikite, Asharite, and Safi'ite schools of Sunni law; and *Imamite*, *Ismailite*, *Zaidite* schools of Shi'a law). Thus, we would expect some strands of environmental ethics to vary across geographic, socio-economic, and cultural communities. In a related vein, some Muslim environmentalists have emphasized the role of institutions (*hisbah*) in formulating and advancing environmental policy. If *ijma'* is inconclusive one looks to:

4. *Qiyas* – the logic of analogy with comparable ethical cases and situations. The rules and limits of analogy have been rigorously developed, for example, to address the rights of humans and animals to water (Wescoat 1995).

For some groups, the scriptural-religious approach stops with *qiyas*, while for others it continues on to less codified sources of custom (*urf*), conduct (*adab*), and individual discernment (*ijtihad*).

The scriptural-religious approach lends itself to analysis of specific environmental ethics issues because it follows a clear logical progression, and has long-established albeit contested principles and tools of inquiry (e.g., concordances and compilations for Qur'an interpretation, *hadith* science, *fiqh*, and local social knowledge of environmental norms and practices).

While many topics in environmental ethics are addressed with a scriptural-religious approach, some, if not most, topics require additional theological and philosophical inquiry when pursued in depth. These include the ethics of environmental topics such as the creation, signs in nature, and paradise eschatology. They also encompass human topics that have environmental dimensions such as viceregency on Earth, free will to conserve or consume, and obligations to mend damage (*islah*), avoid waste (*israf*), and prefer what is better (*istishan*) – to name just a few. To date, few detailed theological or philosophical treatises on these topics have drawn implications for, or made connections with, environmental ethics.

Instead, much Muslim environmental writing of the late twentieth century focuses on local substantive problems or international and crosscultural dialogues. A good example is the *Islamic Principles for the Conservation of the Natural Environment*, co-published by the Meteorology and Environmental Protection Administration (MEPA) of the Kingdom of Saudi Arabia and the International Union for the Conservation of Nature (IUCN) (Ba-Kader, et al., rev. edn, 1994; first published, 1983). After an introduction on “Islam’s Attitude toward the Universe, Natural Resources, and the Relation between Man and Nature,” the authors survey principles for protection of basic natural resources (air, water, land); protection of humans and the environment from toxics, polluting substances, noise, intoxicants, and natural hazards; and individual mandates, legislation, and institutions that support and enforce ethical teachings. Its ethical teachings are drawn almost exclusively from the Qur’an and *hadith*, and not from theological or philosophical studies or from commentaries on sacred texts.

Sponsorship of the *Islamic Principles* by the IUCN, and the document’s reference to World Health Organization publications, indicates an active engagement with international environmental discourse – as do the increasing number of chapters on Islam in edited books on environmental issues. An extended case of engagement is Izzi Deen’s (2000: 149–66) review of the United Nations *World Charter for the Protection of Nature*. Deen compares it with the *Islamic Principles for the Conservation of the Natural Environment*, which provides a Muslim perspective on each passage. Several recent doctoral dissertations explore ethical issues in urban design and landscape architecture in Muslim societies, pointing the way toward further development of the pragmatic thread in Islamic environmental ethics (e.g., Ba-Ubaid 1999).

In the field of Islamic ethics, Fakhry (1991) regards al-Ghazzali as providing a synthesis across scriptural, theological, and religious ethics (though his *Tahufat al-Falasifa*, “Incoherence of Philosophy,” indicates the extent of his synthesis). In environmental ethics three further lines of synthesis seem promising. First, extended studies are needed of the sort pioneered in Seyyad Hossein Nasr’s

An Introduction to Islamic Cosmological Doctrines, which undertook a close philosophical and theological comparison of ideas about nature by the Ikhwan al-Safa, al-Biruni, and Ibn Sina. A second line of synthesis should focus on linkages between historic philosophical contributions and the modern pragmatic work by environmental agencies and organizations (e.g., Izzi Deen 2000). Finally, to cite Nasr (1996) again, advancing beyond simple oppositions between Islamic principles and the consequences of Western humanism, and toward a theory and practice of sacred science, East and West may chart a path beyond the current situation.

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See also: Islam, Animals, and Vegetarianism; Islam and Eco-Justice; Islam and Environmental Ethics; Islamic Basis for Environmental Protection; Islamic Law; Nasr, Seyyed Hossein; Sufism.

Islam and Environmentalism in Iran

Iran possesses more biodiversity than any other country in Southwestern Asia. The country contains many of the world's major ecosystem types, from high mountains and deserts to semi-tropical forests and marine environments. Yet with rapid overpopulation, desertification, and the endangerment of many species, Iran's environmental crisis is as dramatic as anywhere in the world. Whether despite or because of the severity of Iran's environmental crisis, official statements on a range of issues connected with the environment sound strikingly progressive, especially when compared with other parts of the Muslim world.

Iran is probably the only country at present where Islam is claimed as a basis for environmental ethics at the official level. In 1996 the DOE (Department of the Environment) stated in a published paper,

the religious leaders in Iran have found the principles of environmental conservation compatible with the general guidelines of the holy religion of Islam. It is now the duty of environmentalists to encourage the Friday Prayer speakers to convey environmental messages to the public (*Islamic Republic of Iran Country Paper* 1996: 27).

The revolutionary government went so far as to assert its ideological commitment to environmental protection by including it in the 1979 constitution. Article 50 reads:

In the Islamic Republic protection of the natural environment, in which the present and future generations must lead an ever-improving community life, is a public obligation. Therefore all activities, economic or otherwise, which may

cause irreversible damage to the environment, are forbidden.

Iran's Department of the Environment, originally established in 1972, was reorganized under the new, Islamic government, in 1986. The DOE has a Provincial Directorate for each of Iran's 28 provinces. Its mission includes research on appropriate technology, a national biological survey, public education, and national regulation of air, water, urban development, biodiversity, waste disposal, noise pollution, and agricultural toxics. The principle of sustainable development as outlined at the Rio Earth Summit (Agenda 21) is stated to be the framework for Iranian legislation, and environmental impact statements are supposed to be a major consideration in all projects. Recently increased priority has been given to family planning, bringing women into conservation, and encouraging grassroots movements. The DOE is also responsible for administering Iran's seven national parks, four national nature monuments, twenty-four wildlife refuges, and forty-two protected areas. In a national strategy paper published in conjunction with the United Nations Development Program and the World Bank in 1994, the DOE called for 1) a land-use planning strategy based on integrated ecological and socio-economic issues rather than solely socio-economic ones, 2) promotion of NGOs and community participation, 3) provisions for the preparation of management plans for protected areas, 4) provisions for the formation of a "Green Corps" to reinforce the manpower needed for fulfillment of national strategies, and 5) a nine-point plan of action, incorporating details about the degree of sensitivity, sizes and relative cover of the country's protected areas as well as the types of destructive activities threatening those areas, and including a program to finance the proposed strategies. The Department has produced educational programs on the environment for television and radio, and publishes a scholarly journal, called *Mohit-e Zist (The Environment)* four times a year. In 1996 plans were announced for an Environmental University, at which "all aspects of the environmental sciences" will be taught and "the expertise needed in the field of the environment will be trained according to the needs of the country" (*Iran Country Paper* 1996: 27).

The Iranian delegation to the Kyoto conference on Climate Change in December 1997 was led by Vice President and Director of the DOE and the Environmental Protection Organization (EPO), former revolutionary spokeswoman Massumeh Ebtekar. Though the Vice President cited in her address Iran's successes in reforestation, control of desertification, and emissions regulations, she sided with other developing countries in arguing that

Before the actual materialization of promises made by industrialized countries, including technology

transfer and financial assistance, it seems unfair that developing countries should undertake considerations that could seriously hinder their pace of development and damage their fragile economies (Ebtekar, address to Kyoto International Conference on Climate Change, 1–10 December 1997).

Nevertheless, following the Montreal Protocol of 1987 Iran currently has the world's second-largest program (after China) for the phasing out of ozone-depleting chlorofluorocarbons (CFCs). Though Iran does not produce CFCs, it imports them, and the figure of five and a quarter billion tons imported in 1993 is to be reduced to zero by 2005.

Also in 1997, the DOE introduced a National Environment Plan of Action (NEPA), which was submitted to the Cabinet. A workshop at Tehran University in May 1999 brought members of the DOE together with academics and representatives from environmental NGOs, for the purpose of incorporating environmental policies into Iran's Third Development Plan.

Non-Government Organizations

Public awareness of Iran's environmental crisis seems to be on the rise, due in part no doubt to the increasing visibility of new environmental non-government organizations (ENGOS). As of late 2000 there were 149 registered and unregistered ENGOS in Iran.

For the most part NGOs are a recent phenomenon in Iran, and are desperately attempting to establish contacts with similar organizations worldwide. Like many such organizations, they are underfunded. While some have received contributions from foreign donors, most of their funding comes from private donations within Iran. Since they are dependent upon ongoing government authorization to function as independent entities, they tend to abstain from direct political involvement such as lobbying for environmental legislation. There are no Sierra Clubs or Natural Resource Defense Councils. Instead, most of Iran's environmentalist NGOs concentrate on raising public awareness of environmental issues, often through direct contact such as volunteers going door-to-door or taking inner-city children on field trips to the countryside.

The first registered environmental NGO in Iran was BoomIran, founded in 1980. In 1983 BoomIran's director, Farrokh Mostafi, traveled to Switzerland to muster support for opposition to drain the Anzali lagoon near Rasht on the Caspian coast. The World Wide Fund for Nature (WWF) pressured the Iranian government, and the project was abandoned. Mostafi himself was featured in a recent issue of *National Geographic*.

BoomIran, which currently counts some 250 members, publishes a monthly magazine, *Shekar o Tabi'at* (*Wildlife and Nature*), as well as a children's magazine and an encyclopedia of Iran's fauna. The organization maintains

a library, provides lecturers, and produces an educational television program. It has initiated a Pathfinders Program, which seeks to identify road and trail networks for use by hikers and travelers with regard to preserving the environment, and a program called Save Our Rivers, which seeks to identify and protect polluted rivers and determine sources of pollution. The organization recently established links with E-Law in the US, which aims to provide information and support on issues of international conservation law, liability for environmental damage, biodiversity legislation, and the effects on the environment of trade.

BoomIran is currently working to organize opposition to the proposed freeway project that would link Tehran with the Caspian coast, and to put together an environmental impact statement since the government has failed to do so. With six chapters now located around the country, BoomIran also has a birdwatching club that is currently monitoring eight endangered bird species in Iran, including the Siberian crane.

The Green Front of Iran (*Jabheh-ye Sabz-e Iran*), founded in 1989, is another environmental NGO that has become increasingly visible in recent years, with over two thousand members nationwide. Avowedly apolitical, the Green Front aims to increase public awareness of environmental concerns and to foster public participation in clean-up projects. The most extensive such project involved thirty-three sites over eight hundred kilometers along the Caspian seacoast on 27 and 28 August 1999, when over ten tons of garbage was picked up on beaches from Astara near the border of Azerbaijan in the west to the southeast Caspian port of Bandar-e Torkaman. An earlier afforestation trip organized by the Green Front in March 1998 was attended by President Khatami.

Siamak Moattari, founder of the Green Front, offers his own perspective on the oft-proposed tension between the environment and development. "We do not feel that tending to ecological issues is a luxury," he says; "it is a necessity." He points out that environmental degradation and poverty constitute a cycle.

Economic, social justice, and environmental issues must be viewed together. While it may be unrealistic to expect a forest-dweller with an empty stomach not to cut down a tree, we must realize that in the following years there will be no tree for his children to cut down.

Yet, "In Gilan we met individuals willing to lie in front of trucks carrying away lumber and even risk their lives in defense of those trees . . . These are people living in poverty." In Moattari's view, "individuals bring about environmental degradation not as a result of poverty, but as a result of ignorance or misinformation" (in Mokhtari 1998: 2). Despite its social justice agenda, the Green Front

is not explicitly Islamic; it has, however, established a committee that seeks out references to environmental stewardship in the Qur'an and *hadiths* (non-inspired traditions of the Prophet Mohammad), and sends them to religious leaders and organizations.

The Iranian Society of Environmentalists (IRSEN) is an organization founded by academics and scientists. It is part of the multinational Caspian Environment Programme (CEP), and studies among other things pollution point sources, wildlife, and aquatic systems in the Caspian region, with the aim of advising the government on environmental policy issues. More recently a related organization, The Iranian Association of Environmental Health, was established with a specific focus on health concerns. Both organizations have carried out various projects to monitor water, soil, and air pollution throughout Iran.

The major Iranian NGO concerned with wildlife is the Wildlife and Nature Conservancy Foundation. WNCF has undertaken an array of studies, ranging from wetlands assessments to drops in riverine fish populations, to problems of park management and the impacts of human population growth. It is also seeking to determine whether in fact the Caspian tiger and the Iranian cheetah are indeed extinct.

A group of mountaineers formed the Mountain Environment Protection Committee (Hefazat-e Mohit-e Kuhestan) in 1993. In Tehran especially, weekend family outings to the mountains, whether Darband above Tehran or the 18,400-foot Mt. Damavand a short drive to the east, are extremely popular. Unfortunately, 100,000 or more visitors per week are damaging the Alborz, leaving garbage behind them and disrupting the mountain ecology. The MEPC has been attempting to educate Iranians about the fragility of mountain environments, the need to pack out garbage and stay on trails to minimize erosion. According to Director Abdullah Astari, the government has failed to enforce existing laws that could protect the mountains from overuse.

All of the aforementioned NGOs are based in Tehran. One organization active outside the capital is Esfahan Green Message (Payam-e Sabz Esfahan). Originally founded by students at the University of Esfahan in 1994, EGM now counts five hundred members. Like the Tehran-based NGOs, EGM seeks to increase public awareness and participation in environmental issues through educational initiatives, formulate policies through consultation with specialists, and influence decision-makers through meetings and letter-writing campaigns. Other organizations spread throughout Iran's 28 provinces include the Kerman Earth Lovers, Zagros Friends of Nature, Fars Friends of the Environment, Khorasan Green Thought Group, the Green Defence Society of Mazandaran, the West Azerbaijan Association for Reconciliation with Nature, the Green Artists Association, and many others.

Women's Involvement

Public interest in environmental issues received a boost in the wake of the 1994 United Nations Conference on Women in Beijing, which was attended by some Iranian delegations. Mansoureh Shojai, a self-described eco-feminist formerly of Iran's National Library, credits the Beijing conference with dramatically raising Iran's level of public awareness on both women's and environmental issues.

Environmental action in Iran considerably predates 1994, however, as does women's involvement. As long ago as 1970, a group of rural women in the arid southern province of Yazd embarked on an anti-desertification planting project for which they received support from the Office of Natural Resources. That project continues today as part of a microcredit scheme underwritten by the Ministry of Construction Jihad and the ONR. It inspired the United Nations Development Program to film a documentary called *The Green Desert* which took first prize at the first Iranian International Environmental Film Festival held in Tehran in 1999. The Iran office of the UNDP, which has been functioning since 1965, devotes about half of its \$25 million annual budget to environmental projects.

At least three Tehran-based NGOs currently combine women's issues with environmental work. One is the Society of Women Against Environmental Pollution (*Jami'at-e Zanan Mobarezeh ba Aludegi-ye Mohit-e Zist*), whose aim is to raise awareness of environmental problems among Iranian women. Among their activities are the gathering of statistics on urban pollution, the publishing of informational articles and brochures for the general public, organizing seminars, and preparing educational materials for public schools. They have scored a number of notable successes, including getting the Ministry of Education to include the environment as a part of the public school curriculum.

A second organization, the Struggle for Survival Society (*Jami'at-e Talashgaran-e Baqa*) focuses on the poor, especially refugees, who suffer disproportionately from the effects of environmental degradation. A third group, the Children's Book Council of Iran, produces educational materials on the environment for children.

Mansoureh Shodjai, who has been active in children's environmental education programs, describes one technique she has found effective for engaging children with the natural environment, a technique she calls "nature concerts." This involves having children sit down in a natural area and simply listen for a half-hour or so to whatever they hear going on around them. Afterwards they are asked their impressions. "For example, if a child mentions having heard a running stream," says Shodjai, "we understand that this particular child has an attraction to water, and we work with that, teaching the child about water pollution and what causes it and how it can be

remedied. And so on for birds, wind, or whatever" (Shodjai, classroom visit, Columbia University, 1 May 2000).

ENGOS and the Government

The Iranian government under President Khatami has maintained a policy of encouraging the development of civil society, recognizing the important role of NGOs. The involvement of women and youth has been especially encouraged.

In 1998 representatives from several ENGOS met with the DOE and established the Environmental NGO Network. This has provided obvious advantages, including government recognition. On the other hand, the government's relation with ENGOS are still "guided by suspicion and a control mentality and agenda enacted through stifling administrative, regulatory procedures" (Namazi 2000: 11). The concept of NGOs is still unfamiliar to the Iranian public, and environmental NGOs, despite the flourishing of popular interest in environmental issues, face ongoing obstacles, both financial and political. According to Shadi Mokhtari,

There are few NGOs in Iran that can really be considered NGOs because they are mostly dependent on the government both substantively and financially ... Therefore, NGOs that served to hold state agencies accountable or protest the status quo were virtually non-existent (Shadi Mokhtari, personal communication, 15 November 1998).

And some critics argue that most of the Iranian government's expressed concern for the environment is mere rhetoric.

At a meeting in May 1999 Yusef Hojat, however, Deputy Director of Iran's Environmental Protection Organization acknowledged the Iranian government's shortcomings in addressing the environmental crisis. He went on to suggest that Iran's ENGOS were better situated to act than the government in many respects, and advocated increasing cooperative efforts with them.

This illustrates that Iran's ENGOS appear to have succeeded for the time being in remaining in the government's good graces, to the point where the government not only tolerates but encourages their activities in many areas. And at the very least, it may be remarked that strong rhetoric can be a significant first step in changing public attitudes as well as laying the groundwork for official policy.

In Iran today the government's stand on the environment, formally enshrined in the nation's constitution, as well as the energy and motivation of environmental NGOs and the rate at which public awareness of environmental issues is increasing, are all impressive. It may be that Iranians will have much to teach the rest of the developing

world about environmental protection, perhaps especially Islamic countries, and that Iran will even provide a model for the industrial nations who still bear most of the blame for the rapidly deteriorating state of the Earth's life-support systems.

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See also: Islam (various); Mountaineering; Rock Climbing; Sierra Club; United Nations' "Earth Summits".

Islam and Post-Anthropocentrism

Islamic theology tends to exalt the human species as the noblest of God's creatures (*ashrafal-makhlughat*), who are bestowed with divine "viceregency" (*khalifa*) over the Earth. What has emerged so far in the growing literature on Islamic eco-theology is at best a soft anthropocentrism that emphasizes humankind's moral obligations to nature and animals, without, however, relinquishing the hierarchical credo that forms the basis of Islam's anthropocentric cosmology.

The quest for a post-anthropocentric interpretation of Islam need not proceed by focusing on those aspects of the Qur'an and, to a lesser extent, the Prophetic Tradition (*hadith*), which directly or indirectly support anthropocentrism (e.g., "Seest thou not that by His command God has made subject to you all that is on the Earth?"). Rather, the challenge is to find a creative process of reinterpretation that can illuminate the Qur'anic system of inter-species relations in a less anthropocentric way.

A de-centering of humans in Islamic theology might proceed from applying analogical reasoning to the Qur'an's view of humans and other animals: "And there is no animal on the Earth nor bird that flies with its two wings but that they are communities like ourselves." This verse clearly grants nonhuman animals the right of co-habitation, since the Earth is "spread out" for "His creatures." Similarly, a proscription against animal abuse is seen in *hadiths* such as: "Do you wish to slaughter the animal twice: once by sharpening the blade in front of it and another time by cutting its throat?"

What the *hadiths* reveal, however, perhaps even more than the Qur'an, is not simply an Islamic reverence for animal life. The Prophetic commentary on the cruelty of animal slaughter, which takes the form of a "minimum damage" doctrine, is not easily reconciled with anti-dualist conceptions of a sacral unity of humans and nature. The organicist views of mainstream Islamic thought, particularly in recent attempts at "Islamic eco-theology," overextend the divine unity (*tauhid*) to a cosmological totalism, and in so doing ignore the inherently disruptive aspect of Islam's nature theology which would seem to preclude perfect harmony. The partial disharmony between humans and nature is actually the epiphany of the eternal present which illuminates the transcendent self-revelation of God, the sole owner of all things, the creator of "all worlds."

The earthly worlds of nature, animals, and humans, notwithstanding their ontological contingency, are fully anchored in the creative attributes of God's omnipotence and embody his eternal glorification. Islam's recognition of a living tension among these worlds is linked to an eschatological fulfillment of time in which prayer, as act of reconciliation between man and nature, plays a crucial role. Both prayer and fasting are humbling theological experiences that remind practicing Muslims of their divine origins in nature, their uncoupling and distance from both nature and celestial life, and the profound requirements to fulfill the promise of salvation. In Shi'ism, this is joined by an apocalyptic messianism that is open to the impulses of eco-justice and eco-eschatology. For example, in a post-anthropocentric Shi'ism, the motif of divine suffering, reflected in the principle of martyrdom (*shahadat*) as the linchpin of its liberation praxis, could assume a new meaning in the form of compassionate suffering for the sake (and preservation) of nature.

Islamic eschatology-as-apocalypticism provides yet another rich source for a post-anthropocentric epistemology, insofar as humans can foresee their destruction of the environment and, consequently, of their own species, and yet utilize this knowledge for self-restraint in accordance with the divine command (*amr*) for "measured" or "balanced" existence. The potential failure of humans in this duty is internally inscribed in the eschatological wisdom of Islam, yet this very failure could serve as another log in the furnace of post-anthropocentrism. In contrast to the classical Islamic ideal of the "perfect man" (*insan al-kamil*) who finds his perfection in his spiritual liberation from the confines of nature, a post-anthropocentric approach would focus on the limitations of humans in fulfilling the divine promise.

The approach to developing a post-anthropocentric Islam proposed here is based on a marginalist, or "bottom-up" re-prioritization of texts, centered on the twin agenda of deriving both a theology of the nonhuman and a new eco-eschatology. So far this remains a hypothetical undertaking, but one which could potentially be accomplished within an Islamic framework.

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- See also: Animals in the Bible and Qur'an; Biocentric Religion – A Call for; Islam, Animals, and Vegetarianism; Qur'an, The.

Islam, Animals, and Vegetarianism

Although Sufi saints such as the Suhrawardi Hamid al-din Nagori in medieval India, as well as other pious Sufis in North Africa, are known to have practiced vegetarianism, to date any serious discourse on the viability of an "Islamic" vegetarianism is absent. The Qur'an explicitly allows the eating of meat, as in verse 5:1 which reads,

O ye who believe! Fulfill your undertakings. The beast of cattle is made lawful unto you [for food] except that which is announced to you [herein],

game being unlawful when ye are on pilgrimage. Lo!
Allah ordaineth that which pleaseth him.

Medieval Islam's tensions with Buddhism (and, in India, Hinduism), seen as an idol-worshipping religion, historically provided a "guilt by association" argument against vegetarianism. The medieval legal scholar 'Iz al-Din b. 'Abd al-Salam (1181–1262), in his work *Qawa'id al-ahkam fi masalih al-anam*, ("The Foundations of Laws Benefiting the Human Race") states that

The unbeliever who prohibits the slaughtering of an animal [for no reason but] to achieve the interest of the animal is incorrect because in so doing he gives preference to a lower, *khasis*, animal over a higher, *nafis*, animal.

Another medieval scholar, Ibn Hazm, provides an argument against moral consideration being extended to animals which anticipates those heard in nineteenth-century England, when he writes that "the laws of Allah are only applicable upon those who can talk and understand them" (Hazm 1964: 69).

Within the admitted hierarchy of creation in which human beings occupy the highest rank, the Qur'an and the Sunna (lit., "tradition," understood as the example of the Prophet Muhammad as attested in *hadith* reports) nevertheless strongly enjoin Muslims to treat animals with compassion and not to abuse them. The Qur'an states that all creation praises God, even if this praise is not expressed in human language (17:44). The Qur'an further states that "There is not an animal in the Earth, nor a flying creature on two wings, but they are peoples like unto you" (6:38). Thus, when in the nature of things (*fitrah*), the Muslim must kill in order to survive, the Prophet Muhammad called for compassion: "If you kill, kill well, and if you slaughter, slaughter well. Let each of you sharpen his blade and let him spare suffering to the animal he slaughters." On another occasion he is reported to have said, "For [charity shown to] each creature which has a wet heart (i.e., is alive), there is a reward." He opposed recreational hunting, saying that "whoever shoots at a living creature for sport is cursed." In another *hadith*, Muhammad is said to have reprimanded some men who were sitting idly on their camels in the marketplace, saying "either ride them or leave them alone." He is also reported to have said, "There is no man who kills [even] a sparrow or anything smaller, without its deserving it, but Allah will question him about it [on the Day of Judgment]," and "Whoever is kind to the creatures of God, is kind to himself."

Medieval Islamic law prescribes that domestic animals should not be overburdened or otherwise mistreated, that they should not be put at risk of survival, that their young should not be killed in their sight, that they should be given adequate shelter and rest, and that males and

females should be allowed to be together during mating season. The legal category of water rights extends to animals through the law of "the right of thirst" (*haqq al-shurb*).

Probably the richest material that Muslim civilization has produced with regard to animal rights is a tenth-century treatise entitled *The Case of the Animals versus Man* by a group of philosophers who called themselves the *Ikhwan al-safa*, or "Pure Brethren." A briefer example of sympathy for animals can be found in a story about the eighth-century female Muslim mystic Rabi'a of Basra. According to the medieval hagiography of Farid al-din 'Attar,

It is related that one day Rabi'a had gone up on a mountain. Wild goats and gazelles gathered around, gazing upon her. Suddenly, Hasan Basri [another well-known early Muslim mystic] appeared. All the animals shied away. When Hasan saw that, he was perplexed and said, "Rabi'a, why do they shy away from me when they were so intimate with you?"

Rabi'a said, "What did you eat today?"

"Soup."

"You ate their lard. How would they not shy away from you?" ('Attar 1996: 160).

At least one contemporary Islamic legal scholar has taken issue with the dominant anthropocentric view of animal rights. B.A. Masri writes in the preface to his book, *Islamic Concern for Animals*, that in his opinion "life on this Earth is so intertwined as an homogeneous unit that it cannot be disentangled for the melioration of one species at the expense of the other" (1987: vii). Masri understands the superiority of the human species to consist only in its spiritual volition (*taqwa*), that is, its capacity to make moral choices. Without this distinction, Masri believes, the differences between humans and other animal species are superficial. Masri stops short of discussing the option of vegetarianism, however. His concern is with eliminating the kinds of unnecessary cruelty and exploitation of animals that he sees as prevalent in modern society, such as laboratory testing. Masri's discussion implicitly acknowledges the reality that Muslims often fail to respect the Prophetic directives regarding animal welfare.

One issue which is prominently connected with meat-eating in Islam is the customary sacrifice performed once a year on the occasion of 'Eid al-Adha, the Feast of Sacrifice commemorating Abraham's willingness to sacrifice his son. On this day, Muslims traditionally slaughter the largest animal they can afford, from a sheep to a camel, and distribute the meat to the poor as an act of charity. However, during the 1990s, King Hassan of Morocco on two occasions banned this slaughter for economic reasons, citing the well-being of his Muslim subjects. It may be

noted in passing that a number of religious traditions, including Judaism, Vedism, and others, historically evolved metaphorical substitutions for blood sacrifice (and in the case of Judaism after the destruction of the Second Temple, this change was quite rapid). It is therefore not inconceivable that such a development could occur in the future within Islam. In any event, ritual slaughter in Islam is merely customary, and not prescribed by law.

The Qur'an and Sunna have been shown to enjoin Muslims to treat animals with compassion. This is clearly reflected in the established procedure for *halal* (lawful) slaughter. Few Muslims have made the observation that not slaughtering the animal at all would be even more compassionate; animal rights activism and vegetarianism are exceedingly rare among Muslims, and where present are most often motivated by extra-Islamic ethical principles.

Factory farms did not exist in seventh-century Arabia, nor were large percentages of arable land being used for fodder crops in preference to food for humans while 20 percent of the world's population went chronically malnourished. Times have changed. Though in Sunni Islam the tradition of interpreting divine revelation (*ijtihad*) has been largely in abeyance since the eleventh century, Islamic modernists have long been arguing that "the gates of *ijtihad*" must be reopened if Islam is to continue to meet the needs and conditions of the present age. But for a contemporary Islamic legal scholar to make a case for vegetarianism, the Qur'anic verses cited above in particular would have to be addressed.

The possibility for such a re-reading can be seen in the example of the verse: "The beast of cattle is made lawful unto you [for food]" (5:1), which might be compared with other verses (16:5, 66; 40:79) where the wording is equally vague. The theme common to these verses is that of deriving sustenance; in 16:66 milk is explicitly mentioned whereas 40:79 begins, "It is Allah who provided for you all manner of livestock, that you may ride on some of them and from some of them you may derive your food." Nowhere does the Qur'an refer to the eating of flesh as such. Even the gloss "for food" in verse 5:1 is merely inserted into the English translation, being absent in the original Arabic.

It is possible that future Islamic legal scholars will find a basis in the Qur'an and Sunna for vegetarianism, and perhaps issue *fatwas* (legal opinions) classifying meat-eating as *makruh*, the category of discouraged acts whose commission brings no punishment but the abstention from which brings reward. At the very least, one can hope to hear more in the way of Islamic critiques of factory-farming as incompatible with the clearly established Islamic principles of compassion toward animals.

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P Islam on Man and Nature

Our planet is characterized by richness and diversity of its components. Such a system can survive only if its components are in harmony with the overall design and are in due proportion and balance. To maintain this balance, there are natural agencies and systems, which if not disturbed, do their job with marvelous efficiency according to natural laws. These and similar laws are operating not only on this planet, but throughout this universe as we come to understand them due to the expanding horizons of science and technology. This balanced coexistence of all the components of this planet ensures "Peace," in contrast to chaos and disorder, which results if the natural balance is disturbed. Islam, which literally means "peace," is a system which ensures and strengthens this peaceful coexistence. It guides humanity to a methodology and way of life which guarantees peace among all the inhabitants of this beautiful Earth.

Humankind – A Special Creation

All cohabitants of our planet work under and according to the natural laws or divine guidance, which one often refers to as their natural instinct. Thus, under favorable conditions and if allowed to function naturally, a root would always absorb water and a green leaf would always photosynthesize, a clay particle would always hold water strongly and wind currents would always move toward

The *Hadith* and *Shari'a* on Man and Nature

The Prophet Mohammad was sent by Allah as “a mercy to all being” (21:107). He put the commandments of Allah into practice and thus established a working model for all human spheres. It has been interpreted further by different scholars who have laid down legal codes (*Shari'a*). All these details run into thousands of pages and even to summarize them is beyond the scope or capacity of this write-up. Some very illustrative Sayings and *Shari'a* Laws are mentioned here to give a glimpse of the vastness of Islamic literature dealing with environmental issues.

Hadiths:

“Show mercy to those on Earth, and He who is in the Heaven will show mercy to you.”

“Provide for the needs of any animal under your care. If a person causes an animal to die of starvation or thirst, he will be punished by Allah.”

“There is a reward in doing good to every living being.”

“God is pure and loves purity and cleanliness.”

“There is no Muslim who plants a tree, or sows a field and man, birds or beasts eat from them, but it is charity for him.”

“Whoever brings the dead land to life, that is, cultivates waste land, for him is reward therein.”

Shari'a:

Based on the Prophet's practice, Muslim legal scholars have ruled that Allah's creatures possess inviolability (*Hurmah*) which pertains even in war.

In Islamic Law all animals have certain legal rights, which are enforced by the Islamic courts or by the office of the “*Hisbah*.”

One of the fundamental principles of Islamic Law is the Prophetic declaration: “There shall be no damage and no infliction of damage.” This “No Damage Law,” is of immense significance in the human-nature relationship.

Another relevant *Shari'a* rule is: “The averting of harm takes precedence over the acquisition of benefits.” It aims at achieving good and securing benefits without causing significant damage, injury or corruption.

“A private (smaller scale) injury or damage is accepted to avert a general (larger) injury to the public.” While enforcing certain laws or restrictions, interests of a small section of the community are usually affected. In such a situation the interest of the larger community takes precedence over smaller damage.

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a low pressure area. They have no choice but to act according to the laws of nature (i.e., they have no freedom to act otherwise). In contrast to the rest of the creatures, human beings have been given the choice either to act according to divine guidance (read laws) or to follow their own whims or desires. Since Islam is a system which has been revealed to ensure peace and harmony, it guides humanity to a set of laws and directives which preserve and maintain the divine balance and order on our planet. It defines the position as well as responsibilities of human beings on this temporary abode.

Position – As an Inheritor or Viceregent

Allah defines humankind as “*Khalifa*” on this Earth (Qu'ran 35:39; 6:165), which literally means the guardian or vicegerent who inherits the planet from its forerunners. According to Islam, man is not the conqueror or master of nature, he is its guardian and hence protector who ensures continuity and availability of all its bounties.

Responsibilities

To seek knowledge

There are 756 verses in the Qur'an which deal with knowledge or *Ilm*. Without knowledge one can understand neither the complexities and interdependence of all the creatures, nor one's own role and responsibilities, particularly as the guardian of the planet. Knowledge is the basic ingredient and foundation for “Belief” or “*Iman*.” *Iman* is complete faith in Allah, His Laws and Commands, based on reason and knowledge – almost a state of conviction. The Qur'an lays much emphasis on reason, and hence humankind has been gifted with mind, which enables one to think, and the intellect, which helps one to build up knowledge. Once acquired, knowledge helps one to understand the working and significance of divine laws. It is this knowledge which motivates the person to submit to Allah's command. It becomes clear to him that if nothing can survive by defying natural laws, how can he act against the Laws set for him? However, if people do not

utilize the faculties of thinking, observing and hearing (to grasp the truth), they will be destined to hell as they remain un-heedful of the Laws of Allah (7:179).

To ward off evil by good deeds

In any system of governance, we find those who are obedient and those who are disobedient. Those who are disobedient and do not submit to Allah's Laws would definitely disturb the harmony on this planet. They would spread evil ideas of exploitation and injustice. Believers in Allah's System are advised to counter such evil moves by good deeds (13:22). In an atmosphere where evil and the things harmful and destructive for humanity are prevalent, believers should not get carried away and should not adopt the same attitude; rather they should continue to do good as it is only such perseverance in doing good which wards off evil attitudes and designs. All such people who practice righteousness and remain steadfast in doing good, have been acknowledged as Friends of Allah who would be in peace with Him (6:127).

To do justice

Islam lays great emphasis on justice. It expects the Believers to do justice in every walk of life and in every situation, which includes the equitable distribution of natural resources.

Surely Allah commands you to make over trusts to their owners and that when you judge between people you judge with justice; surely Allah admonishes you with what is excellent; surely Allah is Seeing, Hearing (4:58).

O you who believe! Be upright for Allah, bearers of witness with justice, and let not hatred of a people incite you not to act equitably (justly); act equitably, that is nearer to piety, and be careful of (your duty to) Allah; surely Allah is Aware of what you do (5:8).

These suras have affinity with what many in the West today call "environmental justice," showing that the equitable distribution of natural resources is a religious duty, even when dealing with people one does not particularly like, and that the burdens of environmental decline and pollution ought not to fall disproportionately on the poor.

To establish balance

Thanks to the advancement in environmental sciences, we all know about the delicate inter- and intra-community/commodity balance that exists among all the living as well as non-living components of our environment. In several verses of the Qur'an (54:49; 15:19; 55:7-9), Allah reveals about this balance which He has established among His creations and commands His Believers not to transgress it

(55:8-9). The concept of balance is applicable to every sphere of human activity whether it is harmony with nature or human justice, commerce or even in personal relations and emotions. Hence, Believers are thus expected not to indulge in any such activity that disturbs any sort of natural balance, be it between oxygen and ozone or land and vegetation or prey and predator. However, Islam does not forbid the use of nature's bounties; it just reminds us to remain within limits and to ensure their continuity in due proportion. *Ulemas* like Maulana Abdul Kareem Pareekh, Maulana Waheeduddin Khan and Maulana Akhlaq Hussain Qasmi (of the Islamic Foundation for Science & Environment), for example, often speak along these lines.

To improve the society

Whenever any unbalance occurs in nature, it results in chaos or disorder. Our current problems of pollution and ozone depletion are very relevant examples. The Qur'an terms the mischief which results in chaos or disorder as "*Fasad*" and forbids it (7:56). Elaborating upon different types of mischief or disorder, the Qur'an declares the destruction of cultivated land and stock as mischief (2:205), as well as incomplete measurements, insufficient payment for someone's labor, economic disparities and encroaching upon other's rights as mischief (26:183; 7:85). Disrupting a just system (27:34) and committing crimes is also termed as mischief (12:73). All this mischief by people of evil intent results in all round chaos and corruption:

Corruption has appeared in the land and in the seas on account of what the hands of men have wrought, that He may make them taste a part of that which they have done, so that they may return (30:41).

In contrast to these "*Mufsideen*" (corruptors, spoilers, mischief-makers) who have spoiled the natural balance to serve their own ends, Allah characterizes Believers as "*Musleheen*" (rectifiers, correctors or reformers) of society (2:11). They have been commanded to do "*Aml-e-Salehat*" (acts of correction and reformation which would undo the damage done by the spoilers or corruptors; 2:82; 95:6; 103:3). Thus it is the duty of all Believers to take up corrective measures for improving society and to ameliorate the condition of people suffering because of inequalities, unbalances and disorders in society. As the social problems and maladies vary with time and space, these "good deeds" to be performed by Believers would also be different according to the challenges faced by the society at any particular time and place.

Nature – An Islamic Perspective

The Qur'an emphatically declares that nature has been created by Allah (3:191; 38:27; 46:3). By correlating

different verses where Allah has mentioned nature, it emerges that Allah has created nature for two specific purposes:

Blessing provides sustenance, shelter and other necessities to all creatures through the perfectly balanced and self-sustaining systems operating in nature according to Allah's Laws. Through the intricate network of food webs and food chains, through cycling and recycling systems, through displacements and succession, decay and decomposition, autotrophism and heterotrophism, He provides sustenance to all (2:22, 164; 6:96-99; 10:31; 11:6; 16:5-8; 16:10-16, 65-70, 79-81).

Ayat (or Sign) signifies that all the creations of Allah are "*Ayat*" (Signs) of Allah's Wisdom, Knowledge and Grandeur. The Qur'an describes all these creations as His "*Ayat*," which means sign, mark or indication. Allah is supreme, unlimited and beyond human comprehension. Humankind with its limited vision and knowledge, cannot comprehend the unlimited. But His signs help people to understand His mastery, perfection and omnipotence. Thus by understanding his creations, humankind can appreciate Allah's supremacy. For this very reason Allah asks humankind to observe and study nature and ponder upon its mysteries – and hence the emphasis on acquiring knowledge (2:73, 164, 191; 6:46, 65, 97; 7:185; 10:5-7; 12:105; 13:2; 21:30-32; 23:17-22; 24:41-46; 25:53-54; 26:8).

Natural Resources

Nature provides necessities of life to all creatures through its bounties. Some of these resources are available naturally in large quantities, while others need to be tapped, reared or cultivated. At the dawn of civilization, human population was thin and scattered. It traveled throughout the land and used all natural resources freely and without any restriction. However, the situation changed with the establishment of kingdoms and empires and the emergence of class systems based on riches. Money started breeding and multiplying through the spread of trade, interest and banking systems, until it established its own clan. Since then, the world remains divided between those with much and those with little.

Equitable Distribution

Since justice, equity and balance are the main planks of the Islamic system, it asks Believers to treat all natural resources with the same spirit. The Qur'an declares it without any ambiguity: whatever is on Earth He has created it for all (2:29). There is no discrimination on the basis of caste, creed, color or religion. According to the Islamic system, the wealth, produce, or any other resource which anyone gets, earns or inherits does not belong to him alone. It must be shared with all the needy, starting from one's own close relatives to neighbors, travelers, displaced and dispossessed to anyone in need (3:92; 14:31; 17:26;

32:16). Allah thus judges the resourceful and elevated ones (6:165). Allah warns those who accumulate wealth of a crushing disaster (104:2-4). Those who withhold the necessities of life are declared deniers of the day of Judgment (107:7).

To facilitate distribution and ensure the availability of resources, Islam has made it mandatory on all rich people to establish the institution of "*Zakat*," which in essence means a Development Fund for the needy (2:43, 83, 110, 177, 277; 4:162; 5:12; 7:156; 9:5, 11, 18, 71; 21:73; 22:41, 78; 24:37, 56; 27:3; 30:39; 31:4; 33:33; 41:7). "*Zakat*" prevents hoarding of money and causes the wealth to grow so that people can earn their living instead of depending on charity. The Islamic system does not encourage the provision of sustenance to the poor and needy merely through charity; it can be a short-term remedy but on a long-term basis the surplus of the rich should be invested to generate gainful employment for the needy, distressed and displaced.

Islam encourages individual Muslims to participate in the conservation and proper development of resources by creating endowments or "*Awqaf*," which constitute the major avenue for private contribution to the public welfare. In India, and elsewhere as well, there are thousands of such "*Awqaf*" taking care of, and maintaining mosques, schools, hospitals and other welfare activities.

Judicious Use

Islam does not approve of a lavish or unjust consumption of resources, wasteful attitude and extravagance (6:141; 7:31; 17:26). The permissible provisions of modern development in Islam can include all those articles which enhance efficiency in terms of time, space and material utilization, provided they do not disturb the socio-economic equilibrium at any particular place or situation. Islam links "*Israf*" or wastefulness to "*Fasad*" (i.e., chaos, disorder and mischief in society) and declares wasters to be corruptors of society and spoilers of social order and harmony. It considers the extravagance of one person as economic deprivation of the other because extravagance by the former is certainly an encroachment upon the accessibility rights of the latter. Instead of wasting resources in a demonstrative and extravagant lifestyle, it asks the Believers to spend whatever surplus they have on needy people (2:219).

Conservation

Allah forbids unjust killing of any soul (6:151; 25:68). The two earliest inviolable sanctuaries ("*Haramayn*") established in Mecca and Medina in Saudi Arabia reflect the Islamic spirit of conservation. The Qur'an declares Mecca a "city of security" (95:3). The sacred territory surrounding Mecca is a sanctuary for human beings, wildlife and native vegetation. Perpetuating the same spirit, Islamic Laws designate various inviolable zones within

which developments are prohibited for the sake of conserving resources. Similarly, wildlife and forests are safeguarded in “*Hima*” or reserves which are established exclusively for conservation purposes.

Conclusion

The doctrines of Islam are equally explicit and emphatic about man’s role as guardian or viceregent on this planet. His relation to nature should be one of stewardship and not mastery. All the creations of Allah are a divine work of art. They all have been called “*Ayat*” or signs to man, indicative of the greatness, the goodness, the subtlety, the richness and so on of the Creator. To deface, defile or destroy nature would be an impious or even blasphemous act.

Though man is accorded the right to use natural resources, he is not permitted to abuse it with impunity. Besides, this Earth is a temporary abode for man and according to his deeds done on Earth, Allah rewards or punishes him here in this world as well as hereafter. Therefore, those who act against Allah by damaging, defacing or destroying His creations will certainly be punished. Secondly, though the Earth is only a temporary abode for man and is at his service, man is an integral part of it. He is made of the earthen stuff and is a creature among creatures. Hence, according to Islam there should be a kind of organic relationship between man and all other creatures. According to Islam, all human beings are descendants of Adam and Eve, and regardless of color, creed, race or nation they all are equal members of one extended family. Lastly, Islam values the knowledge of nature and encourages its followers to acquire it.

It is supported by the doctrine of signs (“*Ayat*”). As we learn about nature, it becomes abundantly clear that the entirety of nature is an integrated whole. Therefore the destruction of one part of the environment will have its repercussions on its each and every component, including man. This is almost a self-destruction, which is strictly forbidden in Islam.

Even a cursory look at the present state of our planet and human society, provided it is unbiased and unprejudiced, would pinpoint imbalance and inequity as the sole reason of all ills facing humankind. The Islamic System which ensures balance, and hence peace, is the available remedy. If put into practice, as was done by the Prophet, it brings peace and tranquility here in this world as well as in the life hereafter. That it has always been opposed and resisted by vested interests, including Muslims, is a historical fact.

Mohammad Aslam Parvaiz

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See also: Islamic Foundation for Ecology and Environmental Sciences; Islamic Foundation for Science and Environment (and adjacent, *Hadith* and *Shari’a* on Man and Nature).

SP Islamic Basis for Environmental Protection

The idea of “conserving the environment” as it is understood today is relatively new, having emerged as a matter of concern to the human race only recently. This is seen to be a reaction to human excess, which is increasingly threatening the *mizan* (balance) of Allah Ta’ala’s (Allah the Exalted) creation. The main reason for this is that the Earth once considered by humankind to be sacred has now been reduced to an exploitable resource.

At its most basic the Islamic approach to understanding the environment is based on an awareness of the *fitra* (primal condition of humankind in harmony with nature). Conservation in Islam is about *mu’amalat* (acting in the public interest; civic responsibility). It is an integral part of life, an expression of existence in submission to the will of the Creator in harmony with the natural pattern of creation. As there was an Islamic code of conduct that governed social behavior and an individual’s rights and responsibilities within a community, so there was a code of conduct governing an individual’s behavior toward other sentient beings and the rest of the natural world. This however was not expressed as an “ism,” but rather as an integrated expression of life in all its manifestations. It would seem that this was how the human species, in spite of all its faults, lived within their respective traditions until very recent times.

The natural order works because it functions within certain limits. Similarly, there are limits to human behavior and the Qur’an defines these limits for us, which were subsequently clarified and codified by the *Shari’a* (legal modality or code) that evolved in the Islamic milieu. Living within these limits may be defined as living holistically – that is, in Islam and as if there was no separation from one aspect of Allah Ta’ala’s creation and the rest of the natural order. The problem now is that Muslims live mostly outside the precepts of the *Shari’a* and in doing so have lost the understanding of their relationship with nature. We now have to look for and recognize those aspects in the *Shari’a*, which specifically regulate our behavior in relation to the environment and

contrive an “ism” that in previous times would have been superfluous.

The Ethical Foundations of the Qur'an

If the *Shari'a* can be described as a vast carpet with intricate patterns woven into it, what we are doing here is to borrow some of these patterns from the complex weave of the carpet and make sense out of them. The primary element of the *Shari'a* is the Qur'an. It is the font of all knowledge in Islam and its precepts could be likened to the core of each pattern in this carpet. We may begin by examining some of these patterns, which amount to basic principles and which may collectively be seen as providing the basis for Islamic conservation practice. They are:

Tawhid which embodies the principle of unity of the Creator and His creation and is the basis of the holistic approach which is intrinsically Islamic.

Fitra which imparts an understanding of the creation principle and locates the human species firmly in it.

Mizan which recognizes the principle that every aspect of creation holds together because it is in a state of balance.

Khalifa which identifies the responsibility principle and the role of the human in the grand pattern of creation.

Tawhid – The Unity Principle

Tawhid is the foundation of *Din al Islam* (The Way of Islam). It has three aspects, and for our purposes we are looking at just one of these, which is *Tawhid ar Rububiyyah* (the unity of Lordship). This requires us to believe that there is only one Creator and that is Allah the Lord of all creation. (The other two aspects are *Tawhid al Uluhiyya* – to believe that none is worthy of worship except Allah – and *Tawhid al Asma was Sifat* – to believe that the names and attributes of Allah are uniquely His alone.) Understanding *Tawhid ar Rububiyyah* leads us to the recognition that *Al Khaliq* (the Creator) is one and *khalq* (creation) is a unified whole. Its essence is contained in the *shahada* (declaration), the first pillar of Islam, which every Muslim accepts and is a constant reminder of Faith. It is *la ilaha illal lah* (there is no God but God), and it affirms the unity of the Creator from which everything else flows. The second part of the *shahada* is *Muhammadur Rasulullah* (Muhammad is the Prophet of Allah) whose example we follow. The *Shari'a* evolved from the Qur'an and the *sunnah* (practice) of the Prophet as he interpreted the revelations.

Knowing the Creator is the first step to understanding His creation and the very familiar *Sura Al-Ikhlās* (the chapter on Sincerity) lays down the basis of this understanding –

Say: “He is Allah, Absolute Oneness,
Allah, the Everlasting Sustainer of us all.
He has not given birth and was not born
And no one is comparable to Him” (112:1–4)

This is an affirmation of *ahad*, that is, the oneness of the Creator and the unity of all creation of which the human race is very much a part. The Qur'an further illuminates *Tawhid* in the context of *khalq* under the following themes:

Rab Al Alamin (The Lord of All Creation) – there is only one real power
“Praise be to Allah, the Lord of all the worlds” (1:1).

Al Khaliq (The Creator) – everything that exists was brought into being by Allah
“He is Allah – the Creator, the Maker, the Giver of Form.

To Him belong the most beautiful names.
Everything in the heavens and the Earth glorifies Him.

He is the Almighty the All-Wise” (59:24).

And –

“He who originates creation and regenerates it
and provides for you from out of heaven and Earth” (27:66).

Al Muhit (The Encompasser) – this is the bedrock of the holistic approach in Islam as it affirms the interconnectedness of the natural world.

“What is in the heavens and the Earth belongs to Allah.

Allah encompasses all things” (4:125).

Fitrah – The Creation Principle

The *fitrah* principle describes the origination of the human species within the bosom of the natural world. It is a profound reminder of our place in the natural order. *Fitrah* has been described as the natural state. Some translators of the Qur'an call it the natural pattern, others the original state or pattern, and yet others describe it simply as nature. Some scholars describe *fitrah* as the pure state or the state of infinite goodness and point to the possibility that everything in creation has a potential for goodness, the conscious expression of which rests uniquely with humankind. It is commonly held that the real meaning of The Qur'an in Arabic is untranslatable into any other language, but we may conclude that *fitrah* denotes the original and natural state of purity, which applies to all of creation including the human in its newborn state. The term *fitrah* is a noun derived from the root F T R and

occurs once in the Qur'an. It appears in its verb form, *fatarah*, fourteen times. The key verse in The Qur'an in which both the noun and the verb form occur is in *Surah Rum* (the verse on the Romans):

Set yourself firmly towards the Deen [the way, the life transaction],
As a pure natural believer,
Allah's natural pattern on which He made mankind.
There is no changing Allah's creation.
That is the true Deen –
But most people do not know it – (30:29).

The part of this verse that concerns us here is the one that reads "Allah's natural pattern on which He made mankind." Abdalhaqq and Aisha Bewley, the translators of the version the Qur'an used in this entry, render *fitrah* as natural pattern and *fatarah* as made. Here is how two other translators see it: Yusuf Ali: "The nature in which Allah has made mankind." *Fitrah* is translated here as nature and *fatarah* as made. Arberrey: "Allah's original in which He originated mankind." *Fitrah* is translated here as original and *fatarah* as originated.

As the translators grapple to convey the meaning of this verse, there is simplicity inherent in this message that conveys two things to us. The first is a sense of where we belong in the pattern of Allah Ta'ala's creation. The human race was originated, indeed like all other sentient beings, in the bosom of creation that Allah Ta'ala originated. Humankind was made part of a vast natural pattern, which cannot be changed. Secondly, it could be said that taken together with the rest of the verses in the Qur'an on creation this lays down the foundation for the deep ecological principles inherent in Din al Islam. An appreciation of this should lead us to addressing the environmental concerns of today at their roots. The Qur'an comprehensively defines our place and our relationships within this pattern as the following verse further demonstrates –

The creation of the heavens and the Earth
is far greater than the creation of mankind.
But most of mankind do not know it (40:56).

Muslims start every one of their five daily prayers with this verse acknowledging the Creator –

... I have turned my face to Him
Who brought the heavens and Earth into being
[*fatarah*]
A pure natural believer.
I am not one of the mushrikun [*Mushrikun* plural of *Mushrik* – one who ascribes divinity to any thing other than Allah] (6:80).

Mizan – The Balance Principle

Mizan is the principle of the middle path. The natural world, which we are a part of, is held together because it is in *mizan*, a state of dynamic balance. This is another way of saying that the natural order works because it is in submission to the Creator. It is Muslim in the original, primordial sense. In one of its most eloquent and popular passages, the Qur'an describes creation thus –

The All Merciful taught The Qur'an.
He created man and taught him clear expression.
The sun and the moon both run with precision.
The stars [the word *najm* in the Qur'an is translated sometimes as herbs or shrubs] and the trees all bow down in prostration.
He created heaven and established the balance,
So that you would not transgress the balance.
Give just weight – do not skimp in the balance.
He laid out the Earth for all living creatures.
In it are fruit and date palm with covered spathes,
and grains on leafy stems and fragrant herbs.
So which of your Lord's blessings do you both deny?
(55:1–11)

The introductory verses of this *surah* (chapter) remind us of the unique nature of the human species in creation. Our intelligence, the ability to make sense of our surroundings and to express our intentions clearly, is what differentiates us from every other sentient being in the universe. Allah Ta'ala has given us the gift of intellect with reasoning powers that can distinguish right from wrong, good from bad, honesty from dishonesty, conservation from destruction, moderation from greed, purity from pollution and so on.

The sun and the moon, the two objects in the cosmos most closely associated with us, have exacting functions. The stars and the trees bow down in prostration. For the Muslim these verses go beyond the metaphor to the realms of the real. Everything in the universe is in *sujud* (prostration), that is in *Islam* (submission), and that is how the universe remains in *mizan* (balance). Everything we see around us works because it is in submission to the will of the Creator as these verses further explain –

Do they not see the things Allah has created,
Casting their shadows to the right and to the left,
Prostrating themselves before Allah in complete humility?

Everything in the heavens and every creature on the Earth
Prostrates to Allah, as do the angels.
They are not puffed up with pride (16:48–49).

The humbling fact is that we can only look at existence and recognize it in this way because everything is held

together for us. However, and paradoxically, we are the only sentient beings in creation who can through the very gift of reasoning choose not to prostrate and destroy everything around us by our presumed cleverness.

He created man from a drop of sperm
and yet he is an open challenger (16:4).

As Allah Ta'ala has laid down the Earth for all living creatures, our responsibility lies not in denying His blessings through acts of folly that destroy the environment, but through actively recognizing the order that is around us both for the sake of ourselves and the rest of the natural world.

***Khalifa* – The Responsibility Principle**

This principle establishes our role as the guardians of the natural world. The human race has a special place in Allah Ta'ala's scheme. Having given us the gift of intelligence He has appointed us as His *Khalifa* (viceregent) or His representative on Earth. We are thus required to act as protectors of the environment Allah Ta'ala has placed us in.

It is He who appointed you khalifs on the Earth
And raised some of you above others in rank
So He could test you regarding what He has given you.
Your Lord is swift in retribution;
And He is Ever-Forgiving, Most Merciful (6:165).

Although we are equal partners with the rest of the natural world, we have added responsibilities by virtue of the powers of reasoning the Creator has given us. These responsibilities, as the Qur'an points out, are to uphold what is right –

Let there be a community among you who call to the good,
And enjoin the right and forbid the wrong.
They are the ones who have success (3:104).

And, in doing so, to show no favors –

You who have *iman* [faith] Be upholders of justice,
Bearing witness for Allah alone,
Even against yourselves or your parents and relatives.
Whether they are rich or poor, Allah is well able to look after them.
Do not follow your own desires and deviate from the truth.
If you twist and turn away, Allah is aware of what you do (4:134).

And, finally, to compete in doing good –

... Had Allah willed, He would have made you a single community, but He wanted to test you regarding what has come to you.
So compete with each other in doing good . . . (5:48).

Everything we see around us is Allah Ta'ala's *n'ihma* (gift) to us. It is, however, a gift with conditions and the Earth is a testing ground for us. The tests are a measure of our *ehsan* (acts of worship) in its broadest sense. In other words, we are to live in a way that is pleasing to Allah, striving in everything we do to maintain the harmony of our inner and outer environments.

Will the reward for doing good be anything other than good?
So which of your Lord's blessings do you both deny? (55:59–60)

As *Khalifa*, we are trustees of Allah Ta'ala's creation –

We offered the trust to the heavens, the Earth and the mountains
But they refused to take it on and shrank from it.
But man took it on.
He is indeed wrongdoing and ignorant (33:72).

The Qur'an expresses this responsibility in this form because of its enormity, and our wrongdoing takes many forms –

... Eat of their fruits when they bear fruit
And pay their due on the day of their harvest,
And do not be profligate.
He does not love the profligate (6:142).

And –

You who have *iman* [faith]
Do not make *haram* [unlawful]
The good things Allah has made *halal* [lawful] for you,
And do not overstep the limits.
Allah does not love people who overstep the limits (5:87).

There is however a way out of our conundrum –

Corruption has appeared in both land and sea
Because of what peoples' own hands have brought about
so that they may taste something of what they have done
so that hopefully they will turn back (30:40).

Institutions and Accountability

The Qur'an provides the moral foundation for human interaction with the natural world. As the *Shari'a* evolved, it manifested itself into a range of rules and institutions, as an expression of life in all its manifestations embodying what is truly holistic. Taken as a whole as it was intended to be, caring for Planet Earth, our only home, was integrated within the framework of the Islamic value system. This was an everyday concern for the Muslim, as the Qur'an draws attention to in the verses, "We have not omitted anything from the Book" (6:39) and "He said 'Our Lord is He Who gives each thing its created form and then guides it' "(20:49).

What emerged was a threefold process, which we may classify as legislative principles, institutions, and enforcement. The Qur'an laid down the basis from which the *Shari'a* evolved, which in turn determined the nature of *fiqh* (the science of the application of the *Shari'a*) and the subsequent establishment of relevant institutions. The body of the *Shari'a* allows us to deduce three general principles as follows –

- The elements that compose the natural world are common property
- The right to benefit from natural resources is a right held in common
- There shall be no damage or infliction of damage bearing in mind future users.

Muslim legalists have over the centuries worked out both principles and structures to give expression to this. These principles concern –

- Individual rights
- Obligations and responsibilities individuals owe to the community
- Accountability
- Benefits accruing to users from renewable resources held in common
- Penalties for improper use of natural resources.

Two of the most important institutions to emerge for this framework are the *hima* and the *harim*. The former lends itself to the setting up of a whole range of conservation zones, which may be established by a community or the state for the purposes of protecting land or species of flora and fauna. The latter permits the establishment of inviolable zones, not always but usually, for the protection of watercourses. People have a right in the *Shari'a* to create such zones managed by themselves and where use is severely restricted.

Having identified the ethical base and institutions, the third element that was needed to complete the picture was a system of accountability. From its earliest years the Islamic state established an agency known as the *hisba*,

whose specific task it was to protect the people through promoting the establishment of good and forbidding wrongdoing (discussed earlier). A learned jurist (*muhtasib*) headed this agency, and he functioned like the chief inspector of weights and measures and chief public health officer rolled into one. He was also responsible among other similar duties for the proper functioning of the *hima* and *harim* zones and acted – to use today's parlance – as an environmental inspector.

Muslims thus have a fully developed system of environmental protection in their hands but its implementation in the form described above would prove to be problematic in a context in which the secular paradigm is dominant and economic development receives the highest priority. The Islamic Foundation for Ecology and Environmental Sciences (IFEES) is conducting experiments in various parts of the world where compromises are being sought between state machinery and *Shari'a* institutions to achieve the best possible conservation outcomes. The most advanced project in this sense, at the time of writing, is the Misali Island Marine Conservation Project located in Zanzibar, Tanzania. There is much to be drawn from the *Shari'a* in extending and improving this knowledge base, and it is an endeavor that Muslims should now undertake with increasing urgency.

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See also: Islam; Islamic Foundation for Ecology and Environmental Sciences; Tahwid (Oneness of God).

P Islamic Foundation for Ecology and Environmental Sciences

The Islamic Foundation for Ecology and Environmental Sciences (IFEES) based in Birmingham, England emerged as a result of the work begun by Fazlun Khalid who is its founder and director. His interest in reviving Islamic environmental practice led him in the mid-1980s to persuade a group of his close associates to join him in setting up an Islamic eco-community. It was officially recognized as a charity in 1994 and by the early twentieth century the IFEES had become an internationally recognized body articulating the Islamic environmental position and practice.

The IFEES is a multidimensional organization and its objectives include:

- Setting up a center for researching Islamic conservation practice.
- Compiling a database and acting as an information exchange on environmental affairs.
- Producing teaching materials, books and journals.
- Training on practical and theoretical subjects. Training will take place by means of weekend courses and medium- and long-term programs.

Training modules under development are based on the principles of the *Shari'a*. A range of subjects covering the environmental sciences are also taught. Projects include:

- The setting up of an experimental project focusing on land use and organic farming. Practical training will include sustainable land resource management and non-industrial, traditional farming techniques as a

practical demonstration of self-sufficiency. IFEES will be drawing on the expertise already developed in the field.

- Developing alternative low-energy, low-cost technology. IFEES will function as a demonstration center for such technology and will participate in its promotion.
- Acting as a consultancy to various international NGOs, funding agencies and academic bodies.

Among its distinctive features are:

- An emphasis on resolving current concerns through the application of the *Shari'a*.
- Developing projects worldwide that give expression to specifically Islamic conservation practice.

Our program is designed to activate those properties inherent in Islam capable of remedying the socio-ecological imbalances of our time. A dedicated core of people with a range of expertise and skills (administrative, research, technical, agricultural, crafts and training) will work together as a community with a commitment to the goals outlined.

IFEES networks worldwide with NGOs, international organizations, academic bodies and grassroots organizations and invites collaboration from organizations and individuals from all persuasions who are also dedicated to the maintenance of the Earth as a healthy habitat for future generations of humankind as well as other living beings.

Fazlun Khalid

See also: Islamic Basis for Environmental Protection

P Islamic Foundation for Science and Environment

Islamic Foundation for Science and Environment (IFSE) is a voluntary nonprofit organization that was established in 1994 mainly to integrate Muslims with the scientific movement and to explain and clarify the Islamic point of view *vis-à-vis* science and environment. It has been working with a two-pronged strategy.

First, it spreads scientific and environment-related awareness among Muslim masses of this sub-continent, especially with regard to pollution, environmental degradation and resource management. (Whenever reference is needed, students are exposed to theories of evolution including Darwinism and Intelligent Design.) Since 1994 it has published a popular science and environment monthly called *Urdu Science*. Its main target readership

are students and graduates of *Deenee Madaris* (Theology Schools).

Secondly, it is trying to emphasize the need to interpret the Qur'an in today's context and in its right perspective, to understand what it says about scientific and learning pursuits, conservation of resources and the environment, and how a Model Muslim Society situated within the broader, pluralistic Indian society could be established to serve and guide humanity.

The Foundation has established a good rapport with the people of the *Madarsa* system. A meaningful dialogue has been initiated with them and a short-term orientation course for "*Ulemas*" (Religious Scholars) to make them aware of the present-day need to conserve resources and protect the environment has been proposed. An effort has been made to convince them to include these issues in their Friday sermons delivered every week to large gatherings, practically in every mosque.

The Foundation has organized lectures on relevant topics at various *Madarsas* and schools. Occasionally book exhibitions and other outreach programs are also arranged in different schools and *Madarsas*. School/*Madarsa* students are encouraged to write on relevant topics of science/environment and annual awards/cash prizes are given to the best three entries from either stream (i.e., *Madarsa* stream and School stream). There is a regular monthly Question and Answer column in the magazine where readers are free to ask any question on science/environment or their interaction or interpretation in Islam. The best question is given a cash prize every month. Many *Madarsa* students get this prize, which shows their indulgence.

The Foundation is official Consultant to the "Islamic *Fiqh* Academy" (Islamic Jurisprudence Academy) on matters of Science and Environment.

Another plan is to devise and introduce a short course for modern-education-system schools whereby students would be taught Qur'anic principles about: 1) nature, its resources and their conservation, 2) the role of humankind on this planet, 3) the purpose of seeking knowledge, understanding the working of nature and growing in tandem with it, and 4) serving humanity with acquired knowledge – putting others' interest before self-interest – a Qur'anic model of selflessness and serving society.

The Foundation is developing linkages with other societies and religious groups to explain and clarify the Qur'anic teachings about development, coexistence with nature, and equity and distribution of resources for the ultimate good of humanity irrespective of caste or color, north or south.

Mohammad Aslam Parvaiz

See also: Islam on Man and Nature.

Islamic Law

Islamic law (*Shari'a*) occupies a central position in both the ritual and public lives of Muslims such that they consider a good life to be one that is lived in accordance with the provisions of *Shari'a*. Therefore, Muslims of every time and clime strive, as far as circumstances permit, to ensure that their activities comport with *Shari'a* provisions. The sources of Islamic law regarding protection of the environment seek to fulfill *Shari'a*'s role of providing guidance to the right path, and in this context, to the path of sustainability and harmony between all life forms through ascribing intrinsic value to every form of matter on Earth. Islam's role in engendering consciousness about nature in particular, and cosmic beauty and order in general, cannot be overemphasized. Pondering about nature is an important aspect of Islam, and such contemplation breeds love for and circumspection toward the natural environment.

A fundamental concept from which the law flows is that every organism on Earth partakes in God's creation, and as such deserves love and respect. A survey of Islam's tradition and history reveals outward manifestations of love and respect for all of God's creatures, such that Prophet Muhammad said of a mountain: "It is a mountain that loves us and we love it" [See Muslim Ibn al-Hajjah, *Sahih Muslim*, in AL-KUTUB AL-SITTAH § 3371 (Saleh A. Al-Sheik ed., 2000)]. God's creatures are interconnected and united under one source of order according to which harm to one creature ultimately affects others. Yet, Islam is neither associated with historical profanation, nor the contemporary sacralization, of nature.

Generally, environmental rules are dictated by the manner in which Islam constructs the human-nature relationship. Accordingly, the ultimate ownership of all organisms inheres in God, which supercedes apparent human proprietorship, which is protected and enforced under the law *vis-à-vis* competing human claims. This ownership confers the right of beneficial use to fulfill the material and spiritual needs of humans, but it does not extend to an unquestionable power to maintain, spare, or destroy these elements at will.

Flowing from this posture is the belief that most organisms are subject to common human ownership under the law and their appropriation is deemed to be for communal benefit. Water, air, the wilderness, and other natural resources such as oil and gas, are all in the public domain. Regulation of human behavior with respect to these resources is dictated by considerations focused on preventing harm to humans and nonhumans alike. The principle of harm prevention limits the exercise of otherwise justifiable rights where such exercise inflicts unacceptable damage.

Although Islamic law acknowledges the primacy of humankind with its attendant right use Earth resources,

such right is limited by the status of humankind as vicegerent or trustee – a status based on humankind's material/spiritual make-up as well as imbued intellect; and as such, we are accountable and owe a duty to maintain *mizan*, the balance of all life on Earth. The Qur'an states: "And the Earth We have spread out (like carpet); set thereon mountains firm and immovable; and produced therein all kinds of things in due balance" (Qur'an 15:19). It states further: "And the Firmament has He raised high, and He has set up the Balance (of Justice), In order that ye may not transgress (due) balance" (Qur'an 55:7–8). The Prophet also said in this regard: "The world is green and beautiful, and God has appointed you his stewards over it; He will see what you will do" [See Muslim Ibn al-Hajjah, *Sahih Muslim*, in AL-KUTUB AL-SITTAH § 6948 (Saleh A. Al-Sheik ed., 2000)].

Norms of Islamic law regulating the human/environment relationship therefore draw from the trusteeship of humankind and its responsibility to maintain the Earth's ecological balance. Preserving animal life, limiting the justification for killing wildlife to only nourishment as well as placing restrictions on the genre and mode of the killing, preventing harm to all life forms except when human life is exposed to immediate threat, even then limiting the elimination of the threat to the extent of force necessary to remove the danger, and providing site-specific mechanisms are all examples of traditional Islamic norms implementing its conception of the human/environment relationship toward maintaining the Earth's balance.

The site-specific rules applicable to inviolable (or *haram*) regions further illustrate the prescribed human-environment behavior. In these regions, all persons are subject to civil and criminal penalties for disturbing, much less killing, any wildlife from its chosen habitat in the regions, or for cutting leaves or branches of naturally grown trees, even if they happen to be thorns.

The law denounces intemperate use of resources, such as water, even if one is by a flowing river and performing ritual washing. Consumption of resources that do not satisfy a legally identified function or need is considered wastage; as such the Prophet prohibited riding on the fur of tigers. We may note the implicit postulation of Islamic law regarding maintenance of a pristine environment (*fitrah*) and harmony among species. There is, therefore, a considerable challenge when the law tries to redress and rehabilitate a global environment that is being severely degraded. One noticeable challenge and opportunity for further development of the law is the lack of extended protection of marine life on an explicit basis comparable to that which is guaranteed terrestrial wilderness.

However, the implications of these basic provisions for the development of modern environmental management is that they offer a new foundation for opening human

awareness of the need for a wider dialogue on the environmental problem. Islamic law seeks to prevent harm not only to humans, but also to all other organisms because those organisms participate in declaring the glory of their Creator and aspire, like humans, to fulfill a certain spiritual function even as humans "understand not how they declare His glory" (Qur'an 17:44).

This non-anthropocentric posture justifying the independent existence of other organisms apart from their apparent utility to humans presents a functional mechanism beyond moral suasion in that they are designed to prevent harm not only to the present generation of human beings, but also to future ones and to other life forms on Earth. Islamic law is amenable to such a comprehensive framework since most mediums and mineral resources involved in polluting the environment are largely managed for communal or state benefit, and are therefore subject to public-oriented regulation with little challenge posed by private interests. The law does not make waste, excessive consumption or pollution an extension of property rights. Rather, it treats them as part of a notional responsibility toward nature.

Extending the prohibition of harm to all creatures rather than to humans alone does away with humanism and other limitations that have influenced the determination of environmental problems such as unsustainable consumption patterns, population growth, and warfare as based merely on costs and short-term benefits.

Muslim communities can utilize Islamic law in formulating, implementing, and redirecting environmental policies in their domestic programs on the one hand; and on the other, for guiding their positions toward a non-anthropocentric agenda in negotiating international environmental agreements. Environmental programs of some Muslim states are beginning to reflect Islamic law principles, as those states have hinged their biodiversity programs and various Biodiversity Country Reports submitted to the relevant U.N. body on the divine order of the Prophet Noah to protect pairs of every species from peril. Scores of environmental statutes of these countries also proceed from the Islamic concept of harm prevention as explained above. For example, article 50 of the constitution of the Islamic Republic of Iran limits and forbids all activities, especially those in the economic sphere, which may necessitate "damage to the environment." The challenge for Muslims is to cooperate with others in devising means of operating their economic activities in harmony with other environmental postulates of Islamic law.

Ali Ahmad

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- See also: Islam; Islam and Eco-Justice; Islam on Man and Nature; Islamic Basis for Environmental Protection; Muhammad, The Prophet of Islam; The Qur'an.

Israel and Environmentalism

Environmental History Prior to the Foundation of Modern Israel

Efforts to protect the land of Israel or the Holy Land from environmental damage are recent. Since the advent of the Roman conquest and the destruction of the second Jewish commonwealth, evidence exists of steady land degradation, overgrazing and deforestation. Yet, none of the many occupying powers who governed the land seems to have considered environmental issues meaningfully during their rule prior to the twentieth century. Rather, the ecological deterioration was frequently exacerbated by policies that sought to maximize tax revenues from the largely agrarian population. Environmental conditions in Palestine worsened noticeably during World War I when the Ottoman armies devastated forests in their war efforts. For instance, one third of the olive trees in Palestine were destroyed in order to produce the wood necessary to run and extend the railways.

The British Mandate, which began its rule during the 1920s, implemented a limited policy of conservation. Laws were passed creating forest reserves and, for the first time, hunting ordinances were introduced, although poorly enforced. While several species of large animals disappeared from Palestine during the first half of the twentieth century (e.g., the Syrian bear, the crocodile, the cheetah), beyond biodiversity damage, environmental impacts were minimal. Indeed, in many ways the Palestinian environment may have improved, with malaria essentially eradicated, soil conservation measures

encouraged and rudimentary urban sewage systems installed.

Nevertheless, during the three decades of British control, the antecedents to modern pollution problems emerged. The population swelled from some 400,000 residents (at the turn of the century) to 1.8 million, an extensive road infrastructure introduced automobiles to the northern half of the land, and heavy industry was introduced, as was the mining of the Dead Sea. During this period, with the exception of the admonitions of a few bold botanists and zoologists, practically no organized protest over the environmental problems existed. The chief Rabbi of Palestine, Rabbi Abraham Isaac Kook consistently expressed concern for the natural world, but his efforts were limited to the theological realm and did not address the actual environmental policies of the Mandate government.

The Establishment of Israel, Rapid Development and Nature Protection

Subsequent to declaring its independence as a Jewish state, Israel began aggressive efforts to encourage "the ingathering of the exiles," absorbing hundreds of thousands of immigrants. To meet the needs of a growing population, the young country expanded its agricultural production as well as afforestation efforts dramatically. An increasing percentage of the population, however, settled in cities and towns, with industry and services as the major source of employment.

It was during this period that the Jewish National Fund (*Keren Kayemet L'Yisrael*), a corporation owned by the World Zionist Organization, changed its institutional focus from land acquisition to forestry. During most of the 1950s, the JNF planted some six million trees a year, six times more than foresters had planted during the British mandate. The trees planted were primarily conifers, in particular the Aleppo (Jerusalem) pine tree, that had proven to be a very fast-growing and tenacious species, given the poor soil and steep slopes where they were planted. While there were initial efforts to create a local timber industry, the conifers were not sufficiently productive. Debates regarding the indigenesness of this species still continue. What is no longer in doubt is the vulnerability of this species to an aphid that devastated vast swaths of the Jewish National Fund forests. This, along with a growing ecological sensitivity within the JNF, has led to a more recent emphasis on diversity of species with a corresponding growth in traditional Mediterranean forests. In retrospect, the results are dramatic. After their almost complete disappearance, today, roughly 10 percent of Israel's lands are designated as forests under the National Master Plan, largely due to JNF efforts, and areas that had previously been considered to be semi-arid deserts are now forests that provide recreational benefits.

Ironically, agricultural expansion and the JNF's plan to drain the Huleh swamp to that end were also the catalyst for the creation of the Society for Protection of Nature in Israel (SPNI), the first and still the largest environmental organization in Israel. This unique wetlands ecosystem, located at the northern tip of Israel, was considered to be a source of malaria and potentially arable. When the protests of scientists and amateur nature-lovers failed to prevent the draining of the swamp, in 1953 with the leadership of Professor Heinrich Mendelssohn and Amotz Zahavi, this group formally launched the SPNI. Its original mission involved nature protection and soon thereafter education. While its involvement in enforcing hunting laws by fielding a force of amateur rangers came to a halt with the establishment of Israel's Nature Reserve Authority, the SPNI continued to be a leading force in environmental education through its extensive field school network, as well as a high-profile advocate for conservation, primarily through monitoring the planning process.

Like most of the population in Israel at the time, the new activists were decidedly secular in their outlook, espousing at once a Romantic and Zionist ideology toward nature. Yet, their affiliation with the historic biblical aspects of the Holy Land was pronounced and Jewish heritage became an integral part of the SPNI educational message. Hundreds of thousands of school children pass through this informal program of hiking, taxonomy and reference to the long history of the land, in particular the natural history that appears in the Bible and the Talmud.

After considerable lobbying, the SPNI helped pass legislation creating a Nature Reserve Authority in 1963 that was independent from the parallel National Parks Authority whose mandate included development of parks, primarily of historic importance. Israel's biological diversity is remarkable, largely as a result of migrations and mixing from the three adjoining continents. The country is home to 2600 plant species (130 endemic to Israel) and 700 vertebrates. Under the leadership of former General Avram Yaffe, the Authority set out on an ambitious program to protect the country's dwindling natural treasures through the declaration of nature reserves and the preservation of "Protected Natural Assets." Today, some 25 percent of the lands in Israel have been earmarked for preservation and protection of ecological systems in the Reserve system. The tide of extinctions within Israel has largely been halted by the enforcement of hunting laws and the preservation of habitat. Recently, there has been concern expressed that present patterns of urban sprawl and development may threaten some of the impressive conservation gains.

Pollution in the Holy Land

Israel's pollution profile has not enjoyed such progress. With a population growth of roughly one million per

decade, the northern half of the country, in which over 80 percent of the residents live, has become one of the most crowded regions in the world. Almost all environmental trends, with the exception of oil/tar pollution on the beaches and concentrations of lead in ambient air, have become worse or stayed the same. Air pollution in the major cities, which was primarily caused by factories during the 1960s, 1970s and 1980s, is now produced largely by vehicle exhaust and has become increasingly acute. Water quality in the country's two major aquifers has suffered and attempts to restore the country's streams, which primarily serve as conduits for sewage effluents, have not been effective.

A Ministry of Environment was established in 1988, replacing a smaller and poorly funded Environmental Protection Service at the Interior Ministry. The Ministry remains small (less than five hundred workers) and has limited authority in critical areas such as pesticide registration, drinking water, and auto-emission standard setting and oversight. Politically, the position of Environmental Minister has had low prestige, with some eight Ministers filling the position during its first fourteen years. Yet, the Ministry's competent professional staff boast impressive achievements in several important areas.

In response to the severity of the environmental insults, a virtual explosion of new environmental organizations has emerged at both the local and national level. Life and Environment, the umbrella group for Israel's environmental organizations, has around eighty member organizations. *Malraz*, the Council for Prevention of Noise and Pollution, established during the 1960s, was the first legal advocacy group in Israel, providing free legal assistance on a range of nuisance cases. While dormant during much of the 1990s, the organization was revitalized in 2001 and operates a mobile inspection van that has been authorized to stop cars to check their emissions levels. Among the more influential of the new organizations is *Adam Teva V'Din*, the Israel Union for Environmental Defense, established as a public interest law group in 1990. The Tel Aviv-based organization boasts a large staff of lawyers and scientists that have successfully litigated numerous cases involving air quality, water quality and physical planning. Environmental organizations specialize in Israel today and focus on transportation, radiation, water quality and of course education. Almost every town and hamlet has either a formal or informal environmental activist group, with major cities sporting numerous initiatives, like the forty organizations that make up the "Sustainable Jerusalem" coalition.

Since 1998, Green Parties have begun to field candidates in Municipal and National elections. While public support has been insufficient for representation in Israel's Parliamentary elections, elections in Haifa and Tel Aviv

have produced surprising success. Indeed, local Green party leader Shmuel Gilbert was part of a winning coalition in 2003 that lifted him into the position of Deputy mayor and chairman of the Haifa Planning and Building Committee. Voters for Green parties, were not, however, religiously motivated and came generally from among the liberal, highly secular public. (Typically, religious Israelis vote for parties affiliated with their ethnic or chosen theological inclination.)

Education in Israel is divided up according to religious affiliation so it is difficult to generalize about the interplay between religion and the environment in this context. The predominant secular educational program has expanded its environmental offerings, with many high schools offering advanced programs and national matriculation exams also offered on the subject. Religious themes, however, are not part of this curriculum. While Bible studies are mandatory from second grade, evolution is taught in biology classes as a matter of fact, with biblical descriptions of creation left to the realm of national mythology. Religious Jewish (as well as Moslem) education takes a more traditional track. Recently, some ecological materials have been integrated into religious educational programs and some institutions, such as the high school Yeshiva (rabbinic training program) in Mitzpeh Ramon, have made environmental studies a sub-specialty.

Religion and the Environmental Movement in Israel

Leaders of Israel's environmental organizations are primarily secular and non-denominational in their personal affiliation. Indeed, until recently, the religious communities in Israel were completely marginal in activist activities. While some prominent environmentalists, such as ornithologist and former SPNI Director Yossi Leshem are Orthodox Jews, they have not tried to make their faith an important part of the organizations they run. Environmental groups most often reflect the prevailing ideologies of the Israeli environmental community, which continues to be a largely Romantic and occasionally Rationalist philosophical perspective that often contains some mystical elements, based on traditional Zionist adulation of the natural world in Israel. Indeed, sociologist Oz Almog has gone as far as to characterize the traditional perspective among Israel's first generation of *Sabras* (native-born Israeli Jews) as "pantheistic," where nature, rather than the traditional Jewish God, became the subject of worship. Nature was among the most "prestigious" of the compulsory subjects of study, hiking became a national pastime (with the Bible providing the most common travel book), and eulogies for fallen soldiers focused on their competence in field biology rather than their military prowess.

Israel's environmental movement has been strongly influenced by Jewish immigrants, who assumed leading roles in environmental organizations as well as in

academia. Immigrants from English-speaking countries have been extremely influential, with several new groups established and run by this cohort. In addition, Jewish foundations, based in the U.S. and Europe, have since the 1990s offered prodigious funding to Israel's environmental movement, with most environmental organizations enjoying better support from Jewish communities outside Israel than from local philanthropists. Yet, Jewish environmentalists living in the Diaspora have not yet extended a meaningful influence on Israeli environmental thinking and remain unknown to their Israeli co-religionists for the most part.

Recently, there has been a move to integrate Israel's religious Jewish community into the environmental movement as well as consciously to integrate Jewish traditional values of stewardship into the local green ideology. The Heschel Center for Environmental Learning and Leadership, an environmental educational and sustainability think-tank based in Tel Aviv, founded *L'avdo ul'shamro* (To Work and To Protect) based on the directive in Genesis regarding the Garden of Eden, an initiative that brings together religious Jews with pro-environmental leanings. In 2002, Life and Environment sponsored a teach-in day in Israel's Parliament Knesset where rabbis (including Chief Sephardic Rabbi, Bakshi Doron) presented pro-environmental Jewish texts and teachings. When ultra-orthodox rabbi and politician Moshe Gafni became chairman of the Knesset Interior and Environment Committee, he became one of the most environmentally active Parliamentarians, winning an award from greens for his work and even making Jewish traditional commitment to environmental protection an election theme for his party. Several Orthodox and Ultra-orthodox communities have begun to field environmental interest groups, like the Committee for Quality of Life in Har Nof that has sponsored a range of initiatives to protect Jerusalem and even to recycle the water from *mikvehs*, the traditional Jewish ritual baths. As the word "water" appears in the Old Testament 580 times, as well as half a dozen different Hebrew words for precipitation-forms, rain-fed ritual baths seem to provide a natural bridge between environmental concerns and the spiritual routine of traditionally Jewish Israelis.

Involvement of the Moslem and Christian communities in Israel's mainstream environmental movement remains fairly minimal. The few Arab organizations that are active environmentally, like the Galilee Society, and the Arab National Society for Health Services and Research, are decidedly secular in their approach and their leadership contains both Moslems and Arabs. The Interreligious Coordinating Council of Israel (ICCI), a Jerusalem-based, interfaith coalition of seventy organizations, attempts to bring a range of religious persuasions and leaders together to work on environmental issues. In 2001 it began sponsoring an annual conference on Religion and the

Environment, along with the Jerusalem Institute. To date the event has failed to attract mainstream Israeli religious figures and institutions as participants. Perhaps the most influential religious influence on Israel's environment can be found among Haifa's Bahá'í community. Their recently expanded gardens have transformed the center of this scenic city, with sculpted terraces providing tranquil and aesthetic open spaces in the otherwise conventional urban setting.

Most of the cities that are deemed "holy" to the world's monotheistic religions suffer from the environmental pathologies that characterize the rest of Israel. Hebron, Bethlehem, and East Jerusalem have inadequate sewage systems. Nazareth suffers from air pollution from chronic traffic congestion, with its municipal environmental protection unit closed for lack of funds. An improved quality of water in the Sea of Galilee is the source of some encouragement, which is the result of the concerted efforts of the Kinneret Administration, a local agency that has had success at reducing non-point and point source discharges into the world's lowest freshwater lake.

Zionism's insistence on the reemergence of a Jewish state in the Land of Israel (and rejection of a multi-cultural model) and the Arab unwillingness to tolerate such an entity has produced a cascade of violent events. The environment itself has only been moderately affected. While trees have been uprooted by soldiers in attempts to reduce sniping, and segmentation of habitats has been caused by border fences or bypass roads, these impacts may be largely reversible. Paradoxically, there are also unquestionable ecological benefits associated with the enmity, such as de facto no-man's-land preserve areas typified by the Jordan River valley or the Lebanon border. Environmentalists certainly hope that among the confidence-building measures necessary to end the conflict there will be common environmental initiatives such as binational and multinational nature reserves, trans-boundary coordinated air and water management, pesticide-reduction policies, and joint anti-desertification measures. Religion has always had a central role in the now century-long Arab-Israeli conflict, and the environment may provide some common ground for diffusing these divisions, producing a more peaceful and sustainable future.

Alon Tal

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See also: Bahá'í Faith; Gordon, Aharon David; Gush Emunim; Hasidism and Nature Mysticism; Hebrew Bible; Jewish Law and Genetic Engineering; Jewish Law and Vegetarianism; Jewish Environmentalism in North America; Jewish Law and Environmental Protection; Judaism; Kabbalah and Eco-theology.

Izzi Dien, Mawil Y. (1948–)

Among the very few contemporary Islamic thinkers to make the environment a central concern, Mawil Y. Izzi Dien ('Izz al-Din, aka Izzi Deen; b. Baghdad, Iraq) has been one of the most prominent. Izzi Dien was trained in Islamic Law at Baghdad and Manchester Universities. In 1983, while on the Faculty of Law at King Abdul Aziz University in Jeddah, Saudi Arabia, Izzi Dien helped formulate the first contemporary statement on conservation from an Islamic perspective, a paper which was published by the International Union for the Conservation of Nature in English, French, and Arabic. As an advisor to the Saudi government, he helped establish the legal and philosophical framework for that country's Meteorology and Environmental Protection Administration during the 1980s.

Izzi Dien's 1990 essay, "Islamic Environmental Ethics, Law and Society," as a result of being reprinted in numerous anthologies throughout the 1990s, came to be seen by many Western environmentalists as representing the normative Islamic view. In this essay, as in his later book-length treatment published in 2000, Izzi Dien emphasizes the moral obligations which Islam places upon humans, focusing on those aspects of the classical legal tradition of Islam and its sources in the Qur'an and *hadith* which apply to the management and distribution of natural resources, especially land and water. In particular he cites the legal principles of *hima* (protected areas) and *ihya al-mawat* (bringing to life of dead lands) in terms of their applicability in Muslim societies today.

Richard C. Foltz

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See *also*: Islam; Islam and Eco-Justice; Islam and Environmental Ethics.

J

Jackson, S. Wesley "Wes" (1936–)

Wes Jackson, a pioneer in modern methods of environmentally and economically sustainable agriculture, co-founded The Land Institute in 1976 and continues to serve as its president.

Jackson was born in 1936 on a farm in the Kansas River Valley near Topeka, Kansas. He earned a B.A. in biology from Kansas Wesleyan University in 1958, an M.A. in botany from University of Kansas in 1960, and a Ph.D. in genetics from North Carolina State University in 1967. He established and served as chair of one of the country's first environmental studies programs at California State University at Sacramento. After returning to Kansas in 1976, Jackson co-founded The Land Institute with Dana Jackson.

Jackson's work at the Land Institute has been devoted to research and teaching in the area of sustainable agriculture. His "eco-agrarianism" is founded upon the idea that agriculture should mimic the way that an undisturbed ecosystem operates in a given place. Thus, since the natural ecosystem of the Kansas prairie is a polyculture of grasses, mostly perennials, Jackson's initial research at the Land Institute has worked at developing high seed-yielding perennial grains and growing cultivated polycultures. His ideas have expanded to a vision of Natural Systems Agriculture (NSA) which encompasses not only agricultural techniques that are, in Jackson's words, "native to this place," but also a consideration of the economic and cultural feasibility (and necessity) of shifting to NSA.

While Jackson is highly critical of Western religious views – particularly Christian views – that uphold an instrumental view of nature as an object to be exploited for short-term human gain, he draws regularly upon biblical and theological imagery in advocating a biocentric worldview. For example, the title of an early collection of essays, *Altars of Unhewn Stone* (1987) recalls the Exodus 20:25 injunction that Moses build an altar of unhewn stone "for if thou lift up thy tool upon it, thou has polluted it" (in Jackson 1987: 9). In other words, the imposition of human technology upon nature is desecration. He likes to point out that the first commandment of the Bible is to "dress the land," and he frequently speaks of his fascination with Mennonite and Amish farming practices as models (albeit flawed) of land *stewardship*. More recently in an essay, "The Changing Relationship Between the Tree of Knowledge and the Tree of Life" (2000), Jackson finds in

the biblical story of Eden, both a metaphor for human alienation from nature and a possible solution to that alienation, viz., to humbly subordinate the fruit of the tree of knowledge (technological/scientific manipulation of the world) to the tree of life (nature's wisdom).

More positively, as an evolutionary biologist, Jackson has been attracted to the thinking of process theologians such as John B. Cobb, Jr., and has participated in conferences with and sponsored by Cobb and the Center for Process Studies. Like Cobb, Jackson promotes a biocentric ethics based upon a panentheistic view of the fundamental interrelatedness and inherent value of all entities.

Jackson's work, writing, and speaking have gained international attention and earned numerous awards, including: a Pew Fellows Program in Conservation and the Environment (1990); MacArthur Foundation, MacArthur Fellow (1992); and the Right Livelihood Award (2000).

Paul Custodio Bube

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See also: Back to the Land Movements; Berry, Wendell; Cobb, John; Christianity (7f) – Process Theology; Land Institute; Process Philosophy.

Jainism

Fundamental Jaina Views

The Jaina religion originated in India at least 2500 years ago. It is currently practiced by approximately four million persons in India and several hundred thousand others scattered across the globe. Jainism espouses a philosophy that emphasizes the pervasiveness of life forms and advocates a religious practice rooted in a nonviolent ethic. Jainism posits a living universe, uncreated, and eternal. In this sense, it can be deemed non-theistic. It

holds a voluntarist stance, emphasizing that one's individual, self-generated karma determines one's present and future reality.

This worldview began with the teachings that informed the religious development of Mahavira, the great Jaina leader who lived during the same period as the Buddha, around the fourth century B.C.E. Mahavira himself is said to have arrived at his definition of life through direct observation:

Thoroughly knowing the Earth-bodies and water-bodies, and fire-bodies and wind-bodies, the lichens, seeds, and sprouts, he comprehended that they are, if narrowly inspected, imbued with life (*Acaranga Sutra* 1:8.I.11–12).

The earliest known Jaina text, cited above, lists in detail different forms of life and advocates various techniques for their protection. The text states that “All breathing, existing, living, sentient creatures should not be slain, nor treated with violence, nor abused, nor tormented, nor driven away. This is the pure, unchangeable, eternal law” (1.4.1). The *Acaranga Sutra* mentions how to avoid harm not only to animals, but also to plants, by not touching them, and to the bodies that dwell in the Earth, the water, the fire, and the air. For instance, Jaina monks and nuns must not stamp upon the Earth, or swim in water, or light or extinguish fires, or thrash their arms in the air.

In the later philosophical tradition, Umasvati's *Tattvartha Sutra* (ca. 100) states that the universe is brimming with souls weighted by karmic material (*dravya*), many of which hold the potential for freeing themselves from all karmic residue and attaining spiritual liberation (*kevala*). These souls constantly change and take new shape due to the fettering presence of karma, described as sticky and colorful. By first accepting this view of reality and then carefully abiding by the five major vows (nonviolence, truthfulness, not stealing, sexual restraint, and nonpossession), the Jaina aspirant moves toward the ultimate goal of liberation. At the pinnacle of this achievement, all karmas disperse and the perfected one (*siddha*) dwells eternally in omniscient (*sarvajna*) solitude (*kevala*).

Umasvati explains how careful action will help ensure one's rebirth in a higher realm. Violent action might thrust one down into one of seven infernal regions or hells; auspicious action might elevate one to one of the eight heavenly regions. The highest spiritual action can only be undertaken in the middle realm, Earth or Jambudvīpa, by human beings. If effective, one's meditation and careful observance of nonviolence might release one into a state of perfection, the *siddha loka*, where one dwells eternally experiencing energy, consciousness, and bliss, while retaining one's sense of individuality, symbolically represented by ascent to the summit of one's own mountain peak.

According to Umasvati's *Tattvartha Sutra*, 8,400,000 different species of life forms exist (1994: 53). These beings are part of a beginningless round of birth, life, death, and rebirth. Each living being houses a life force or *jiva* that occupies and enlivens the host environment. When the body dies, the *jiva* seeks out a new site depending upon the proclivities of karma generated and accrued during the previous lifetime. Depending upon one's actions, one can either ascend to a heavenly realm, take rebirth as a human or animal or elemental or microbial form, or descend into one of the hells, as a suffering human being or a particular animal, depending upon the offense committed.

The Jainas were careful to observe and describe the many life forms that they hoped to spare. They catalogued them according to the number of senses they possess. Earth bodies, plants, and microorganisms (*nigodha*) are said to possess the sense of touch. Earthworms and mollusks are said to add taste to touch. Crawling insects add the sense of smell. Moths, bees, and flies add sight. At the highest realm, Jainas place animals that can hear and those that can hear and think, including reptiles, birds, and mammals. Santi Suri, a Jaina writer of the eleventh century, summarizes this assessment of different life forms in the *Jiva Vicara Prakaranam*, a text of fifty verses. He makes clear that all forms of life, from clods of Earth to human beings, have “life, breath, bodily strength, and the sense of touch” (Suri 1950: 163). Hence, all must be protected.

Santi Suri's *Jiva Vicara Prakaranam* lists types of life, frequency of appearance, and cites an approximate lifespan for each. For instance, he states that hardened rock can survive as a distinct life form for 22,000 years; “water-bodied souls” for 7000 years; wind bodies for 3000 years; trees for 10,000 years, and fire for three days and three nights (1950: 34). Each of these forms demonstrates four characteristics: life, breath, bodily strength, and the sense of touch (1950: 163). Earth, water, fire, air bodies, which comprise material objects such as wood or umbrellas or drops of water or flickers of flame or gusts of wind all contain *jiva* or individual bodies of life force. Moving from the elements to descriptions of plants, he lists various plant genres, with precise detail given for plants with fragrance, hard fruits, soft fruits, bulbous roots, thorns, smooth leaves, creepers, and so forth. Santi Suri includes passages that urge one to restrict the use of specific plants, with special attention paid to determining avoidance of doing harm to plants that harbor the potential for even greater production of life forms.

He then describes two-sensed beings, possessing touch and taste, which are said to live twelve years and include conches, cowries, gandolo worms, leeches, earthworms, timber worms, intestinal worms, red water insects, white wood ants, among others (1950: 15). Three-sensed beings live for 49 days and include centipedes, bedbugs, lice,

black ants, white ants, crab-lice, and various other kinds of insects (1950: 16–17). These beings add the sense of smelling. Four-sensed beings, which add the sense of sight, live for six months (1950: 35) and include scorpions, cattle-bugs, drones, bees, locusts, flies, gnats, mosquitoes, moths, spiders, and grasshoppers (1950: 18). At the top of this continuum reside the five-sensed beings, which add the sense of hearing and can be grouped into those who are deemed “mindless” and those who are considered to be sentient. This last group includes the denizens of hell, gods, and humans. Various lifespans are cited for five-sensed beings, which Santi Suri describes in great detail: land-going, aquatic, sky-moving, and so forth. The detailed lists by Santi Suri and his later commentators present a comprehensive overview of life forms as seen through the prism of Jainism. As such, they have presented a view of life that presages later environmental theory, resonating in its attention to detail with such writers as Aldo Leopold.

Jainism and Social Activism

The Jaina worldview states that the material world itself contains feelings and that the Earth feels and responds in kind to human presence. Not only do animals possess cognitive faculties including memories and emotions, also the very world that surrounds us can feel our presence. From the water we drink, to the air we inhale, to the chair that supports us, to the light that illumines our studies, all these entities feel us through the sense of touch, though we might often take for granted their caress and support and sustenance. According to the Jaina tradition, humans, as living, sensate, thinking beings, have been given the special task and opportunity to cultivate increasingly rarefied states of awareness and ethical behavior to acknowledge that we live in a universe suffused with living, breathing, conscious beings that warrant our recognition and respect.

The Jainas were quite assertive in making their minority religious views known in areas of India where they gained ascendancy. Many of the southern kingdoms of Karnataka offered protection and patronage to the Jainas, who won several concessions regarding public laws designed to encourage vegetarianism and discourage hunting (*Saletore*). Jainism exerted profound influence throughout this region from 100 to 1300. In the northern kingdoms of Gujarat, they experienced a golden era when Kumarapala (r. 1143–75) converted to Jainism. He encouraged the extensive building of temples, and under the tutelage of the Jaina teacher Hemacandra (1089–1172) became a vegetarian (Cort 1998: 100). He enacted legislation that reflected Jaina religious precepts regarding the sanctity of all life. In the north central area of India, Jincandrasuri II (1541–1613), the fourth and last of the Dadagurus of the Svetamabara Khartar Gacch of Jaina monks, traveled to Lahore in 1591 where he greatly influ-

enced the Mughal Emperor Akbar the Great. Akbar protected Jain places of pilgrimage and ordered non-interference with Jaina ceremonies. Most remarkably, he forbade the slaughter of animals for one week each year (Babb 1996: 124). The Jainas tirelessly campaigned against animal sacrifice, which is now illegal in most states of India. Mahatma Gandhi, the most well-known leader of modern India, was deeply influenced by the Jaina commitment to nonviolence and adapted it in his campaign for India's political independence from Britain.

For various reasons, it might seem logical for Jainas to become active in India's burgeoning environmental movement. The Jainas have been great protectors of life within India. They have inspired legislation to protect animals over the course of centuries, and have been influential in the modern government of India. Though the great struggles to ban ritual slaughter of animals and to free India from colonial rule have largely been won, Jainism is well equipped to face the new challenges faced by India as it continues to pursue a course of rapid industrialization.

Contemporary Jaina Environmentalism

The Jaina community has undertaken some steps toward including environmental issues within their religious discourse. L.M. Singhvi, a noted jurist and Member of Parliament, published a small book titled *Jain Declaration on Nature* in 1990. It quotes Mahavira's warning that observant Jainas must be respectful of the elements and vegetation: “One who neglects or disregards the existence of Earth, air, fire, water, and vegetation disregards his own existence which is entwined with them” (in Singhvi 1990: 7). Singhvi himself writes that “Life is viewed as a gift of togetherness, accommodation, and assistance in a universe teeming with interdependent constituents” (Singhvi 1990: 7). Stating that there are countless souls constantly changing and interchanging life forms, he goes on to note that “Even metals and stones . . . should not be dealt with recklessly” (1990: 11).

Several Jaina organizations have taken up the cause of environmentalism, regarding it as a logical extension of their personal observance of nonviolence (*ahimsa*). The Shrimad Rajchandra Kendra near Ahmedabad announced in 1990 plans to operate a news service to “supply information on different Jain environmental projects and on ecology issues generally to the 450 Jain newsletters and magazines in India as well as abroad” (*Ahimsa Quarterly Magazine* 1991: 5). Reforestation projects have been underway at various Jaina pilgrimage sites, such as Palitana in Gujarat, Ellora in Maharashtra, and Sametshirkhar and Pavapuri in Bihar. At Jain Vishva Bharati in Rajasthan, a fully accredited university, the Ahimsa Department offers a specialization in ecology. In December 1995, the department co-sponsored a conference entitled “Living in Harmony with Nature: Survival into the Third Millennium.”

Topics included the environmental crisis, ecological degradation, and unrestrained consumerism. A conference held at Harvard University in 1998 examined the topic of Jainism and ecology, and included representatives and scholars of various sects of Jainism. These activities reflect some ways in which the tradition has been newly interpreted to reflect ecological concerns.

At first glance, the Jaina tradition might seem to be inherently ecologically friendly. It emphasizes non-violence. It values all forms of life in their immense diversity, not merely in the abstract but in minute detail. It requires its adherents to engage only in certain types of livelihood, presumably based on the principle of ahimsa. However, if we look at both the ultimate intention of the Jaina faith as well as the actual consequences of some Jaina businesses, we might detect a need for in-depth critical analysis and reflection. First it must be noted that the observance of ahimsa must be regarded as ancillary to the goal of final liberation or *kevala*. Although the resultant lifestyle for monks and nuns resembles or approximates an environmentally friendly ideal, its pursuit focuses on personal, spiritual advancement. In a sense, the holistic vision of the interrelatedness of life is no more than an eco-friendly by-product.

In terms of the lifestyle of the Jaina lay-person, certain practices such as vegetarianism, periodic fasting, and eschewal of militarism might also be seen as eco-friendly. However, some professions adopted by the Jainas due to their religious commitment to harm only one-sensed beings might be environmentally disastrous, such as strip-mining for granite or marble, unless habitat restoration accompanies the mining process. Likewise, how many Jaina industries contribute to air pollution or forest destruction or result in water pollution? The development of a Jaina ecological business ethic would require extensive reflection and restructuring, a tradition well known within the Jaina community. Nonetheless, the Jaina community, despite its relatively small numbers, is extremely influential in the world of Indian business, law, and politics. If Jainas speak with a united voice on environmental issues, their impact can be quite profound.

Due to their perception of the "livingness" of the world, Jainas hold an affinity for the ideals of the environmental movement. The Jaina observance of nonviolence, as practiced by monks, nuns, and lay-people, has provided a model for a way of life that respects all living beings, including ecosystems. The Jainas are well suited to reconsider their traditions in an ecological light, particularly because of their successful advocacy against meat-eating and animals sacrifice, as well as their success at developing businesses that avoid overt violence. Many Jainas identify themselves as environmentalists. Through a rethinking of contemporary industrial practices, and concerted advocacy of environmental awareness through religious teachings and the secular media, the Jaina

tradition might help bolster the environmental movement not only in India but also throughout the world.

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- See also: Ahimsa; Gandhi, Mohandas; Goshalas (Home for Aged Cattle); India; Jataka Tales; Religious Environmentalist Paradigm.

James Bay Cree and Hydro-Quebec

For the James Bay Cree people of northern Quebec province in Canada, the watershed event was the decision in

1971 to develop the hydro-electric potential of their rivers. Facing one of the largest energy development projects ever built, the Cree people and their Inuit allies in the Hudson Bay area demanded recognition of their Aboriginal rights and went to court to assert their authority over the land.

The James Bay hydro project was a watershed event also for the evolution of Aboriginal land claims in Canada, and for the critique of large development projects. A powerful coalition of environmentalists and Aboriginal leaders, assisted by a well-publicized and prolonged court case in 1972–1973, was successful in initiating public discussion on some of the themes important in this volume: the role of humans in the environment, and the idea that humans can be a part of nature. The events triggered public discussion on the notion of a traditional ecology in which humans and nature are in a symbiotic relationship, with mutual obligations leading to “respect,” a central idea in the relations of many Amerindian groups with nature.

The Cree and the Inuit found not only a receptive public, but also a court sympathetic to their cause. They were successful in obtaining an injunction to stop development in 1973. However, this decision was overturned only a few weeks later by a higher court, forcing the Cree and Inuit to the negotiating table for the surrender of their Aboriginal claims and to open the way for hydro development. In 1975, the Cree and Inuit signed the *James Bay and Northern Quebec Agreement*, the first of the modern comprehensive land claims agreements in Canada. Under the *Agreement*, the Cree and Inuit obtained ownership rights to areas around their communities, exclusive hunting and fishing rights over a large territory, regional self-government powers, cash compensation and other privileges, in exchange for allowing Hydro-Quebec, the power company, to proceed with development.

The 1975 *Agreement*, signed under duress, left the Cree leadership with strong and ambiguous feelings about development. In the 1980s, the Cree allowed a series of alterations of the original hydro development plans. But in 1993, the Cree successfully fought and blocked a multi-billion dollar extension of the James Bay hydro project, known as the James Bay II or Great Whale development after the name of the Grande Baleine (Great Whale) River which is to the north of the James Bay I development.

Subsequently, in 2001, the Cree leadership signed an interim deal for the development of the Rupert and Eastmain rivers to the south of the James Bay I development. The action triggered a bitter fight that pitted community leaders against one another, with the chief of one of the directly affected communities, who was initially a key supporter, declaring, “I have little enthusiasm for going down in history as the Waskaganish chief who signed the death warrant for the Rupert River” (*Montreal Gazette*, 10 December 2001). As long as undeveloped hydro-electric potential exists in the region, these battles are

likely to continue. But the important questions for our volume are, who are these Cree people who talk about rivers as if they were alive, and what is their belief system really like?

The eastern James Bay Cree are part of the largest Aboriginal group in Canada. Their lands cover a good part of the boreal forest zone that stretches across Canada, and part of the northern plains. The Cree groups of the boreal forest were traditionally hunters, and many of them still obtain a large part of their protein diet from the land. Their hunting ethics and belief systems are rich, and have been documented extensively by anthropologists such as Harvey Feit, Richard Preston, Adrian Tanner and Robert Brightman.

The central belief of the James Bay Cree and some other groups of the boreal forest is that animals make themselves available to hunters who treat them properly. Those who break rules of proper conduct are punished. This punishment usually takes the form of hunting failure, and it can be individual or communal. For example, the Chisasibi Cree believe that the disappearance of caribou from their area for some seventy years is related to a disastrously large and bloody hunt that took place in 1914 when the repeating rifle first became available (Berkes 1999).

The rules of proper conduct are expressed as practices to follow, such as practices of showing respect for the animal. For example, the bones of important animals have to be disposed of in certain ways, as in placing of beaver skulls on trees. Tanner lists the many ways in which the Mistassini Cree show respect for black bears, from hunter's initial approach with an attitude of humility, to offerings made to the dead animal, to the butchering, consumption of the meat, and the disposal of the remains. Some of the rules are expressed as practices and attitudes to avoid. For example, it is widely believed that fish will avoid a person who boasts about his/her skills and previous successes. How do they know? Because the land is alive and animals are sentient beings.

Religion may be broadly defined as encompassing issues regarding the meaning of human life and engagement with transcendent powers, such as forces that impinge on people's lives. Most Cree are Christians, but their “religion” in the above sense indicates a belief system that differs considerably from the mainstream Western society. The Cree believe in a nature that pulsates with life and meaning. Their ecology is spiritual, rather than impersonal and mechanistic. Landscapes “know” people, rather than people knowing the land. Animals control the hunt and can retaliate by “returning the discourtesy.” Humans, animals and other beings in the environment share the same Creator; hence, just as one respects other persons, one respects animals. Social relations such as mutual obligations and reciprocity are extended to non-human nature. Respect and humility are important, and

Cree culture is rich in rituals that symbolize respect and remind the hunter of his/her ethical obligations.

Fikret Berkes

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- See also: Aboriginal Environmental Groups in Canada; Harmony in Native North America; Indigenous Activism and Environmentalism in Latin America; Indigenous Environmental Network; Inuit; Traditional Ecological Knowledge; Traditional Ecological Knowledge among Aboriginal Peoples in Canada.

James, William (1842–1910)

William James, the oldest of five children born to Henry James, Sr., and Mary James, was immersed from his youth in the family's romantic hopes to find spiritual significance in the natural world. The elder James read the mystic Emanuel Swedenborg's works extensively, lectured widely on his idealistic solutions to contemporary religious and social issues, and firmly believed that the material world was a mere shadow compared to the reality of spiritual forces that would bring about a more righteous and democratic society. In his young adulthood, William resisted these spiritual insights, especially when he began his own career in the wake of Darwinism by studying chemistry, anatomy, physiology, and medicine at Harvard in the 1860s.

The young James did not remain satisfied for long with the scientific and secular insights that surrounded him during his first career steps in the New Psychology. A traumatic personal crisis signaled his return to the issues his father had taught because he felt repulsed by the notion that material nature possessed only mundane physical reality. Although he worked in mainstream professions, as a teacher at Harvard throughout his career and

as a respected and popular psychologist, philosopher, and social commentator, his own commitments remained on the margins because of his drive to understand spiritual meanings in nature.

James' commitments remained fairly muted in his first major publications. He wrote his influential *Principles of Psychology* (1890) "from a natural science point of view," with comprehensive references to the experimental psychology of Europe and America and with a working assumption that reflected the scientific orthodoxy that mental life could be understood with physical explanations. However, his guiding motivation was to find the relation between brain and mind, between things material and impulses immaterial.

Those interests grew even as the psychology profession took an increasingly laboratory orientation in the 1890s. James quickly turned his attention to philosophy and to spiritual, psychical, and other exceptional experiences of human consciousness. He expressed his commitment to religious belief against the withering criticism of agnostics in his declaration of the importance of a "Will to Believe" (1895) in ideas that satisfy our need for commitment even when they cannot be empirically verified. He wrote *The Varieties of Religious Experience* (1902) to document the extraordinary depths of personal religion and to showcase the profound impact of belief on human saintliness and mystical insight. In the essays collected as *Radical Empiricism* (1912), James proposed to show the intimate relation between subjective ideas and empirical objects. In *A Pluralistic Universe* (1909), he argued for looking at the world in terms of the multiplicity of its empirical parts, without losing the sense of purpose derived from religious worldviews. James is perhaps most famous for his theory of *Pragmatism* (1907), which proposed that usefulness and practical action should be the way to measure the worth of ideas, and he was particularly interested in showing how pragmatism could endorse religion's ability to motivate and sustain.

In his work, William James did not dismiss science, but he proposed that its insights, along with those of religion, were all useful as paths for increasing our awareness of human possibilities embedded in our physical frames. With these commitments, he anticipated twentieth-century humanistic psychology and the flowering of personal spiritualities that have flourished across denominational lines in the last few generations. His influence is perhaps best expressed with the image he used in *The Varieties*: our normal waking consciousness is only a doorway to some other cosmic consciousness, of which we occasionally get glimpses, especially with the help of religious geniuses. And so, by the end of his life, James found a way to express his father's commitments in more secular terms; like a psychologist, he investigated the human mind in its relation to the brain, but with his spiritualist drive, he proposed that those physical,

psychological facts are just a first step in comprehending profound spiritual meaning.

Paul Jerome Croce

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- See also: Ecopsychology; Perennial Philosophy; Swedenborg, Emanuel; Transpersonal Psychology.

Japanese Gardens

Garden design has been a spiritual art form in Japan for a thousand years, one in which the Japanese have explored various conceptions of nature. Influenced by both Buddhism and Shinto, the aesthetic complexity of Japanese gardens has been seen as a sign of the Japanese reverence for nature. However, the relationship between Japanese gardens and what we call “nature” is complex and raises questions about the specific quality of love of nature in the Japanese tradition.

There are various types of artistic Japanese gardens. The first type we can call “symbolic.” Starting in the Heian Period (794–1186), gardens were constructed as representations of various types of spiritual realms. In some cases they suggested the paradise of Pure Land Buddhism. In other cases, influenced by Shingon Buddhism, they were topographic mandalas, cosmic diagrams of ultimate reality. Still other gardens suggested the fabled Daoist islands of immortals. In all cases the assumption is that there can be a direct correlation between the natural world and the divine, and that conscious human design can in a sense make the sacred present in the concrete world of trees and ponds.

In the medieval period (1186–1603), Zen Buddhism became the primary influence in Japanese gardens. A new form of garden developed, which we can call “micro-cosmic.” These gardens represent life-like scenes of nature in a miniature way. Perhaps the finest example is at the

temple Daisen-in in Kyoto, where a composition of rocks about three-feet high suggests a huge mountain and a waterfall, with a narrow bed of gravel suggesting a river and isolated rocks serving as islands. There is also a large rock clearly signifying a boat. The scene presented is not one of some paradise distinct from this world but rather a realistic setting in the mountains. But religious reality is not absent because, as Buddhism’s Heart Sutra says, “form is emptiness and emptiness is form”: this very world is ultimate reality. The gardens are not merely clever miniatures but religious microcosms. They cultivate in the viewer a state of mind liberated from conventional assumptions about space and time, large and small, near and far.

Another garden form is the “dry landscape” (*karesan-sui*) or rock and gravel garden. The most famous example is at the Zen temple of Ryōan-ji. This garden is about the size of a singles tennis court and consists of a flat expanse of gravel broken only by five earthen mounds that hold a total of fifteen rocks and some moss. There are no trees or flowering plants. Some observers have said the mounds represent islands in a sea, mountain peaks breaking through cloud cover, or even a mother tiger leading her cubs across a river. But this type of garden is not realistic or representational. Because of that we might be tempted to call such gardens “abstract,” but they are not abstractions from the concrete world of nature but rather elemental distillations of it. The basic components of Japanese garden design – rocks, plants, and water (in the form of flat gravel) – are concentrated into their most elemental form. As with the microcosmic gardens, the rock garden is meant to be viewed from a veranda of the temple bordering one of its sides. Meditation on the rocks and gravel is considered particularly conducive to the stillness and open awareness prized in Zen.

Late in the medieval period another form of garden developed in association with the Way of Tea (*chadō*). The tea ceremony (*cha-no-yu*) developed out of the drinking of tea in Zen monasteries, a custom brought from China that helped meditating monks remain awake. Eventually, a highly ritualized form of serving tea to a few guests developed. The ceremony became a kind of choreographed dance of enlightenment. Each person brings to the occasion an absolute focus on the present based on a deep tranquility and a recognition of the unlimited value of every moment. The tea house is simple and natural, exemplifying the aesthetic ideal of *wabi* (aesthetic rusticity and tranquil appreciation of the simple and natural). The approach to the tea house and the ceremony needed to cultivate a spiritual state of mind, and tea garden (*roji*) developed in order to accomplish this. The garden does not function to display conventional beauty, but to nurture a meditative state of mind: it is spiritually therapeutic. It works by having the viewer walk through a garden that is highly subdued, usually only rocks, moss, and some

evergreen plants organized in a subtly aesthetic way. Once the participant enters the tea house, the door is closed and there is no view of the garden, for now he is to focus all attention and value on the tea ceremony.

In the seventeenth century the “stroll garden” developed. As in the tea garden, the viewer walks through the landscape, but these are larger gardens in which spring blossoms and fall colors provide a rich but still subdued beauty. The most exquisite example is Katsura villa, just outside of Kyoto. Walking through the garden, the viewer encounters a variety of aesthetically composed scenes in a subtle rhythm of stimulation and quietness, turns and pauses. The garden exhibits the two major aspects of a Buddhist worldview: change and interrelationship. Subtle framing techniques emphasize the interrelatedness of rock, water, tree, and building, while stone steps and bridges tie together divisions in garden areas. Strolling through Katsura is like walking in a holy cathedral, a sculpture park, a landscape painting by Monet, and Walden Pond – all at once.

These various types of Japanese gardens demonstrate the beauty and religious significance of nature. But from a Western perspective we can ask whether they are “natural.” Japanese gardens are minutely maintained, with pine trees trained to appear like old trees growing on a mountain cliff (including tying branches to a pole and pulling them down so they are horizontal, as well as plucking older needles so the tree is very open). This approach to design we can call “formal naturalism.” It is formal because the design and the maintenance of the garden reflect a preconceived ideal of what a garden should look like – very little is left to grow on its own. But it is naturalism because the design is based on naturalistic principles. Rather than the stiff symmetry of formal French gardens, Japanese stroll gardens display a more dynamic asymmetrical balance, and they are intended to reflect the essential nature of the objects.

Western observers have tended to distinguish “nature” from that which has been subject to human control, and in this sense Japanese gardens are certainly not natural. But we need to recognize the assumptions at work in Japanese aesthetics. In East Asian religion, the ideal is to act according to our nature, but our nature is obscured and distorted by our desires and delusions. Left by themselves, humans do not act according to their nature. It takes rigorous spiritual training to uncover our true nature. A similar idea is at work in garden design. The gardener training the pine tree is not distorting the pine but helping it manifest its true nature, which is exemplified by trees subjected to centuries of harsh conditions on a mountain cliff. In addition, nature and culture are not assumed to be separate spheres. Humans are part of nature, and culture is interrelated with nature’s processes. The question is whether individual behavior and particular cultural activities conform to nature’s ways or to human self-

centeredness. Thus the “idealized” nature in Japanese gardens can be considered to be the true nature of nature.

There is, however, a significant limitation in Japanese garden aesthetics. As John Elder has pointed out, Japanese gardens tend to put high spiritual value on specific, often walled-in spaces. This concentration of value runs the risk of devaluing all that is outside the confines of a garden. The technique of “borrowed scenery” (*shakkei*) integrates the garden with its surrounding landscape (for example, by using trees in the garden to frame a distant mountain peak). In addition, Buddhism proclaims that all places interpenetrate and all of the phenomenal world is the Absolute. But for most viewers, the garden remains a special place of beauty and value, and the mundane world they return to when they leave the garden is left neither to our sense of natural wildness nor cultivated according to formal naturalism. All too often, it is subject to human exploitation and degradation.

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Japanese Love of Nature

Renowned Buddhist scholar D.T. Suzuki claimed in *Zen and Japanese Culture* that Japanese demonstrate a unique “love of nature,” especially as conveyed through such arts as painting, landscape gardening, the cultivation of *bonsai*, and haiku poetry. Japanese religious traditions have shaped this “love” of nature, even though it is not necessarily as unique or thoroughgoing as Suzuki’s idealized representation made it out to be.

In the mythology set forth in the *Kojiki* (712) and *Nihon Shoki* (720), heavenly *kami* create the Japanese

archipelago, as well as basic forces and components of nature, many of which are *kami* in their own right. From early in their history, Japanese have regarded particularly awe-inspiring parts of their natural surroundings as *kami*. They have demarcated distinctive trees, rocks, waterfalls, and even entire mountains as *kami* or the dwelling places of *kami*. Through Shinto practices Japanese align themselves with benevolent *kami* (or placate malevolent *kami*), thereby harmonizing themselves with the life-sustaining energies that course through nature. Further, Shinto rites of purification serve to maintain or, if need be, restore harmony with those energies.

Buddhism has further influenced Japanese attitudes toward nature. Doctrines of rebirth have subverted rigid boundaries between humans and other parts of nature, as have doctrines of “Buddha-nature” (*busshō*) and “original enlightenment” (*hongaku*) as a kind of innate buddhahood in not only humans but also other animals, plants, and even, to some exegetes, inanimate parts of nature. Cosmological schemes deriving from Kegon (Ch. Huayan) Buddhism have situated humans in a universe characterized by total interdependence. Zen Buddhists often claim that seated meditation (*zazen*) both reduces the epistemological distance between the practitioner and nature (hence the rhetoric of “becoming one” with nature or things therein) and eradicates entanglement in rational analysis and volitional effort, thereby fostering “naturalness” in the sense of spontaneity. In fact, the closest Japanese equivalent to “nature,” *shizen*, literally meaning “self-so,” or “in the manner of itself,” connotes spontaneity in the sense of things expressing themselves in accordance with their natures when not affected by human intervention.

Some writers have argued that these dimensions of Japanese religions generate both a love of nature and a firm basis for environmentalism. Upon closer scrutiny, however, the Japanese “love of nature” has distinct limitations.

First, the nature loved from the Japanese religio-aesthetic perspective is nature *simplified* or *reduced* to its essence. It is a distilled, refined, and miniaturized nature, evident in minimalist rock gardens, carefully pruned *bonsai* trees, the suggestive brush strokes in landscape paintings, and epigrammatic haiku poetry. This is stylized, not wild, nature. In fact, Japanese have usually gazed at wild nature – with all of its mysterious and often destructive powers – from a distance, as something to be avoided, pacified, or tamed.

Second, Japanese generally regard only awe-inspiring features of nature as sacred (in the sense of being *kami*), not nature more broadly, and hence rigorous protection of nature in Japan has not extended much beyond those special features.

Third, as an adverbial expression indicating a certain mode of being – whether of natural entities or human

action – *shizen* exists in any biosphere, pristine or polluted, sustained or destroyed.

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See also: Aesthetics and Nature in China and Japan; Buddhism – East Asia; Japanese Gardens; Japanese Religions; Matsuo Bashō; Religious Environmentalist Paradigm; Whales and Japanese Cultures; Zen Buddhism.

Japanese Religions

To trace how “nature” was experienced and expressed in the history of Japanese religions is no simple matter. It was not before the end of the eighteenth century, when the Japanese scholars of Dutch Learning (*Rangaku*) translated “*natuur*” into *shizen*, that the Japanese had for the first time managed to form a terminological equivalent for the Western concept of nature. It was during the Meiji (1868–1912) era that the categories of “nature” (*shizen*) and “culture” (*bunka*) were fixed in their verbal expressions in Japanese, not only as distinct but also as polarized conceptions. The term *shizen* had been borrowed much earlier from the Chinese, but the Chinese term (pronounced by the Japanese as *jinen*) was used to mean the spontaneous power of self-development as well as the results that came from that power. This idea is drawn from a Daoist point of view which is apt to perceive nature as a cosmic whole in which human as well as “divine” dimensions are integrated.

That the ancient Japanese did not have an equivalent term for the Western term “nature” does not necessarily mean that they had no recognition of the phenomenon, which is today called *shizen*. The Japanese, for most of their history, preferred terms such as *mono* or *ametsuchi* (*tenchi*), which are semantically more comprehensive than the term *shizen*. The term *mono* includes not only “things” but also “deities” (such as Omononushi, the great deity of the Miwa Shrine in Yamato), “souls” and “spirits”; and the term *ametsuchi* which literally means “heaven and Earth” is another alternative concept to refer to what the

Japanese now call *shizen*. With respect to the term *mono*, it has been repeatedly asserted by some scholars that the ancient Japanese recognized natural phenomena as manifestations of *kami* (deities), which opens up the possibility of comprehending nature as a plurality of *kami*.

According to Japanese mythology as narrated in the *Kojiki* (*Records of Ancient Matters*, completed in 712) and the *Nihonshoki* (also known as *Nihongi*, *Chronicles of Japan*, compiled in 720), natural phenomena are themselves the offspring of *kami*. This animistic view of nature might have been influenced by the beliefs of the peoples of the Jomon (ca. 4000 or 3000 – 250 B.C.E.) and Yayoi (ca. 250 B.C.E.–250) periods, and developed later into the religious tradition now designated by the term Shinto. In those texts, animistic spirits were individualized and deified as natural deities of, for instance, the sun (Hirume, the original name of Amaterasu), the moon (Tsukiyomi), the mountain (Yamatsumi), and the ocean (Wadatsumi). The *Kojiki* and *Nihonshoki* also indicate the worldview of early Japan, in which the dwelling place of the celestial deities (Takamagahara), the world of living beings (Ashihara no nakatsu kuni) and the underworld of the dead (Yomi no kuni) are not detached but contiguous, so that the inhabitants of the three worlds can easily interact. The mythology in these documents tells that Omononushi, sometimes assuming a serpent form and at other times taking on human shape, married a human maiden, and became the tutelary deity of the Miwa clan. In this perspective, nature, human society and the spiritual world are so close as to be inseparable. From this point of view, Byron Earhart once described “the closeness of human beings, gods, and nature” as one of the characteristics of Japanese religions, saying that “mortals, gods, and nature form a triangle of harmonious interrelationships [that] is a cornerstone of Japanese religions” (Earhart 1982: 7–8).

This harmony might have originated from a Japanese cosmogony in which there is no creator god but rather a plurality of *kami* coming into existence one after another generated by other *kami*. This is manifested especially in the work of the divine couple Izanagi and Izanami, who came together to give birth to the eight islands of Japan and the various *kami* who came to populate the islands. It may be worth contrasting this procreation seen in the ancient Japanese myth to the Judeo-Christian cosmogony, which is focused on a single creator God. The contrast here seems clear, between what might be characterized as the “cosmogony of creation” in the Judeo-Christian tradition and the “cosmogony of generation” in the Japanese tradition. The “cosmogony of creation” is based on the notion of God as the single Creator, the transcendent origin of creation, while the “cosmogony of generation” as expressed in the *Kojiki* and *Nihonshoki* puts special emphasis on the notion of *musuhi* (the generative force), which is immanent in all beings.

In his analysis of the *Kojiki*, Maruyama Masao noted that, in addition to this contrast, the dominance of “becoming” (*naru*) is one of the characteristics of what he calls the “ancient substratum” of Japanese thought, a characteristic he opposed to the “artifice” or “making” (*tsukuru*) prevalent in the West. Although caution must be taken so as not to oversimplify these two ideal types, it nevertheless seems to be worthwhile to contrast “becoming” with “making” as illustrating the difference between the “cosmogony of creation” and “cosmogony of generation.” Maruyama, in this regard, took two deities, Taka-mi-musuhi-no-kami (“High Generative-Force Deity”) and Kami-musuhi-no-kami (“Divine Generative-Force Deity”) as the most important in Japanese cosmogony. Both deities symbolize the power of “generation/ becoming,” by which various *kami* “naturally” come to existence one after another, which explains the immanent relationship among *kami*, human beings, and nature.

As to this “ancient substratum,” we should not overlook the Sino-Korean influences on Japanese views of nature, especially that of Daoism (*dōkyō* in Japanese). Scholars such as Fukunaga Mitsuji, Yoshino Hiroko, and Arakawa Hiroshi, for instance, have persuasively asserted the strong and comprehensive influence of Daoism as well as *onmyōdo* (the way of Yin-Yang) on the *Kojiki* and *Nihonshoki*, especially in the section of cosmogony of those texts. Daoism, which emphasizes harmony with nature, was adopted by the ancient Japanese people and became part of the Japanese religious heritage so that the Daoist cosmological theory provided the idiom for expressing ideas that were already a central element of Japanese indigenous religion.

It might be safe to say that Japanese religions, from the beginning, generated an intimate view of nature among the Japanese, teaching that nature is full of spirits and, therefore, not essentially dissimilar to human beings. This view of nature reached an apex in the Heian period (794–1192), when literary and aesthetic appreciation of nature pervaded among the Japanese, especially the noble class. The sentiment of the era is typically expressed in the phrase *mono-no-aware*, literally, “deep feeling over things,” which was used in the literature, prose and poetry of the era to express an empathic sentiment felt in experiencing beauty, melancholy, and ephemerality throughout nature and human life. This term also indicates the inter-relationship between *mono* (things) of the outer world and *aware* (feelings) of the inner world, a spiritual and aesthetic ideal based on a sensitivity toward the harmonious world as a whole.

There is no doubt that the Japanese worldview, which conceives of nature as the totality of human and divine existence rather than the opposite of human culture, has been sustained and intensified by Chinese epistemologies conveyed by Daoism, Buddhism and Neo-Confucianism. It is not only in Japan but also in China (and Korea) that

the unification of humanity with nature has become a religious, as well as artistic, ideal. Arguing that magic in Japan is a “natural” science at the interface of nature and culture, Josef Kyburz points out that the idea of fusion with nature, and, by extension, with the cosmic whole, has been pursued in Japanese (and Chinese) culture as “the absolute ideal of existence, as a way of life and, ultimately, as the realization of the cosmic Principle” (Kyburz 1997: 261), sophisticated by Daoism and Zen Buddhism. The former provided a concept for the cosmic principle (or “Way” – Chinese *dao*; Japanese *dō*), while the latter, emphasizing the identification of the soul with the universe, taught how to awake, through intense contemplation, a complete sympathy with nature, a sympathy in which humans and nature, present and eternity, life and death, are no longer contradictory.

The fusion of the animate and inanimate permeated Japanese culture so widely and deeply that natural phenomena such as mountains, rocks, stones, the sound of blowing wind and even the chirping of insects came to be regarded to have sensuous connotations which help humans to be aware of their own inner nature (or Buddha-nature). Most religious sites in Japan, then, are not detached from their natural surroundings: rather, sacred centers such as Kumano and Ise, the buildings of which form a part of the landscape, have been regarded as a Pure Land or the Eternal Center of Heaven and Country, and have become centers of pilgrimage and devotion where the Japanese people from all strata of society visit.

Another example of the closeness of nature and humans, or the spiritual world and human society, is the continuity of *yama* (mountains, forests) and *sato* (village). It is well known among the Japanese folklorists that the most sacred mountains in Japan have two shrines: the *yama-miya* (shrine on the top of the mountain, the abode of the *yama no kami*, *kami* of the mountain) and the *sato-miya* (shrine at the foot of the mountain, the abode of the *ta no kami*, *kami* of the paddies). This dual system is considered by Yanagita Kunio to be the prototype of ancestor worship of Japan. According to him, it has been believed throughout Japan that “in the spring the *Yama-no-kami* descends to the farming settlements and becomes the *Ta-no-kami* and ascends again into the mountains at the end of autumn to become *Yama-no-kami* once more” (Yanagita 1970: 74). This cycle of *kami* was so closely related to the cycle of four seasons and rice planting that

[i]f there was an idea that instead of crossing into the Buddhist Paradise, the souls of our ancestors remain in a quiet, calm place in our land to return at a fixed time each year, then instead of in early autumn when the rice stalks are starting to flower, would not that time be when [human beings] are preparing to plant rice seed beds and their hearts are

sensitive as they hopefully await the return of the *Kami*? (Yanagita 1970: 75).

Arne Kalland and Pamela Asquith also point out that *yama* denotes not only the “outside” of *sato* but the “inside” of the other world (or the spiritual world), a zone of transition. In this sense, mountains or wilderness, being “betwixt and between,” have been regarded as potentially dangerous areas inhabited by deities and spirits, and they, consequently, become ideal sites for religious exercises such as meditation and pilgrimage.

If we may imply an animistic view of nature in the expression “nature of life” (nature is full of life) and a pantheistic notion of nature in the expression “life of nature” (all nature can be seen as one holistic life), the worldview of the Japanese people can be seen as composed of two distinct dimensions, penetrating into each other from the ancient times to the present. The mythical and religious representations of nature in Japanese culture mentioned above have formed the Japanese concept of nature. The Japanese see nature as something that always contains harmony or order. Every natural thing, mountains and rivers, rocks and trees, thunders flowers and winds, and insects, can be seen as a living god, which altogether compose the harmonious cosmos.

As a part of the cosmos, humankind also should live harmoniously within nature, which is transitory and temporary like the cycle of the seasons. Not only nature but also human life are seen as temporary phenomena inescapable from the cycle of transmigration. The self of a person who prefers to live in close communion with nature, instead of opposing it, then, is dissolved in and assimilated with cosmic order, or the “true self.” The construction of capitals such as Nara and Kyoto is a notable example of the practical means to bring about the identification of human space and nature.

The natural order of the harmonious cosmos is, however, not always benevolent to human beings; it also easily becomes so malevolent and dangerous, represented by fierce deities such as *kami* of storm, thunder, and pest, as to cause disasters. To calm and soothe a malevolent *kami* (*aramitama*) and make it into a benevolent *kami* (*nikimitama*, or *nigimitama*) requires a ritual pacification. This ritual transformation of chaos into harmonious cosmos affects both nature and human society, because both are mutually reflected in each other.

As we have seen, Japanese religious traditions see nature as immanently divine, and, as a result, consider the correspondence between external beauty and internal equilibrium as axiomatic. Regarding nature as divine and sacred, the Japanese people did not consider nature as inferior or opposed to human beings. They preferred to live embedded in nature, expressed in such ways as flower arrangement, the tea ceremony, literati art works, and Zen painting, all of which, in this perspective, however, are not

necessarily equivalent to nature as it is. Rather, nature, as religiously and aesthetically signified in the Japanese history, is a kind of abstraction of an idealized world including human beings as well as *kami*.

Since the middle of the nineteenth century, modern Japan has been eager to adopt and absorb Western scientific and technological ideas in which the concept of “human as subject and nature as object” is central (Morris-Suzuki 1998: 36). It brought the Japanese a disintegrated idea of nature: objectified nature as resources for national industrialization, and imagined nature as the “heart of the Japanese culture.” Both are symbolized in the phrase of *wakon yosai* (Japanese spirit, Western knowledge). The former idea of nature easily pushed the Japanese people into serious environmental degradations (massive pollution), while the latter has been emphasized more and more in the course of modern constructions of national identity as “anti-modern” and “anti-West.”

It has been said that a “love of nature” is an essential part of traditional Japanese culture. If so, how do we account for such environmental degradations as the Minamata disease and the *itai-itai* disease taking the Japanese “love of nature” into consideration? We must further contextualize the Japanese concepts of nature to clarify how nature (*jinen*, *shizen*) has been experienced, imagined, and idealized in Japanese history.

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Jataka Tales

Jataka or “stories from the earlier births (of the Buddha)” is a collection of around 550 stories. They depict many of the former lives of the Buddha when he was a *bodhisattva*, a being on the way to become a Buddha. In many of his previous lives he was a human being, but interestingly, in many others, the celebrated founder of Buddhism, Siddhartha Gautama, was a noble and good animal.

Many of the Jataka stories belong to a literary genre that uses stories about animals to convey to humans lessons about life. In some of the Jataka stories animals are made to exemplify values celebrated by Buddhism such as loving kindness (*metta*) and compassion (*karuna*). Buddha as a gazelle is willing to give up his life to save a pregnant gazelle. His altruistic behavior persuades the king to abandon hunting altogether thereafter (story number 12). In another life the Buddha was a self-sacrificing rabbit, who jumped into the fire to give himself up as food for a guest (story number 316).

The Jataka stories illustrate the doctrine of rebirth. Each story is introduced by a “story of the present,” which narrates the circumstances in which the Buddha told the story of one of his previous lives, and ends with the Buddha identifying the persons in the story in their present rebirths. Although the doctrine of rebirth is generally accepted in Buddhism, most people have no memory of previous lives. Buddha, however, distinguished himself by being able to remember a large number of them. He was able, therefore, to remember many lives as an animal. This illustrates the Buddhist doctrine that humans and animals are part of the same rebirth realm; there is no absolute difference between humans and animals.

The Jataka text, which in the English translation makes up more than 1800 pages, is part of the Pali Canon of the Theravada Buddhists known as Tipitaka or “three baskets.” Jataka stories are, however, found in the texts of all the main Buddhist groups. The oldest of the Jatakas were composed from around the third century B.C.E., but many were composed several centuries later and the collection incorporated into the Pali Canon is from around the fourth century. Although it is a later part of the Pali Canon, it is one of the most popular ones. Themes from the Jataka were used to decorate the Buddhist monuments and are among the oldest motifs in the arts of India. Monks often use Jataka stories, in their sermons, to teach ethics to lay people. The purpose of the stories is to entertain and to

The Great Monkey Jataka (*Mahakapijataka*)

In the past when Brahmadatta ruled in Benares, the Bodhisatta (later to become the Buddha) was reborn as a monkey. He came of age, complete in length and breadth, became strong and vigorous and lived in the Himalayas in the company of eighty thousand monkeys. On the banks of the Ganges a mighty mango tree (some say it was a banyan tree) was rising up like a mountain-top, with branches and forks with dense shade-giving foliage. Its sweet fruits with divine aroma and taste were as large as water jars. The fruits from one branch fell on the ground, from another into the Ganges, and from two other branches into the main trunk of the tree. The Bodhisatta while eating the fruits with the flock of monkeys, thought: "The fruit falling from the tree into the river will some day be a hazard to us." So that not even one fruit from the branch above the water was left, at the time of flowering when the fruits were no bigger than chick peas, he made them eat and throw away the fruits.

Nevertheless, one ripe fruit hidden in an ant's nest was not discovered by the eighty thousand monkeys. It fell into the river and was caught in the upper net of the king of Benares who was bathing for amusement with a net set up above and below him. When the king had played the whole day and was going away in the evening, the fisherman who was taking up the net saw the fruit, and not knowing what it was, showed it to the king. The king asked: "What is the name of such a fruit?" "We do not know, Sir." "Who will know?" "The forest workers, Sir." He had the forest workers called and learning from them that it was a mango, he cut it with a knife and had first the forest workers taste it, then ate some himself and thereafter shared some with his women and companions. The taste of the ripe mango pervaded, and remained in, the whole body of the king. Possessed by desire for the flavor, he asked the forest workers where the tree was, and hearing that it was on the river bank in the Himalaya, he had several boats joined together and went upstream by the route shown by the forest workers.

Later (the exact number of days is not told), when they arrived at that place, the forest workers told the king: "Here is this tree." The king stopped the boats and went on foot with a large group of people. Having the bed prepared at the foot of the tree, he ate some mangos, enjoying the many marvelous flavors, and laid down. They placed a guard in each direction and made a fire.

When the folks had fallen asleep, in the middle of the night, the Bodhisatta arrived with his flock. Eighty thousand monkeys moving from branch to branch ate mangos. The king awakened and seeing the flock of monkeys, woke up his men and called on the archers saying: "Surround these monkeys who eat the fruit so that no one escapes, and shoot them. Tomorrow we will eat mangos with monkey meat." The archers obeyed by

saying "very well," surrounded the tree and stood with arrows ready.

The monkeys saw them and not able to escape feared for their lives. They came to the Bodhisatta and asked: "Sir, the archers have surrounded the tree and declare 'We shall kill those fleeing monkeys.' What shall we do?" and stood shivering. The Bodhisatta said: "Have no fear. I will save your life." He comforted the flock of monkeys, climbed a branch going straight upward, went along another branch that stretched toward the Ganges, and jumping from the end of it one hundred bow lengths, he landed on the other side of the Ganges on the top of a bush. While coming down he measured the distance, saying "that much is the distance I have come." He cut a creeper at the root, stripped it, and said: "So much will be fastened to the tree and so much will stay in the air," and so estimated the two lengths, not considering the part bound to his own waist. He took one end of the creeper and fastened it to a tree on the bank of the Ganges. The other end he fastened to his own waist, and then jumped the length of one hundred bow lengths with the speed of a cloud torn by the wind. However, he was not able to reach the tree. Seizing a branch of the mango tree firmly with both hands, he gave the sign to the flock of monkeys: "Quickly step on my back and go to safety by means of the creeper." In that way the eighty thousand monkeys escaped after first having greeted him and apologized. At that time Devadatta was also a monkey and in that flock. He said: "Now is the time to get rid of my enemy." He climbed up a branch, gained speed, and fell on the Bodhisatta's back. The Bodhisatta's heart broke and a strong pain arose. Devadatta who had caused that great pain, went away, and the Bodhisatta was alone.

The king was awake and had seen all that happened to the monkeys and the Bodhisatta. He lay down thinking: "This is an animal, yet he brought about the well-being of his flock without regard for his own life." When the day broke, being pleased with the Bodhisatta, he thought: "It is not right to destroy this king of the monkeys. I will bring him down in some way and take care of him." So placing the row of boats below on the Ganges and making a platform there, he made the Bodhisatta come down slowly, laid him down on his back, dressed him in yellow robes, bathed him in Ganges water, had him drink sweetened water, and had his body purified and anointed with expensive oil. He put an oiled skin on a bed, made him lie there and sat down on a low seat. Then he spoke the first verse.

You made yourself a bridge for them, so that they
safely crossed
What are you then to them, great monkey, and
what are they to you?

The Bodhisatta heard him and spoke these verses to instruct the king:

I am the monkey's king and lord, the guardian of
the flock
When they were overwhelmed by sorrow and ter-
rified of you

I jumped the distance, one hundred bows
outstretched
a thin rope of creeper was firmly bound around
my waist

impelled by the wind like the tearing of a cloud I
jumped towards the tree
unable to reach, I grasped at a branch and held it
with the hands

And as I hung stretched between the creeper and
the branch
the monkeys together walked across on foot to
safety

Therefore no fetter pains me and death will not
cause me pain
Happiness brought I to those over whom I used to
rule

This simile for you, O King, is made to show you
clearly
that of the kingdom, the draught bullocks, the
army and the city
is happiness to be sought by the knowing king

The Bodhisatta in this way instructing and teaching the king, died. The king calling his minister, said: "Give this monkey king a burial service like a king." He ordered the women to come to the funeral in red clothes with disheveled hair and with torches in their hands as the retinue of the monkey king. The ministers made a funeral pile with a hundred cartloads of wood. They performed the funeral of the Bodhisatta in a kingly manner. Thereafter they took the skull and came to the king. The king had a burial mound made at the place of cremation, had lamps lighted there, had it honored with incense and flowers, and had the skull inlaid with gold. He had the skull placed on the point of a spear in front of the burial mound and honored it with incense and flowers. Thereupon he went to Benares, had it placed on his own gate and had the whole city decorated. He worshipped it for seven days. Finally, taking it as a relic, and establishing a shrine, he honored it with incense and garlands as long as he lived. Established in the teaching of the Bodhisatta, he gave alms and did meritorious deeds, and ruling his kingdom with righteousness, he became destined to heaven.

Translated from Pali by Knut A. Jacobsen

convey moral teachings. Several types of stories have been included in the Jataka: fables, fairy tales, anecdotes, short stories, sayings and pious legends. Many of Jatakas were not of Buddhist origin and many of them are also found in non-Buddhist Indian literature.

The Jataka stories contradict some of the classical doctrines of the Buddhist traditions about animals. An animal rebirth is usually considered bad (*durgati*) because animal life contains more suffering than happiness. Animals are unable to produce religious merit, they cannot progress effectively on the path to nirvana and they are not admitted as members of the *sangha* (community of monks). Critiques of the possibility of constructing a Buddhist environmental ethic usually neglect the Jataka stories. However, some of the stories tell about humans who are impressed with the altruistic acts of animals. They describe humans caring for animals and animals caring for humans. In one story Buddha in a previous life, as an ascetic, brought water to animals in a time of drought, and the animals in gratitude brought him food (story number 124). Some Jatakas describe friendship between animals, thoughts and deeds of humans are ascribed to animals, and some stories make animals seem similar to, or, even better than humans. The Jatakas might teach us to recognize the

humanness of many animals, an implication of the Buddhist doctrine of rebirth.

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See also: Animals; Buddha; Cetacean Spirituality; Dolphins and New Age Religion; Elephants; Hyenas – Spotted; Islam, Animals, and Vegetarianism; Nile Perch; Hinduism; India; Serpents and Dragons.

Jeffers, John Robinson (1887–1962)

John Robinson Jeffers was born in Allegheny, Pennsylvania. His father, a noted seminary professor, sent him as a child to boarding schools in Switzerland for training in languages and literature – Greek, Latin, French, German, and English. Undergraduate studies at Occidental College in Los Angeles were followed by graduate studies in literature, medicine, and forestry at the University of Zurich, the University of Southern California, and the University of Washington. Jeffers married Una Call Kuster in 1913 and settled in Carmel, California, the following year. Twin sons, Garth and Donnan, were born in 1916. In 1919, Jeffers helped build Tor House, a stone cottage he and Una designed, on a barren bluff above the sea. The skills he learned as a stonemason were used throughout his life, first on Hawk Tower, which he completed in 1925, and then on additions to his home.

An earnest but unremarkable poet in young adulthood, Jeffers became a poet of great power. The transformation occurred in his early thirties, when he was building Tor House. Like other artists and intellectuals of his generation, Jeffers was shaken by the breakdown of civilization occasioned by World War I. Working outdoors day after day, however, with the vast ocean before him and the massive continent behind, helped him see beyond the world's sorrows and achieve a new understanding of humanity, nature, and God.

Humans, Jeffers came to believe, are not qualitatively superior to other forms of life. Unfortunately, however, most people believe otherwise. Indeed, anthropocentrism is so ingrained that when people think about the past, they think primarily of human history; when they think about the future, they dwell on human destiny; and when they think about the present, they privilege human needs. Narcissism, as such, is a mental disorder, the antidote for which is a recognition of the “transhuman magnificence” of the natural world. Nature, Jeffers asserted, is supreme. As he said in “The Place for No Story,” referring to the rugged landscape of the Big Sur coast, “No imaginable / Human presence here could do anything / But dilute the lonely self-watchful passion.” Earth itself, Jeffers believed, will outlast its present affliction – human dominion – and return to a state of wild beauty. Meanwhile, an appreciation of nature can lead to an experience of God, who is all there is:

We that have the honor and hardship of being human / Are one flesh with the beasts, and the beasts with the plants / One streaming sap, and certainly the plants and algae and the Earth they spring from, / Are one flesh with the stars. The classifications are mostly a kind of memoria technica, use it but don't be fooled. / It is all truly one life, red blood and tree-sap, / Animal, mineral,

sidereal, one stream, one organism, one God” (“Monument”).

Jeffers' pantheism has several unique features, the most significant of which is his doctrine of divine suffering. Whereas most theistic systems imagine God as a perfect being who, at an ultimate level, experiences eternal peace, in Jeffers' view God purposely endures unending torment. As he says in a letter to Rudolph Gilbert (29 November 1936), “If God is all, he must be suffering, since an unreckoned part of the universe is always suffering. But his suffering must be self-inflicted, for he is all; there is no one outside him to inflict it.” Such a God, fierce as a hunting hawk, is not inclined to kindness. Indeed, “He has no righteousness / No mercy, no love” (“At the Birth of an Age”).

The implications of this and other tenets of his vision were explored by Jeffers in seventeen volumes of epic, dramatic, and lyric poems written in a forty-year career.

Titles of major books include *Roan Stallion*, *Tamar and Other Poems* (1925), *Cawdor* (1928), *Thurso's Landing* (1932), *Be Angry at the Sun* (1941), *Medea* (1946), *The Double Axe* (1948), and *Hungerfield* (1954). Though always controversial – for his imputed misanthropy (he called his philosophy “Inhumanism”), his opposition to war, his tales of madness and cruelty, and his unyielding commitment to the principles of environmentalism – Jeffers had a profound impact on a wide range of readers, who found in him one of the few poets of the modern age who spoke authentically in the vatic mode. When David Brower was working with Friends of the Earth, for instance, he established a journal called *Not Man Apart*. The title came from the concluding lines of a poem by Jeffers, “The Answer”:

Integrity is wholeness, the greatest beauty is
Organic wholeness, the wholeness of life and things,
the divine beauty
of the universe. Love that, not man
Apart from that, or else you will share in man's
pitiful confusions,
or drown in despair when his days darken.

James Karman

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See also: Abbey, Edward; Death and Afterlife in Robinson Jeffers & Edward Abbey; Earth First! and the Earth Liberation Front; Radical Environmentalism.

Jesus and Empire

It would be difficult to exaggerate the importance of nature in the teaching of Jesus of Nazareth and the canonical and extra-canonical traditions associated with his name. Scholarly debate continues concerning which of the particular sayings and actions ascribed to him accurately record his life and teaching. Nevertheless, there is general agreement that Jesus' invocations of the natural world to represent the "*basileia* (kingdom/ reign/dominion/rule) of God" and teachings associated with it, reflect Jesus' historical origins as a first-century Galilean peasant, his agrarian context, and the socio-political conditions of his day. Archeological excavations, literary testimony drawn primarily from the New Testament Gospels and other roughly contemporary literature, especially the *Gospel of Thomas*, and the first-century Jewish historian, Josephus, help to place Jesus in his social agrarian context.

In literary form and content, biblical and extra-canonical witnesses to Jesus' connections with nature illustrate their continuity with pre-Common Era Jewish and Ancient Near Eastern traditions, especially those associated with the Hebrew Bible and intertestamental prophetic and wisdom literature. Thus, for example, the canonical Gospels draw on Hebrew tradition when they portray Jesus in natural landscapes associated with sacred Israelite history, especially the Exodus, and divine interventions on Israel's behalf (e.g., wilderness [Mk. 4:12–13; 6:31–44 par.; 8:1–10 par; Matt. 4:1–11 par.; Jn. 6:1–15, 22–71; also 1 Cor. 10:1–5]; mountain [Mk. 3:13–19 par.; 6:46 par.; 9:2–10 par.; Matt. 5:1–7:28; Matt. 28:16–20]; sea [Mk. 4:35–41 par.; 6:47–51 par.; Jn. 6:16–21]), thereby winning for Jesus pride of place in sacred tradition. These depictions coincide with profiles of other Jewish figures from first-century Palestine, the most familiar of which is John the Baptist (Matt. 3:1–6 par.; Jn. 1:19–34), who chose similar symbolically charged settings to express their self-understanding and divinely appointed historical role. Josephus comments that a variety of figures appeared in the first century leading followers into the wilderness "so that there God would show them signs of imminent liberation" (*Jewish War* 2.259; *Antiquities* 20.168; Acts 5:36–37). Many of these styled themselves after Moses, presumably in fulfillment of prophetic expectation (thus Deut. 18:18), and consequently were

active in sacredly charged geographies. Thus, one led his followers to Mt. Gerizim, to initiate a Moses-inspired revolt against Roman overlords (*Antiquities* 18.85–87). Another, Theudas (Acts 5:36; Josephus, *Antiquities* 20.97–98), led a crowd across the Jordan River, imagining himself as Moses leading his people to liberation. Josephus (*Jewish War* 2.261–63; also *Ant.* 20.169–71) names "the Egyptian" as leading his followers "through the wilderness to the Mount of Olives," a place associated in the Hebrew Bible with the apocalyptic "Day of the Lord" (Zech. 14:1–4, 9). The Qumran Community chose to express geographically its religious political identity as the true people of God divinely nurtured in the wilderness to express its rejection of an allegedly corrupt Temple establishment.

While New Testament witnesses similarly deploy sacred landscape to express larger theological and political meanings of Jesus' life, death, resurrection and teaching, it is unlikely that the historical Jesus deployed nature associations as programmatically as these contemporary figures. Nevertheless, the historical Jesus' associations with nature are theologically and religiously charged. Whether in parables (e.g., Mk. 4:1–9 par.; *G.Th.* 9; Mk. 4.26–29; 4:30–32 par; *G.Th.* 20; Matt. 13:24–30; *G.Th.* 57; Matt. 13:47–50; *G.Th.* 8; Lk. 12:16–21; *G.Th.* 63; Lk. 13:18–19 par; *G.Th.* 96; Lk. 15:3–7 par; *G.Th.* 107; Jn. 10:1–18; 15:1–7), wisdom sayings (Lk. 8:16 par; *G.Th.* 33; Lk. 14:34–35 par.; Matt. 5:45; 7:9–12; Jn. 7:37; 8:12) and moral instruction (Mk. 11:23 par.; *G.Th.* 48/106; Lk. 6:43–45 par.; *G.Th.* 45; 6:47–49 par.; Matt. 6:19–34 par.; *G.Th.* 76; Matt. 17:24–27), prophetic and apocalyptic pronouncements (Mk. 8:11–12 par.; 11:12–14 par.; 13:24–29 par.; *G.Th.* 111; Lk. 12:54–56 par.; *G.Th.* 91; Lk. 13:6–9; 13:34–35 par.), discipleship instructions (Mk. 1:17 par.; Lk. 10:2 par.; *G.Th.* 73; Lk. 12:4–7 par., Matt. 10:16; Lk. 10:3) or more general descriptions of the typical rural settings of his daily life in and around Galilean towns and villages (e.g., Mk. 1:14–20 par.; 1:35–39 par.; 2:1 par.; 2:13 par.; 2:23–28 par.; 3:7–12 par.; 6:31–32; 6:53–55 par.; Jn. 6:15; Lk. 6:17–19; 8:1 par.; 9:13–15 par.; 9:58 par.; *G.Th.* 86; Matt. 9:35; Jn. 21:1–14), the natural world forms the indispensable backdrop for understanding the teachings and fate of the historical Jesus and later theological portraits of his significance.

These texts represent a complex history of development at the oral and written stages of transmission, often bearing the imprint of post-Easter/early Christian agenda. The historical Jesus' representations of nature are best understood against a backdrop of economic and societal degradation of Galilean peasantry under the reign of Herod Antipas (ruled 4 B.C.E.–39), client of the Roman imperial regime and as a religio-political response to it. Jesus' portraits of nature share with other pagan, especially Stoic and Cynic, critics of Roman domination an affirmation of life lived in conformity with nature as a means to nurture a dissident social identity. Jesus'

idiosyncratic proclamation of the kingdom of God and the representations of nature associated with it imply a pointed politics. This becomes especially clear once interpreted against the backdrop of propagandistic imperial celebrations of Roman rule as bringing about a peaceable natural and civil world order blessed by the gods (see for example, Virgil, *Eclogue* 4). Attention to political context corrects a too romantic interpretation of Jesus. Championed especially in the nineteenth century by Ernest Renan, and echoed regularly in contemporary reconstructions, such portraits celebrate Jesus as a rugged “back to nature” individualist favoring unmediated access to God via the natural world over against the corrupt and artificial institutions of an established moribund Jewish religion. Scholars rightly criticize such interpretations for their anti-Judaism and anachronistic individualism. Relating Jesus’ interpretations of nature to his political context also resists an anachronistic translation of Jesus’ teaching into apolitical theological categories which, while relevant to the modernist secular divide between religion and politics, is foreign to ancient religion.

During Jesus’ lifetime, Galilee underwent radical social and economic transformation under the reign of Herod Antipas. Herod’s ambitious building and promotion of his Galilean capitals, Sepphoris and Tiberias (founded ca. 18), as philo-Roman cities, together with his creation of a mint, resulted in the monetization of an economy hitherto centered on material exchange and enabled the imperial administration to realize its goals of taxation and Roman control over the Galilean hinterland. Monetization drew elites to settle in Herod’s cosmopolitan cities and to govern their rural estates as absentee landlords, and simultaneously resulted in subsistence farmers losing ancestral land through debt and subsequent indenture. Many of Jesus’ parables present indebted rural peasants laboring under absentee landlords (Mk. 12:1–12; *G.Th.* 65; Lk. 19:11–27 par.; Lk. 12:41–46 par.; Lk. 16:1–9) who amass fortunes from surplus production (Lk. 12:16; *G.Th.* 63). Jesus reflects his economic setting when he deploys release from debt and generous loaning as potent religious metaphors (Matt. 6:12; Lk. 6:29–35; *G.Th.* 95; see also Lk. 3:11).

When considered against the straitened conditions of the Galilean hinterland, Jesus’ observations of nature to illustrate the abundance of God’s kingdom become especially pointed and counterpolitical. He reflects his association with Hebrew Bible and Intertestamental Wisdom traditions (especially Proverbs; Sirach; Wisdom of Solomon) – an early text represents him as an emissary of Wisdom (Lk. 11:33–35 par.; compare Wis. Sol. 7:27–28) – in his instructional depictions of the natural world. In the beauty of the lilies of the field more glorious than the elite clothing of King Solomon (Lk. 12:27–32 par. *G.Th.* 36), and in God’s care of the natural world (Lk. 12:6–7, 24–26 par.), he discovers illustrations of God’s generous

reign and freedom from material anxiety. The natural “commons” owned by all and none become sign of this reign and token of its hidden omnipresence, generosity, and potency (Lk. 17:21; *G.Th.* 3; 77; 113). This is in marked contrast to contemporary imperial representations of divinely appointed rule located in the splendor of cities and cultivated landscapes, which are controlled, owned, and manipulated by propertied, finely clothed elites (Matt. 11:8 par.; *G.Th.* 78). Jesus discovers in the divinely arranged natural world, which unconditionally and generously gives its gifts to all, the pattern for a renewed sociality rooted in the sharing of the Earth’s abundance (Lk. 11:5–8, 11–13 par.). The politics of unconditional generosity becomes especially sharp when interpreted against the backdrop of first-century codes of honor, patronage, and clientship designed to preserve traditional hierarchies and the power of social elites. Jesus inverts commonplace political associations of God’s kingdom with the stately image of the cedar and oak tree (Ezek. 17:23; 31:10; Dan. 4:12) when he represents God’s realm as the bush that bursts forth from a tiny mustard seed and gives shelter to birds (Lk. 13:18–21 par.; *G.Th.* 48). Jesus’ self-portrait in the saying, “Foxes have holes and the birds of the air have nests, but the Son of man has nowhere to lay his head” (Lk. 9:58 par.) may be a further political burlesque addressed against the palatial splendor of “fox” Herod’s (Lk. 13:82) glittering cities (“Sepphoris” is derived from the Hebrew word for bird). Jesus acknowledges that in the monetized Herodian world one is obliged to pay taxes to Caesar. But he subverts its larger religio-political claims by observing that it is finally to God that all is owed (Mk. 12:13–17 par.; *G.Th.* 100). This obligation arises from abundant divine provisions bursting forth from Earth (Mk. 4:1–9 par.; *G.Th.* 9), sea (Matt. 13:47–50; *G.Th.* 8), and sky (Matt. 5:45). Jesus’ invocations of nature and his invitations to learn from its example thus become the means of challenging and contesting absolute Herodian/Imperial and religious claims on Jesus’ listeners, and the social codes that keep Galilean overlords in power, and become exhortations to embrace a countercultural logic that anticipates unexpected social outcomes (Lk. 6:20–26, 27–31 par.; *G.Th.* 54; 69), subverts traditional hierarchies (e.g., Mk. 10:13–16; Lk. 14:26 par.; *G.Th.* 55), and expresses a counterimperial order of God’s beneficent reign (e.g., Lk. 14:16–24 par.; *G.Th.* 64).

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- See also: Christianity (2) – Jesus; Christianity (3) – New Testament.

Jewish Environmentalism in North America

Roots

Environmental and ecological issues have deep roots in Jewish civilization, going back at least to the commandments in Leviticus 25 to let the land rest and to other agricultural laws. The consciousness that such texts are connected to environmental issues is however new, and it remains a controversial phenomenon within parts of the Jewish community. Twentieth-century sources of inspiration include the works of Rabbi Abraham Isaac Kook (1865–1935), the pro-vegetarian mystic and chief rabbi of Palestine; Rabbi Abraham Joshua Heschel (1907–1972), who wrote paeans to the Sabbath and to the sense of place, wonderment, and nature in his numerous works; and A.D. Gordon (1856–1922), the theoretician of Zionist labor who emphasized spiritual unification with land. Starting from these expressions and from the appreciation of nature that has always been a part of the Jewish tradition from Psalms to Job to rabbinic midrash and medieval thought, Jewish environmentalism has sought to embrace the scientific and spiritual insights of ecology, and to transform Jewish practice based on these insights.

The Jewish environmental movement in North America was in many ways motivated by the revival of back-to-the-land values in the 1960s and 70s. However, whereas for the majority of the counterculture movement these values were an expression of 1960s radicalism, for Jews there was the additional and powerful influence of Zionist

idealism, which since its inception also emphasized returning to the land. Especially after the 1967 Arab–Israeli war, which generated a huge outpouring of sympathy and identification with Israel among unaffiliated Jews, the motif of return to the land became a bridge that connected progressive Jewish activists with the Jewish community from which they were often estranged. For the decade and a half following, there seemed to be a profound harmony between environmental and Zionist values.

Tu biSh'vat – "Jewish Earth Day"

Perhaps most emblematic of this nexus of values is the growth of the primary Jewish environmental event to which most Jews have been exposed, the *Tu biSh'vat seder*, often labeled "Jewish Earth Day." Falling in the early spring two full moons before Passover, *Tu biSh'vat* ("the fifteenth of the month of *Sh'vat*") generally coincides with the first sap rising in the fruit trees in the land of Israel. Because in rabbinic Judaism this day was labeled the "New Year for the Tree," seventeenth-century mystics created a ritual meal or seder of fruit and nuts for the day that celebrated the "Tree of Life" that sustains the universe. The Jewish National Fund (JNF) applied these motifs in the 1950s to championing *Tu biSh'vat* as a day for planting trees in the land of Israel.

One of the early moments of awakening to environmental issues in the Jewish community came when rabbis and Jewish activists drew on the symbolism of the JNF campaigns to create the "Trees for Vietnam" reforestation campaign in 1971 in response to the use of Agent Orange by the U.S. In 1976, Jonathan Wolf in New York City created and led one of the first modern environmental seders, incorporating liturgy from the Kabbalists with information from Israeli environmental groups like Neot Kedumim ("Ancient Fields," a conservancy group devoted to biblical species), and the Society for the Protection of Nature in Israel (SPNI). By the late 1970s, Jewish groups around the country were innovating rituals for *Tu biSh'vat* that connected biblical and rabbinic teachings with material from the Kibbutz movement or JNF and with current environmental concerns. In the 1980s dozens of homemade *Tu biSh'vat* liturgical books or *haggadot* modeled after the Passover seder were being used around the country to celebrate trees and to talk about local and national environmental issues, the Earth and ecology.

Pioneers

The pioneers of environmentalism in the Jewish community who began these innovations were a quirky lot that often focused on a strongly ideological reading of the tradition. Many of these figures, including Wolf, who founded Jewish Vegetarians of North America in 1976, were deeply committed to vegetarianism. Notable among this group alongside Wolf is Richard Schwartz, who published *Judaism and Vegetarianism* in 1982 and followed

this with *Judaism and Global Survival* in 1984. Roberta Kalechofsky began turning out tracts on Jewish vegetarianism in 1985 through her press, Micah Books.

As with most things Jewish, a large part of Jewish environmental work has consisted of investing Jewish practice with ecological meaning through sermons, teachings, and books. Two early writers were especially influential, Eric Freudenstein (1970) and Rabbi Everett Gendler (1971). Rabbi Arthur Waskow has been one of the leaders in this area, starting with his work *Seasons of Our Joy* (1982), which follows the liturgical calendar through the changes in the Earth. Waskow's work reached a wider audience than Schwartz's, and was part of a trend now called "Jewish Renewal," which involved uniting values associated with 1960s or New Age spiritual counter-cultures with Jewish practice. In the same year, Rabbi Robert Gordis of the Conservative movement published his article "Ecology in the Jewish Tradition," while David Ehrenfeld, a scientist affiliated with Rutgers University, organized the first-ever Jewish Environmental Conference with Rabbi Gerry Serotta of Rutgers Hillel (the Jewish campus organization). Ehrenfeld's seminal conference brought together most of the people mentioned in this section. Rabbi Everett Gendler also influenced a great many activists and teachers during this period, both through his teaching and his farming. In 1983, Waskow founded the Shalom Center, which over time increasingly turned its energy from nuclear weapons to environmental issues. The Shalom Center is now one of the primary organizations in North America and the world that promulgates an activist ecological understanding of Judaism.

Books

During the 1990s publishing burgeoned in the area of Judaism and ecology. In 1991 and 1992 the Melton Center for Jewish Education published two issues of its journal devoted entirely to ecology and the environment under the editorship of Eduardo Rauch. Rabbi Arthur Green's seminal work on the contemporary meaning of Kabbalah, *Seek My Face, Speak My Name* (1994), included discussions of both ecology and vegetarianism. Shomrei Adamah published numerous volumes during these years, including *Ecology and the Jewish Spirit* (1998). Waskow edited or co-edited the important collections *Trees, Earth and Torah* (2000) and *Torah of the Earth* (2001). The 1998 conference on "Judaism and the Natural World," part of the Religions and Ecology conference series produced by Harvard University, led to the publication of *Judaism and Ecology* (2003).

Careful readers of the many works that now exist will find much to criticize: the more scholarly material is often written by Judaic specialists who have not studied ecology, whereas much of the popular material is written with a superficial knowledge of Judaism. Nonetheless, there are valuable insights in all of the above-mentioned works.

Two books deserve special mention. The first is Jeremy Cohen's treatment of the use of the verses in Genesis about dominion in Christian and Jewish civilizations, "*Be Fertile and Increase, Fill the Earth and Master It*" (1989). While Lynn White popularly analyzed these verses to be the source of anti-environmental trends within Western civilization, Cohen marshaled exhaustive documentary evidence to argue that cultural and intellectual trends do not support White's thesis. The other important work is Evan Eisenberg's *Ecology of Eden* (1998), which examined the cultural significance of the biblical tropes of garden, mountain, and so on, in the light of ancient environmental crises faced by Mesopotamian civilization. Eisenberg, an independent scholar with broad interests in cultural evolution and musicology, also advocated increasing urban density as a method for minimizing the negative impact of the human population on ecosystems. Additional scholarly work in both North America and Israel, including articles by David Seidenberg and by Eilon Schwartz of the Heschel Center for Environmental Awareness in Israel, focused on creating a theology of nature and an eco-theology of Judaism that taps into the sources and roots of the Jewish tradition.

Organizations

By the end of the 1980s, through the work of Wolf, Schwartz, Waskow, and others, substantial networks of people were involved in some activity that connected Judaism and ecology. Some of the most important work was done by "L'OLAM" (whose name means both "Forever" and "For the World"), which was created in Manhattan by Wolf under the guidance of Rabbi Saul Berman at Lincoln Square Synagogue, a liberal Orthodox shul and by Ken Amron of Conservative Congregation Ansche Chesed. L'OLAM expanded throughout the New York City region between 1984 and 1989 with the help of Susie Tanenbaum and others, growing from a social action committee to a network of over a thousand people from dozens of synagogues and organizations who cared about Judaism and environmentalism.

In 1988, Shomrei Adamah ("Guardians of the Earth") burst on the scene as the first national Jewish organization devoted to environmental issues. Founded by Ellen Bernstein in Philadelphia, Shomrei Adamah produced guides to Judaism and the environment such as *Let the Earth Teach You Torah* (1992), which was one of the works that initiated the field of Jewish environmental education. Shomrei Adamah captured the imaginations of environmentally concerned Jews around North America and quickly supplanted groups such as L'OLAM on the national level. However, even as regional groups like Shomrei Adamah of Greater Washington D.C. (founded in 1990) sprung up to do grassroots organizing, the national organization pulled away from involvement with political issues, leaving a gap between national, institutional

groups and grassroots organizations which would continue to be a source of tension even after national Shomrei Adamah ceased to be active.

Shomrei Adamah-DC and L'OLAM continued their activist work, but the tension between local groups and Bernstein's organization kept resources from being developed and utilized in a unified and cooperative way. During this time, other regional groups like the Northwest Jewish Environmental Project in Seattle (NWJEP or NJEP), founded in 1997, took a decidedly different approach. While Jewish identification with the Earth and Jewish environmental activism had gone hand in hand up until then, these new groups focused on making nature a source of Jewish identity and explicitly deemphasized political activism. The roots of this approach can be traced back to Jewish hiking groups and to the national network of such groups, Mosaic Outdoor Clubs of America (founded in 1988).

In 1993, The Coalition on the Environment and Jewish Life (COEJL) was formed to bring the Jewish environmental movement into the mainstream. COEJL filled the vacuum left by Shomrei Adamah, working with other religion-based groups under the umbrella of the National Religious Partnership for the Environment (NRPE) to achieve these goals. Unlike earlier groups, which were created by activists or organizational entrepreneurs, COEJL was founded by three institutions: The Jewish Theological Seminary (of the Conservative movement), the Religious Action Center (the lobbying arm of the Reform movement), and the Jewish Council for Public Affairs (previously the National Jewish Relations Advisory Council), the national umbrella for the Jewish Community Relations Councils that can be found in most metropolitan areas. Led from 1995 to 2003 by Mark X. Jacobs in Manhattan, COEJL's work was characterized by lobbying, national campaigns in coordination with NRPE, and the development of curricula such as "Operation Noah," which examined the theme of biodiversity in Jewish texts (1996).

To a large degree during the 1990s, the model represented by COEJL dominated Jewish environmental work. COEJL held annual national conferences that spawned regional networks, and COEJL subsequently began to provide money for staff to organize regional affiliate groups. By the turn of the twenty-first century there were over 25 such groups in the US and Canada, including Jews of the Earth in Boulder Colorado (founded in 1999), the Jewish League for Environmental Awareness in Ventura County California, and other similar groups. COEJL also established affiliate relationships with some independently founded groups like Shomrei Adamah-DC, though in some places, such as New York City, COEJL tried to develop its own networks independent of existing Jewish environmental groups.

COEJL's national conferences also attracted many

locally focused environmental activists who were seeking community with other Jewish activists. Building a movement from these networks proved difficult for COEJL though because of tension between the direct action approach many activists favored, and COEJL's more institutional approach. While often this was a question of strategy, in some instances a more fundamental conflict arose, between those within Jewish institutions who emphasized using environmentalism as a way to connect Jews to Judaism, and independent activists who thought sustainability issues and ecology were paramount.

For most of the people involved with Jewish environmentalism, however, Judaism, environmental action and social transformation were all fundamentally important and interconnected. The movement for Jewish environmental education was one of the chief meeting grounds where these concerns were given equal weight. The Teva Learning Center, founded in 1995, has been the flagship of this movement. Under the leadership of Adam Berman and then Nili Simhai, Teva ("Nature") continues to bring committed activists and educators together with day-school and Hebrew school students at sites in New York and Connecticut. Teva trained many of the people who started environmental programs or retooled traditional nature programs in schools and Jewish summer camps throughout Canada and the United States; through its trainings, it also played a critical role in disseminating the work of environmental educators and ecological thinkers. Several other camps and camping programs, such as Camp Towanga in California, also made contributions to this field.

Other Trends

While the mainstreaming of Jewish environmentalism sometimes led to the marginalization of certain types of activism, new projects continued to be initiated on the edges of the community. One of the last efforts undertaken by L'OLAM was the campaign to stop the Trans-Israel Highway, which according to activists would destroy huge tracts of land and push Israel's development toward an automobile-centered culture. This campaign, led from Israel by Dr. Uri Shanas and spearheaded in the United States by Corri Gottesman, along with many others, brought together a broad spectrum of Jewish activists who had a more overtly political approach than COEJL. In this same vein, one of the most innovative moments in Jewish environmentalism was the *Tu biSh'vat* seder of 1996 created by the "Redwood rabbis," Naomi Steinberg, Margaret Holub and Lester Scharnberg, in which a hundred Jewish activists trespassed onto land owned by Pacific Lumber Company to "illegally" plant redwood trees in civil disobedience against clear-cut harvest practices that have caused significant ecological and economic damage in Northern California. A number of activists like Ramona Rubin and Barak Gale graduated from these

actions to other projects that challenged Jewish institutions to oppose corporate practices.

One of the trends in new Jewish eco-activism is “eco-Kashrut,” which has been catalyzed at the discussion stage by people like Rubin in Santa Cruz California, and Rabbi Yitzhak Husbands-Hankin in Eugene Oregon, as well as by Arthur Waskow. All three have also been involved in campaigns against corporate globalization. The term eco-Kashrut, which signifies the inclusion of environmental and labor standards in the laws that determine what is kosher, was coined by Rabbi Zalman Schachter-Shalomi, a grandfather of the Jewish Renewal movement. Another trend is signaled by the term “eco-Zionism,” which attempts to connect Jews in North America to Israel through environmental issues or through involvement with green Kibbutzim (see below). In Israel itself, North American Jews, such as Devorah Brous of Bustan L'Shalom (“Orchard for Peace”), have played critical roles in many environmental organizations, and in all aspects of environmental work.

One important nascent phenomenon has been the blending of Native American and shamanistic ideas and rituals with Jewish practice in the teachings of people like Gershon Winkler in New Mexico and Gabe Goldman in the Northeast. Another trend has been the development of Jewish ecofeminism, which was first discussed in print in a special issue of *Bridges* journal called “Jewish Women and Land” (Fall 1995). Recent colloquia and academic panels in this area have been organized by Irene Diamond. Among the most significant contributions of any one individual are the environmental films of Judith Helfand, whose film about thalidomide and her family, “A Healthy Baby Girl” (1996) connected Jewish and health issues with the environment and corporate practice. Helfand subsequently produced “Blue Vinyl” (2001), a “toxic comedy” about the siding industry and its environmental impact, creating a model for bringing activism to the mainstream community.

The Land

While most Jewish environmental work focused initially on finding ways to celebrate the Earth through Jewish texts and ritual, a handful of people also began to experiment with intentionally living on the land as Jews. Rabbi Everett Gendler started an organic farm in Andover Massachusetts as a way to understand the cycle of nature within the Jewish holidays in the early 1970s. In 1970, a collection of *olim* (Jewish immigrants to Israel) from North America, Europe and South Africa, took over Kibbutz Gezer in Israel's coastal plain and turned it into a vegetarian environmental community. Mike Tabor organized a prototype communal farm in Pennsylvania called Kibbutz Micah in 1972 with the support of the Fabrangen minyan and Jews for Urban Justice in Washington D.C. Tabor grew up on one of the many

socialist-influenced Jewish agricultural communities in North America that once existed in places such as Vineland New Jersey and Petaluma California, though there is little evidence that those earlier communities had a strong influence on Jewish environmentalism as a whole.

By the 1980s other experiments in rural Jewish community, like Shivtei Shalom (“Dwellers in Peace”) in Oregon, were underway. Many North American Jews were also heavily involved in the Green Kibbutz initiative in Israel, and remain instrumental in the ecological education programs of communities like Kibbutz Gezer, in central Israel, and Kibbutz Keturah and Kibbutz Lotan, both in the Negev desert. Most of the stateside intentional communities were short-lived experiments, with people often returning to urban areas afterward. The Jewish population that does live in rural areas has nevertheless become an important birthing place and testing ground for new forms of Jewish environmental work. Communities in New England, for example, have continued the tradition of the Conference on Judaism in Rural New England, founded 1982, for over twenty years, and synagogues in Northern California have supported their rabbis' and members' activism on behalf of forests. In 2003, the first new intentional Jewish farming community in many years was inaugurated in Western Massachusetts, under the leadership of the Lubavitcher community and the direction of Shmuel Simenowitz from Vermont. Calling itself Eretz Ha'Chaim (“The Land of Life”), this organic farm is also the fruit of a slowly growing trend within the Hasidic and ultra-Orthodox community to emphasize organic diet and healthy living.

Challenges and Conclusions

By the beginning of the twenty-first century, the Jewish environmental movement had made substantial inroads into the institutions of the Jewish community but the push to mainstream this movement appeared to have stalled. Numerous local chapters of COEJL failed to establish themselves, and growth into new synagogues has been slow. While the tension between mainstream organizers and grassroots activists remains an issue, the greater challenge appears to be to find effective ways to transform communities and lifestyles.

The question of transforming lifestyles faces the entire environmental movement, of course. The Jewish community, however, faces unique challenges as well. One central issue, especially for outreach to the Orthodox community, is that environmental discourse often sounds “pagan” and is therefore regarded with suspicion. This struggle is partly a legacy of the nineteenth-century rationalists who interpreted Judaism as antithetical to “nature religion,” though the trend toward anti-biblical and anti-monotheistic rhetoric among some environmentalists reinforces these fears. Furthermore, the connection between Israel and the ecology of the land, which

once strengthened Jewish environmentalists everywhere, has now become a point of serious conflict. While some people see the Israeli settlers as the ultimate expression of going back to the land, others perceive the diminution of human rights in the Palestinian territories as the ultimate desecration of the land. Moreover, the emphasis one finds in most Diaspora Jewish communities on the land of Israel and the state of Israel also diverts attention from land issues outside of Israel.

Despite such challenges, the past few decades have brought "the consciousness of the Earth" into Jewish ethical thought and ritual and will continue to exercise an influence over the evolution of Judaism. Whether these will lead to a transformation of the way people live in the Jewish community may well depend on two things: the development of a coherent and comprehensive ecological understanding of Judaism, and the development of broader social and technological trends that will allow our society as a whole to live in a sustainable way.

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- See also: Animal Rights in the Jewish Tradition; Eco-kabbalah; Ehrenfeld, David; Gordon, Aharon David; Hasidism and Nature Mysticism; Hebrew Bible; Israel and Environmentalism; Judaism; Judaism and Sustainability; Judaism and the Population Crisis; Kabbalah and Eco-theology; National Religious Partnership for the Environment; Paganism and Judaism; Paganism – A Jewish Perspective; Redwood Rabbis; Tikkun Olam – A Jewish Imperative; Vegetarianism and Judaism; Vegetarianism and Rabbi Abraham Isaac Kook; Waskow, Rabbi Arthur.

Jewish Intertestamental Literature

The theology and literature of Judaism in the Second Temple Period (ca. 200 B.C.E.–100 C.E.) was very diverse. Nevertheless many perspectives about nature were widely

shared among various Jewish sects. The biblical view of nature is the foundation, but some concepts are further developed, particularly the eschatological hope for nature.

God's Good Creation

Intertestamental Judaism continued the biblical emphasis that God created all material and spiritual things (2 Macc. 7:23; Sir. 18:1; 2 En. 48:5; T. Levi. 18:9). This is the starting point for a theology of nature. God created everything according to his wisdom (2 En. 33:3). He is the "author of beauty" (Wis. 13:3). He established the orderly patterns of nature, such as the paths of the heavenly bodies and the changing seasons (2 En. 48:4–5; 2 Bar. 21:4–11). Wisdom is present in all of creation, including heaven, Earth, and the netherworld (Sir. 24:3–7). Only God the Creator should be worshipped rather than any creature (Wis. 13; 15:18–19).

All of nature is good and serves purposes intended by God (T. Naph. 2:8; T. Iss. 3:8; Sir. 39:16–35). All creatures are "desirable" and "meet a particular need" (Sir. 42:22–23). This does not necessarily mean that all creatures are beneficial to humans, since God uses nature both to bless the righteous and curse the wicked (Sir. 39:22–28). God is praised for his beautiful creation (Sir. 33; 39; 43). The hope of a future bodily resurrection, particularly common among Pharisees, implies the goodness of the material creation (2 Macc. 7:11, 29; 1 En. 51:1–5; 2 Bar. 50:2–4; Sib. Or. 4.181–187). However, there is an ambivalence about the body for Jewish writers influenced by Platonic thought. Philo, for example, sees the spirit as superior to the body (QG 2.56).

God Sustains Creation

God is in control of creation and is actively involved in the operation of nature. He sustains creation and "holds all things together" (Wis. 1:7; Pss. Sol. 5:9–10). The way God providentially oversees nature differs in various works: 1) God directly causes natural events (Sir. 42:21–43:33; 1 En. 101:6). 2) Angels, acting as God's representatives, control weather, movements of stars and other aspects of nature in accordance with God's will (1 En. 75:1–3; 80:1; 82:7–20; 2 En. 3–6; 11–17). 3) God designed nature to be autonomous, yet obedient to his will (1 En. 2–5; 69:16–25; Sir. 39:28–31; Wis. 16–19).

Many works stress the consistent and perfect operation of nature. In apocalypses with a heavenly journey, the visionary learns the hidden secrets of the operation of the cosmos. The Astronomical Book (AB, 1 En. 72–80) describes the movements of the heavenly bodies in great detail. The unchanging patterns are completed "with precision" according to God's "commandments" (1 En. 72–75; 79:1–2; cf. Pss. Sol. 18:10–12; Sir. 16:27; 18:1–4). The *Book of Parables* (BP, 1 En. 37–71) describes a cosmic covenant that God made to guarantee the consistent operation of the cosmos (1 En. 69:16–25).

Types of Intertestamental Literature

Jewish non-canonical literature from the Second Temple Period (ca. 200 B.C.E.–100 C.E.) is vast and theologically diverse. Variations in theological perspectives are due to different biblical interpretations, the growing oral Law tradition and varying degrees of Hellenistic influence. Many works are pseudepigraphical – written from the perspective of a great historical religious figure, such as Moses, Enoch and the Patriarchs of Israel.

There are several types of Jewish religious literature in this period: 1) *Histories* were often written with a polemical purpose: 1 Maccabees (1 Macc.) and 2 Maccabees (2 Macc.) describe the Maccabean revolt and exalt the Hasmonean priest-kings. Josephus' *Antiquities* (Josephus, *Ant.*) cover Jewish history from biblical times through the destruction of Jerusalem (70) to help the conquering Romans better understand the Jews. 2) *Wisdom literature* is patterned after biblical wisdom books, but reflects Hellenistic influences: Wisdom of Solomon (Wis.) and Ecclesiasticus/Wisdom of Jesus ben Sirach (Sir.). 3) *Apocalypses* were common because the occupied and oppressed Jews hoped for God's intervention at the end of history to bring deliverance from suffering and a golden age. 1 Enoch consists of five books written by multiple authors over 200 years: Book of Watchers (BW, chs. 1–36), Book of Parables (BP, chs. 37–71), Astronomical Book (AB, chs. 72–82), Animal Apocalypse (AA, chs. 83–90) and Epistle of Enoch (chs. 91–107). Other important apocalypses include 2 Enoch (2 En.), 2 Baruch (2 Bar.), 4 Ezra (4 Ez.) and Sibylline Oracles (Sib. Or.). 4) *Legends and expansions on biblical stories* often included significant apocalyptic sections: Jubilees (Jub.), Life of Adam and Eve (LAE), Apocalypse of Moses (Apoc. Mos.) and Tobit (Tob.). 5) *Psalms* show pious Jewish reflections on the conquest of Jerusalem in the first century B.C.E.: Psalms of Solomon (Pss. Sol.). 6) *Testaments* combine ethical wisdom and apocalyptic predictions in the form of the pseudepigraphical final words of a dying religious leader: Assumption of Moses (As. Mos.) and Testaments of the Twelve Patriarchs, including Levi (T. Levi.), Judah (T. Jud.), Issachar (T. Iss.), Zebulon (T. Zeb.) and Naphtali (T. Naph.). 7) *Philo's philosophical writings and allegorical biblical commentaries* argue that Platonic and Stoic ideas can be deduced from the writings of Moses: *Eternity/De Aeternitate Mundi* (Aet), *Creation/De Opificio Mundi* (Opif), *Questions and Answers on Genesis* (QG) and *Life of Moses* (Mos). 8) *Qumran sectarian writings* from the Essene community near the Dead Sea include biblical commentaries, apocalypses and ethical rules for the community: Thanksgiving Hymns (1QH), War Scroll (1QM), Manual of Discipline (1QS) and Cairo Damascus Document (CD).

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The consistency and obedience of nature to God's design is an example for humans to emulate (1 En. 2–5; 101; Sir. 16:24–17:24). The luminaries “do not alter” their paths and “do not transgress,” unlike people who sin and rebel against God (1 En. 2:1–2; 5:3).

Creation shows God's glory. The wise person contemplates and understands the created order. Reflection on nature shows that God created nature, teaches ethical lessons, and encourages praise of the Creator for his glory reflected in nature (1 En. 101; Sir. 17:8–10; 43:1–5; Wis. 13; 2 Macc. 7:28). God's wisdom gives understanding of the cycles of nature, seasons, patterns of the stars, characteristics of various animals and healing virtues of plants (Wis. 7:15–22; 1QH 1:11–12; 1 En. 2–5).

The Human Relationship with Nature

The biblical theme that God gave humanity dominion over nature (Gen. 1:26–28) is prominent in Intertestamental literature (Sir. 17:1–12; Jub. 2:14; 4 Ez. 7:11; 2 Bar. 14:18–19). God commanded humanity to “cultivate much of the Earth and enjoy an abundance of its fruits” (Josephus *Ant.* 1:110). Since men and women were created in God's image, they are entrusted with responsibility over nature. “The Lord appointed him over everything as king, and he subjected everything to him in subservience under his hand” (2 En. 58:3). Dominion includes not only animals as in Gen 1:26, but even heavenly bodies which God created to serve people (4 Ez. 6:45–46).

But human dominion is not a license to exploit nature. Humans are accountable to God for how they exercise dominion over nature, comparable to how a governor responsible for a territory reports to the king (Philo, *Opif* 83–88; cf. 2 En. 58:3–59:6). Sira and Philo minimize the impact of the Fall on the human relationship with nature. Human superiority over animals continued after Adam's sin (Sir. 17:2–4; *QG* 2.56).

There are different views about whether God created the world for its own sake or for the benefit of humanity. Many works see all creatures as desirable and good for their own sake, even when they have no positive benefit for humans (T. Naph. 2:8; Sir. 39:16–35; 42:22–23). But some later works indicate that the world was made for the sake of humanity (4 Ez. 7:11; 2 Bar. 14:18–19), particularly the righteous of Israel (4 Ez. 6:55–59; 2 Bar. 15:7; 21:24; As. Mos. 1:12–17).

Land theology is important in this period, although not as prominent as in the Hebrew Bible. The land has great value and significance. The people of God have a special and profound connection with the land of Israel. The land of Israel is holy, blessed, good, and more precious than other lands because it is God's own possession (Wis. 13:3–7; Tob. 14:4, 5; Jub. 13:2, 6; 1 En. 27:1; 89:40; 2 Bar. 65:9–10; 71:1; Sib. Or. 3:266). Even in war the land must be honored (1QM 2). The biblical laws of Sabbatical and Jubilee years (Ex. 23:10; 25:4–6; Lev. 25:8–22) require the

land to lie fallow every seventh and fiftieth year (1 Macc. 6).

Since the land is holy, God's people must be holy in order to dwell in the land (Jub. 15:28; 20:4; 50:5; Wis. 12:3–11; 1QS 1:5; 8:3). The land is defiled by the sins of those who dwell there (Jub. 7:33; 16:5–6; 23:18; 4 Ez. 9:19–20; 2 Bar. 44:9). Persistent sin causes God to remove his blessing from the land so it becomes less fruitful and even desolate (Jub. 23:18; CD 2:9–11; 4:10; 2 Bar. 62:4–5; 66:2–5). The Qumran sectarians believed that the land was unclean because of the disobedience of Israel to God. Hence God preserved the sect as a righteous remnant in the wilderness to purify and “atone for the land” (1QS 8:7, 10; CD 2:9–11; 4:10). Apocalyptic writings (including those at Qumran) look forward to an eschatological time of perfect righteousness, often associated with the messianic kingdom, during which the land will become superproductive (Pss. Sol. 17:26–28; 2 Bar. 71:1; 1 En. 90:20).

Apocalyptic writings extend land theology to include the entire created order. Human sin defiles the Earth (Jub. 7:33; 16:5–6; 23:18; 4 Ez. 9:19–20; 2 Bar. 44:9). Widespread evil prior to the Flood and in the last days causes profound changes to the natural order, such as altered seasons and changes in the growth of plants (2 En. 70:5–7; 1 En. 80; Jub. 23:14–16; 4 Ez. 5:1–13).

Because of the human dominion over nature and the close solidarity between the people and the land, God often uses nature to judge wicked people. Weather, famine, pestilence, wild animals and other aspects of nature can be instruments of judgment (Sir. 39; 43; Wis. 16:1–6; 1 En. 100:1–13; Philo, *Mos* 96–146). God uses suffering caused by nature to urge people to repent (Wis. 12:8–11). Throughout Israel's history, nature joined with God to defeat the enemies of God's people (Wis. 5:17–23). God punishes idolaters through the very creatures they esteem as gods (Wis. 12:27). Many writers anticipate a period of cosmic disasters and intense suffering that will precede the coming of the Messiah and the new age (Jub. 23:23; 2 Bar. 70:8; As. Mos. 10:5–6; Sib. Or. 3:672).

Ecological Responsibility

Many Jewish writings hold humans and fallen angels accountable for sins against nature. The stress on obedience to all the commandments of the Torah (Sir. 24:23; T. Jud. 26:1; As. Mos. 12:10; Tob. 4:5; 2 Macc. 6:8–7:1) implicitly includes the commandments regarding responsible care for animals and the land.

Specific ecological sins are also described. Some social ethics lists include a concern for the treatment of animals (Sir. 7:22). “Have compassion on all, not only human beings, but also dumb animals” (T. Zeb. 5:1). Do not ignore the needs of an animal in distress, but have sympathy for its pain (Josephus, *Ant.*, IV.8.30). 2 Enoch has a strong concern for animal rights. The subjection of nature to

humanity is balanced with an accountability to God for proper treatment of animals (58:3–59:6). “Human souls he will judge for the sake of the souls of their animals” (58:4). God will judge people according to how they have treated animals. During the judgment, animals will accuse the people who have mistreated them: “Every kind of animal soul will accuse the humans who have fed them badly” (59:6). Specific sins against animals include inadequately feeding domestic animals, improperly preparing animals before killing them for sacrifice, harm done to animals in secret, and “despising any of the Lord’s creatures” (52:6; 59:1–6). Sinning against an animal harms a person’s soul much like harming or murdering a human (59:1–5; 60:1).

Gentiles as well as Jews will be judged for sins against nature. God will judge people for abusing nature and for ungratefulness for God’s material provision. “You nations and tribes are guilty . . . because you have used creation unrighteously” (2 Bar. 13:11). God provides for the physical needs of people, but they are ungrateful and deny that the blessings of the natural world come from God (2 Bar. 13:12).

The wickedness of the pre-Flood era included ecological sins. In the *Book of Watchers* (BW, 1 En. 6–11), fallen angels (“Watchers”) and their offspring, the Giants, commit numerous sins against nature. In their insatiable hunger, they crave more produce than people can grow. As a result they eat people and “sin against birds, wild beasts, reptiles, and fish” (1 En. 7:5). The word translated “sin against” suggests a violent assault on the animal kingdom, since “they poured out much blood upon the Earth.” Their offense was not merely eating animals, which was not of itself sinful to most Jews. They committed an excessive and violent assault against the animals, so that they ate everything in sight. The proper balance of creation was upset so that animals and the defiled Earth itself cry out to God for release from oppression (1 En. 7:6; 9:3). The Flood was a divine judgment to cleanse the Earth of this wickedness.

Jubilees claims the ecological sins and other evil of Watchers, humans and animals resulted in the divine judgment of the Flood. Even animals are accountable for violating God’s design and thus were wiped out by the Flood (5:2–3). Humans were accountable for ecological sins when they “sinned against beasts and birds” (7:23–24). Jubilees also has a concern for the proper treatment of plants. In the instructions Noah gave his sons after the Flood, he tells them not to pick the fruit of new plants for three years and to offer the fourth year’s fruit as an offering to God (7:35–37). The reasons are both ethical and pragmatic: “you will be righteous and all that you plant shall prosper” (7:37). Proper treatment of plants is a moral and spiritual requirement that results in more productive crops as part of God’s blessing.

Several writings show that the biblical laws of Sabbatical and Jubilee years were often followed during

this period (1 Macc. 6; Josephus, *Ant.*, iii 12.3.282–283; Philo, *QG* 3.39; Jub. 50:1–4). During these special years the land was to lie fallow and no produce was to be gathered. The land should be treated with respect and care rather than used selfishly by humans. These laws show respect for the cycles of plant life and faith that God will provide material needs when people honor the land. In the Jubilee year, real estate is to be returned to its original owners, as a reminder that land belongs to God, not individuals.

The Effect of Sin on Nature

Although some works stress the perfect operation of nature, most see creation as corrupted by sin to some degree and at least partially changed from God’s original design.

Wisdom books (Sir. and Wis. Sol.) and some heavenly journey apocalypses (AB; 1 En. 1–5) stress the perfection and consistent operation of nature. “Creation serves you who made it” (Wis. 17:24). Wisdom 1:14 says there is no evil in nature and no impact from evil spiritual forces. Sirach 17:1–12 modifies the Genesis story to minimize the impact of the human Fall on nature. Death was part of the original creation, not the result of the Fall (contra Gen. 2:17; 3:19). God created Adam and Eve to live only “a few days, a limited” time. God’s pronouncement that humans would return to dust is not a punishment for sin (Gen. 3:19), but a part of God’s original intention. The human dominion over nature was not diminished or changed by the Fall. AB stresses the perfect consistency of the movements of the heavenly luminaries and patterns of the weather (1 En. 72:1–80:1; cf. 1 En. 2–5; Sir. 16:27; 18:1–4). In these works, everything continues as it has since creation, and human sin has not affected the operation of nature.

However, many works stress that creation was in some sense corrupted by sin, so it no longer operates entirely as it did before the Fall. This view is particularly common among apocalypses. There is a tension between God’s reign over nature as his good creation and the cosmic disorder that sin introduces.

One major stream points to human sin as the cause of the corruption of creation. There are several views of the source of the damage to nature: 1) the Fall (Jub.; 4 Ez.; 2 Bar.; Ap. Mos.); 2) widespread evil in the pre-Flood generation (Jub.; 2 En.; BP); 3) human sin throughout history (BW; AB; 4 Ez.; 2 Bar.); and 4) increased human sin in the eschatological era (AB; Jub.; 4 Ez.; 2 Bar.).

In many Jewish writings, the human Fall had a profound effect on the natural world. Nature was profoundly changed when Adam disobeyed God, since humans were given dominion over nature (4 Ez. 7:11). This concept originates with Gen. 3:16–19, which describes the curse resulting from the Fall: death, pain of women in child-bearing, and the curse on the ground resulting in the need

of hard labor to grow crops (Jub. 3:24–25; 4:28; Apoc. Mos. 14:2; 25:1–3; 28:3; 4 Ez. 3:7; 7:15; LAE 26:2). Some works go beyond Genesis and ascribe all suffering, plagues, injuries, sickness, famine and even unpleasant weather to the Fall (Jub. 23:12–15; 4 Ez. 7:12–13; LAE 34:2; Apoc. Mos. 8:2). The nature of animals changed after the Fall, so they rebelled against human dominion (Apoc. Mos. 24:4–6) and lost the ability to speak (Jub. 3:28; 12:25–26).

Human sin throughout history also corrupts creation. It is not merely ecological sins that harm the environment, but also the overall spiritual state of humanity. Sin “defiles,” “spoils” and “pollutes” the Earth so that it needs cleansing (Jub. 7:33; 16:5–6; 23:18; 4 Ez. 9:19–20; 2 Bar. 44:9). Throughout Israelite history, the land was cursed or blessed depending on the sin or righteousness of those who dwelt in the land (Jub. 23:18; 2 Bar. 61:7; 62:4–5). In the pre-Flood generation human sin was so profound that “all the Earth changed its seasons and every tree and every fruit changed their seeds” (2 En. 70:5–7). The increase in sin in the last days will be accompanied by profound cosmic changes (1 En. 80; Jub. 23:14–16; 4 Ez. 5:1–3).

Due to the solidarity between humanity and nature, when humans sin, the natural world is corrupted and when the people of God are righteous, the land is prosperous. Several factors account for this solidarity: 1) Human beings were created from the dust of the Earth and thus share a natural, material dimension with nature (4 Ez. 7:62, 116; cf. Gen. 2:7). 2) In some works, the world was made for the sake of humanity (4 Ez. 6:55–59; 7:11; 2 Bar. 14:18–19; 15:7; 21:24). 3) Most importantly, God gave humanity dominion over nature. Thus, as in Genesis 3:15–19, when humanity fell into sin, nature suffered as well (4 Ez. 7:11). Nature is affected whenever humanity fails to live as God intended, since humanity is the caretaker of the world.

Another important stream explaining the corruption of nature is the fallen Watcher tradition. The seminal passage is 1 En. 6–11, which is an expansion of Gen. 6:1–4. The motif is also found in later sections of 1 Enoch (Animal Apocalypse [83–90], BP, AB), as well as 2 Enoch and Jubilees. The problems of a corrupt world are blamed on the fall of the angels (“Watchers”) rather than fall of the first humans. The sinful actions and teachings of the Watchers “corrupted” or “defiled” the Earth (1 En. 10:7–8, 20; 106:17; 2 En. 18:4). Their fall introduced death, disease, birth defects and psychological disorders to creation. It produced cosmic irregularities, such as aberrations in the movements of heavenly luminaries, earthquakes, crop failures and disturbances among animals (1 En. 6–16; 69:11–12; 2 En. 70:7). Even animals were corrupted by the Watchers and began to pervert the way of life that God intended, possibly indicating that some animals became carnivorous (Jub. 5:1–3; 1 En. 69:1–15). In some works, these aberrations were corrected after the Flood (2 En.

70:7), but in others the effects were permanent (1 En. 69:12).

The material world is generally not considered inherently evil or “fallen” in Second Temple Jewish writings. Nature is usually a victim of the sins of humans or fallen angels. The personified Earth cries out in pain for release from the harm done to it (1 En. 7:6; 9:2; 87:1; 106:17; Jub. 4:3). Nature is corrupted and oppressed by sin, but it does not become evil itself. Nevertheless, in a few instances some parts of nature disobey God’s design and are held morally accountable (1 En. 17–36; 80; Jub. 5:2–20). But this is an aberration due to the influence of human and angelic sin in the pre-Flood era or the end of history, not the normal state of nature. Philo goes further than most writers of this period to emphasize the superiority of spirit over body (*QG* 2.56). Nevertheless, he does not go as far as later Gnostics, who see the material world as inherently evil.

The Redemption of Nature

The diversity in Jewish Second Temple literature is most marked in eschatology. In wisdom literature and other works that see no cosmic impact of sin, there is no need for the redemption of nature since creation already works perfectly (Pss. Sol. 18:10–12). Apocalypses that describe the perfect, hidden workings of nature (AB, BP) generally imply this will continue as long as the world exists. Despite the sins of the Watchers, the perfect cosmic patterns will continue “forever,” “unto eternity, till the new creation” (1 En. 69:16–26; 72:1). In this view, although there will be a new creation, it is not due to any defect or damage in the present creation. In wisdom literature, the world will be saved by increasing the number of wise people, rather than through an eschatological divine intervention (Wis. 6:24).

Yet a significant number of Jewish writings expect that one day God will deliver creation from the damage caused by sin. The prophetic hope of an eschatological “new heavens and Earth” (Isa. 65:17–22; cf. 11:6–10) was expanded during this period, particularly in apocalyptic literature. In the new age, the natural world will be redeemed and transformed into great glory.

There are several views of how the new creation will come: (1) God will create a new Earth (Apocalypse of Weeks [AW, 1 En. 91, 93], AB). (2) The present creation will be transformed (BW; Pss. Sol. 17). (3) Some works combine both ideas without resolving the tension (Jub.; BP; 4 Ez.; 2 Bar.). The primary focus is the character of the changes to nature rather than how God will bring them about. Sometimes “new creation” refers to the renewal and cleansing of creation rather than a destruction of the present world and the creation of a new one (4 Ez. 6:13–28; 7:30–31; 2 Bar. 32:1–6). Jubilees 1:29 defines “new creation” as the time when “heaven and Earth and all their creatures shall be renewed.” Even Philo

refers to a new creation without this world being destroyed (Aet 75–85).

There will be fundamental and permanent changes in the operation of nature in the new age. The damage done to nature by the fall of humans and angels and by ongoing human sin will be reversed. The curse on the ground from the Fall (Gen. 3:15–19) will be removed. Death, suffering and disease will be eliminated (1 En. 6:16; 45:4–5; 69:26–29; 2 En. 65:8–10; 4 Ez. 6:25–28; 2 Bar. 73:2–7) or humans will live extremely long lives (Jub. 23:26–28). Plants will produce many times their normal fruit without painful human labor (1 En. 10:17–22; 2 En. 8:2–7; 2 Bar. 29:3–8; Sib. Or. 3.744, 750). Wild animals will become tame and obedient and will no longer harm people (Jub. 1:29; 2 En. 58:4–6; 2 Bar. 73:6). The heavenly luminaries will become brighter and perfectly consistent in their movements (Jub. 1:29; AW). The description of the transformed creation evokes images of a return to Eden in which the last things will be like the first things or even greater (T. Dan. 5:12–13; T. Levi. 18:10–11; Ap. Mos. 28:4).

Many works expect the resurrection of humans, which affirms the value of the material realm to God (4 Ez. 7:32; 2 Bar. 32:1–6; 1 En. 51:1–5; 2 Macc. 7:11, 29; Ap. Mos. 10:2; Sib. Or. 4.181–187). The resurrected bodies of the righteous will be transformed into great glory (2 Bar. 51:3–5). Although some works emphasize the eternal spiritual existence of the souls of the righteous (1 En. 103:3; 2 Bar. 51:1–16), many promise a material dimension to the eternal state of the righteous. Their glorified bodies will enable the righteous to dwell on the transformed Earth (1 En. 51:5; Ap. Mos. 13:2–4; Sib. Or. 4.187–190). Even references to the souls of the righteous can be accompanied by descriptions of the transformed Earth and the expectation that the righteous will have access to both heaven and the new Earth (1 En. 45:3–6).

Nature will only be perfected when humanity becomes righteous and obedient to God's will (1 En. 10:17; 45:3–6). This will happen either during a temporary messianic golden age (1 En. 91:13; Jub. 1:28–29; 23:24–30; 4 Ez. 7:29; 2 Bar. 29:3–8) or in the eternal new creation (1 En. 10:25–32; 91:16; 4 Ez. 7:31–33; 2 Bar. 44:12–15). Nature can only function as God designed when humanity lives as God intends, due to the human solidarity with nature and the human dominion over nature.

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See also: Creation Myths of the Ancient World; Creation Story in the Hebrew Bible; Fall, The; Hebrew Bible; Judaism.

Jewish Law and Animal Experimentation

Judaism is fundamentally a religion of law and posits regulations governing virtually every facet of human endeavor. The ultimate source of this corpus of law is divine legislation transmitted through both the Written and Oral Law. To this were added numerous rabbinic enactments and decrees designed to prevent encroachment upon biblical prohibitions as well as to promote human welfare and the well-being of society.

In light of the comprehensive nature of the areas of conduct regulated by Jewish law, the apparent absence of normative regulations governing animal experimentation might well be regarded as indicative of the absence of serious ethical concern for the welfare of members of the animal kingdom. But this is demonstrably not the case, for, in Jewish teaching, there is no dearth of *nomoi* designed to protect and promote animal welfare. The most obvious example of a regulation having such an effect is contained in the verse "If you see the ass of him that hates you lying under its burden, you shall forbear to pass by him; you shall surely release it with him" (Ex. 23:5, see also Deut. 22:4). The selfsame concern is manifest in the prohibition against muzzling an ox while it threshes in order that the animal be free to eat of the produce while working (Deut. 25:4). Similarly, scripture provides that both domestic animals and wild beasts must be permitted to share in produce of the land that grows without cultivation during the Sabbatical year. Talmudic exegesis understands Genesis 9:4 and Deuteronomy 12:23 as forbidding the eating of a limb severed from a living animal. Jewish

law teaches that this prohibition is universally binding upon all people as one of the Seven Commandments of the Sons of Noah. Sabbath laws contained in both formulations of the Decalogue reflect a concern which goes beyond the mere elimination of pain and discomfort and serve to promote the welfare of animals in a positive manner by providing for their rest on the Sabbath day: "But the seventh day is a Sabbath unto the Lord your God, on it you shall not do any manner of work . . . nor your ox, nor your ass, nor any of your cattle . . ." (Deut. 5:14). Even more explicit in expressing concern for the welfare of animals is the verse ". . . but on the seventh day you shall rest; that your ox and your ass may have rest" (Ex. 23:12).

Nevertheless, it does not necessarily follow that a general obligation to be kind to animals, or, minimally, a duty to refrain from cruelty to animals, can be inferred from any of these biblical regulations or even from all of them collectively. These regulations have been understood by some of the Sages of the Talmud as establishing particular duties, not as expressions of a more general duty.

Yet, Judaism most certainly *does* posit an unequivocal prohibition against causing cruelty to animals. The Gemara, BT *Baba Metzi'a* 32b, declares that assistance not encompassed within the ambit of the commandment concerning "unloading" (*p'rikah*) a burden carried by an animal is required by virtue of a general biblical principle prohibiting cruelty to animals.

It is nevertheless probably incorrect to conclude that concern for "*tza'ar ba'alei chayyim*" (pain of living creatures) is predicated upon a legal or moral concept of animal "rights." Certainly, in Jewish law no less than in other systems of law, neither the animal nor its guardian is granted *persona standi in judicio* (i.e., the animal lacks capacity to institute judicial proceedings to prevent others from engaging in acts of cruelty of which it may be the victim). In all likelihood, the rationale governing strictures against *tza'ar ba'alei chayyim* is concern for the moral welfare of the human agent rather than concern for the physical welfare of animals; the underlying concern is the need to purge inclinations of cruelty and to develop compassion in human beings. Thus, Maimonides, in *The Guide For the Perplexed*, (3:17) states that the duty with regard to *tza'ar ba'alei chayyim*

is set down with a view to perfecting us that we should not acquire moral habits of cruelty and should not inflict pain gratuitously, but that we should intend to be kind and merciful even with a chance animal individual except in case of need.

The concern expressed in rabbinic sources is that cruelty to animals consequentially engenders an indiscriminately cruel disposition. Acts of cruelty mold character in a manner that leads to spontaneously cruel behavior. *Tza'ar*

ba'alei chayyim is forbidden because cruelty is a character trait that is to be eschewed. Practicing kindness *vis-à-vis* animals has the opposite effect and serves to instill character traits of kindness and compassion.

Since the concern is for the moral and spiritual health of the human agent rather than for the protection of brute creatures, it is not at all surprising that concern for *tza'ar ba'alei chayyim* is less than absolute.

The most obvious exception is the slaughtering of animals for meat, which is specifically permitted by scripture to Noah and his progeny: "Every moving thing that lives shall be food for you" (Gen. 9:3). Maimonides regards this exception as circumscribed by the provisions surrounding the requirement for ritual slaughter in order to eliminate pain.

Jewish law, at least in its normative formulation, sanctions the infliction of pain upon animals when the act that causes pain is designed to further a legitimate human purpose. This is evident from two rulings recorded in *Shulchan Arukh*. The Rema (R. Moses Isserles, 1530–1572) on *Shulchan Arukh*, *Yoreh De'ah* 24:8, rules that, prior to slaughtering sheep, the wool covering the area where the neck is to be slit should be removed in order to enable the act of slaughter to be performed in the prescribed manner. *Shakh* (R. Shabtai ha-Kohen, 1621–1662), *Yoreh De'ah* 24:8, extends the same requirement to the slaughter of fowl and requires that feathers be plucked from the throat of fowl prior to slaughter. Rema, *Shulchan Arukh*, *Even ha-Ezer* 5:14, states even more explicitly:

Anything which is necessary in order to effect a cure or for other matters does not entail [a violation] of the prohibition against *tza'ar ba'alei chayyim*. Therefore, it is permitted to pluck feathers from geese and there is no concern on account of *tza'ar ba'alei chayyim*. But nevertheless people refrain [from doing so] because it constitutes cruelty.

A somewhat modified position is espoused by R. Yosef T'umim, *Pri M'gadim*, *Orach Chayyim*, *Mishb'tzot Zahav* 468:2. *Pri M'gadim* reports that his advice was sought by an individual who maintained exotic birds in his garden and was fearful that they might take flight. The interlocutor sought a ruling with regard to the propriety of breaking "a small bone in their wings" in order to render them incapable of flight and prevent financial loss to their keeper. *Pri M'gadim*'s response was negative for, in his opinion, "*tza'ar ba'alei chayyim*, other than in case of great need, is forbidden." Apparently, *Pri M'gadim* distinguishes between ordinary "need" or "benefit" and "great need" and sanctions *tza'ar ba'alei chayyim* only in the latter situation. In a similar vein, *T'shuvot Avodat haGershuni* no. 13 quotes a certain R. Tevel the Physician as declaring that *tza'ar ba'alei chayyim* cannot be sanctioned for purposes of realizing "a small profit."

There is also some controversy with regard to the nature of the need or benefit that is deemed to warrant causing pain to animals. *Issur v'Heter he'Arukh* 59:36 permits *tza'ar ba'alei chayyim* only for therapeutic purposes, including procedures necessary for the treatment of even non-life-threatening maladies. Thus, *Issur v'Heter* apparently regards *tza'ar ba'alei chayyim* which is designed to serve other needs (e.g., financial profit) as improper and forbidden.

Among latter-day authorities, R. Yitzchak Dov Bamberger is quoted by R. Jacob Ettlinger, *T'shuvot Binyan Tzion* no. 108, as asserting that Rema permits *tza'ar ba'alei chayyim* "only when there is need for medical purposes even for a patient who is not dangerously ill, but we have not found that he permitted *tza'ar ba'alei chayyim* for financial profit." Rabbi Ettlinger himself, however, distinguishes between "great pain" and "minor pain" and permits minor pain for other "definite" benefits as well. R. Eliyahu Klatzkin (1852–1932), *T'shuvot Imrei Shefer* no. 34, sec. 1, adopts an intermediate position in stating that Rema intended to permit *tza'ar ba'alei chayyim* for medical purposes or for purposes of similar importance and necessity, but not simply for the purpose of financial gain. Nevertheless, the majority of rabbinic authorities regard financial gain as a legitimate "need" or "benefit" which, at least as a matter of law, may be fostered even in face of resultant pain to the animal.

Despite his ruling that plucking feathers from a live bird for use as quills is permitted as a matter of law, Rema adds the comment that people refrain from doing so because of the inherent cruelty involved in this practice. The immediate source of both this caveat and the normative rules regarding the plucking of feathers is the fifteenth-century rabbinic decisor, R. Israel Isserlein, *T'rumat haDeshen*, *P'sakim uK'tavim* no. 105.

The talmudic source cited by *T'rumat haDeshen* is an anecdote concerning R. Judah the Prince related by the Gemara, B.T. *Baba Metzi'a* 85a. R. Judah suffered excruciating pain for many years until the pain subsided suddenly. In the following narrative, the Gemara explains why the suffering was ultimately alleviated:

A calf, when it was being taken to slaughter, went and hung its head under Rabbi [Judah]'s cloak and cried. He said to it, "Go, for this were you created." [In heaven] they said, "Since he has no mercy, let suffering come down upon him." . . . One day Rabbi [Judah]'s maidservant was sweeping the house; some young weasels were lying there and she was sweeping them away. Rabbi [Judah] said to her, "Let them be, as it is written 'And His tender mercies are over all His works' (Psalms 145:9)." [In heaven] they said, "Since he is compassionate, let us be compassionate to him."

Reflected in this account, and in the halakhic principle derived herefrom, is the distinction between normative law and ethical conduct above and beyond the requirements of law (*lifnim mishurat hadin*). In its normative law, Judaism codifies standards applicable to everyone and makes no demands that are beyond the capacity of the common man; but, at the same time, Jewish teaching recognizes that, ideally, human beings must aspire to a higher level of conduct. That higher standard is posited as a moral desideratum, albeit a norm which is not enforceable by human courts. Not every person succeeds in reaching a degree of moral excellence such that he perceives the need and obligation to conduct himself in accordance with that higher standard. Those who do attain such a level of moral perfection are obliged, at least in the eyes of Heaven, to conduct themselves in accordance with that higher standard. No human court can inquire into the degree of moral perfection attained by a particular individual and, hence, such a court cannot apply varying standards to different persons. The heavenly court, however, is in a position to do so and, accordingly, will punish a person who does not comport himself in accordance with the degree of moral perfection which he has attained.

R. Yechiel Ya'akov Weinberg, *S'ridei Esh*, III:7, hastens to point out that Rema's cautionary statement with regard to normatively permitted forms of *tza'ar ba'alei chayyim* should not be construed as applicable to medical experimentation. In a short comment, *S'ridei Esh* rejects the application of Rema's remarks to medical experimentation for what really are three distinct reasons: 1) moral stringencies beyond the requirements of law are personal in nature; a person may accept stringencies of piety for himself but may not impose them upon others; 2) elimination of pain and suffering of human beings takes precedence over considerations of animal pain; 3) the concern for avoiding pain to animals even when it is halakhically permitted to cause such pain is germane only at the cost of forgoing benefit to an individual but not when benefit may accrue to the public at large.

S'ridei Esh's comments are in opposition to the view expressed by *Chelkat Ya'akov*, I:30, sec. 6, to the effect that, although medical experimentation upon animals is certainly permissible as a matter of law, nevertheless, in accordance with Rema's caveat, it is proper to refrain from inflicting pain upon animals even for such purposes. More recently, a member of the Supreme Rabbinical Court of Israel, R. Eliezer Waldenberg, *Tzitz Eli'ezer*, XIV:68, found no difficulty in supporting medical experimentation upon animals but urged that pain be minimized insofar as possible.

R. Judah Leib Zirelson, *Ma'arkhei Lev* no. 110, draws a much broader distinction between the conduct frowned upon by Rema and other uses to which animals may be put without breach of even the "trait of piety" commended by Rema. According to *Ma'arkhei Lev*, the crucial factor is the

element of necessity. Quills may be removed from dead fowl as readily as from live ones. Hence, plucking feathers from a live bird is an entirely unnecessary act of cruelty, even though the act itself serves a human purpose. However, in a situation in which there exists a need which otherwise cannot be satisfied, it is not improper to cause discomfort to animals, and refraining from doing so does not even constitute an act of piety. R. Judah was punished, asserts *Ma'arkhei Lev*, because his sharp and impulsive remark was entirely gratuitous.

In conclusion, it may be stated that Jewish law clearly forbids any act that causes pain or discomfort to an animal unless such act is designed to satisfy a legitimate human need. Accordingly, all authorities agree that hunting as a sport is forbidden. Although many authorities maintain that it is not forbidden to engage in activities that cause pain to animals in situations in which such practices yield financial benefits, there is significant authority for the position that animal pain may be sanctioned only for medical purposes, including direct therapeutic benefit, medical experimentation of potential therapeutic value and the training of medical personnel. *A fortiori*, those who eschew the latter position would not sanction painful procedures for the purpose of testing or perfecting cosmetics. An even larger body of authority refuses to sanction the infliction of pain upon animals when the desired benefit can be acquired in an alternative manner, when the procedure involves "great pain," when the benefit does not serve to satisfy a "great need," or when the benefit derived is not commensurate with the measure of pain to which the animal is subjected. Even when the undertaking is designed to promote human welfare, there is greater justification for causing the swift and painless death of an animal than for subjecting it to procedures that cause suffering to a live animal.

Judaism recognizes moral imperatives that establish standards more stringent than the standard of conduct imposed by law. According to the view of most authorities, those moral imperatives should prompt humanity to renounce cruelty to animals even when the contemplated procedure would serve to promote human welfare.

Medical experimentation designed to produce therapeutic benefit to humankind constitutes an exception to this principle and is endorsed by virtually all rabbinic authorities. Nevertheless, as stated by R. Eliezer Waldenberg, it is no more than proper that, whenever possible, such experimentation be conducted in a manner such that any unnecessary pain is avoided and, when appropriate, the animal subject should be anesthetized.

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See also: Animal Rights in the Jewish Tradition; Maimonides; Vegetarianism and Judaism.

Jewish Law and Environmental Protection

Jewish law or *halakhah* is a living legal tradition whose history reaches back to ancient biblical times. Like any other system of law, the course of the *halakhah's* growth and development has been shaped by the practical issues facing its adherents. The modern preoccupation with environmental protection is largely a reaction to the dangers posed by relatively recent technological change. The *halakhah* was first codified around the year 200 in a legal compilation called the *Mishnah*. Rabbi Joseph Caro composed its last major codification, the *Shulchan Arukh*, in the sixteenth century. It is therefore hardly surprising that "environmental protection" *per se* does not constitute a well-defined category in Jewish law. Furthermore, in recent times the *halakhah* has nowhere achieved jurisdiction over questions of governmental policy such as land-use, emissions standards, etc. Of late, the *halakhah's* creative energies have been devoted to solving pressing issues of personal importance to the faithful (e.g., medical ethics) rather than to forging theoretical stands on issues of state policy which would not be binding on any presently existing government. Nonetheless, traditional halakhic literature includes rulings and principles that offer a firm foundation for the development of a comprehensive Jewish law of the environment. A number of concepts and principles from Jewish law are of immediate relevance for environmental concerns.

Bal tashchit ("Don't destroy")

According to Deuteronomy 20:19–20,

When in your war against a city you have to besiege it a long time in order to capture it, you must not destroy its trees, wielding the ax against them . . . Only trees which you know do not yield food may be destroyed; you may cut them down for constructing siege-works. (New Jewish Publication Society of America translation. Unless otherwise indicated all subsequent quotations have been translated by the author.)

These verses are understood in Jewish law as prohibiting all *wanton* destruction of fruit trees, in times of peace as well as in war. Although *purposeful* destruction of fruit trees is permitted for various economic and other reasons, it has always been frowned upon and thought to bring misfortune. For instance, when Rabbi Ya'akov Emden (d. 1776) was asked whether a grapevine could be

uprooted to allow for the planned expansion of a synagogue, he suggested that they replant the vine elsewhere rather than destroy it outright.

The law against destroying fruit trees is seen as offering a biblical foundation for the legal principle of *Bal tashchit* (Hebrew for “don’t destroy”), a very broad prohibition of the wanton destruction of anything that may be of utility to human beings. *Bal tashchit* may be understood as placing an important limitation on usual notions of legal ownership. Mere ownership of natural resources does not allow one to waste them. This limitation reflects both the theological notion that all that exists ultimately belongs to God rather than to humans, as well as the ethical principle that one must avoid destroying resources that are potentially valuable to other human beings. In the words of the anonymous thirteenth-century *Sefer ha-Chinukh*, righteous people

love peace and rejoice in the welfare of others . . . they would not destroy a single mustard seed in the entire world, they are distressed by any loss or destruction they see, and if they can save [something], they will save anything [that they can] from destruction with all their strength (commandment 529, in some editions 530).

Tza’ar ba’alei chayyim (“The suffering of living things”)

Tza’ar ba’alei chayyim is the Hebrew expression for the prohibition against causing unnecessary suffering to animals. Several biblical commandments are generally understood as involving this principle (e.g., helping with the unloading of an overburdened animal [Ex. 23:5], coming to the assistance of a fallen animal [Deut. 22:4], and the prohibition against muzzling an ox while it threshes [Deut. 25:4]). Rather than reflecting a concern for the interests of animals themselves, considerations of *tza’ar ba’alei chayyim* are usually seen as being ultimately educational in nature. They are aimed at discouraging cruelty and promoting the virtues of kindness and mercy among human beings. Nonetheless, *tza’ar ba’alei chayyim* frequently serves as factor in halakhic decision making, and several legal controversies have developed around its application. Rabbi J. David Bleich, a contemporary scholar, cites a spectrum of authoritative opinions ranging from those who would permit suffering to be caused to animals for the sake of financial gain, to those who prohibit

the infliction of pain upon animals when the desired benefit can be acquired in an alternative manner, when the procedure involves “great pain,” when the benefit does not serve to satisfy a “great need,” when the same profit can be obtained in another manner, or when the benefit derived is not commensurate with the measure of pain to which the animal is subjected (1989: 236).

Some authorities permit animal suffering only for medical purposes. It should be pointed out that death, especially death caused by painless ritual slaughter, is not always viewed as involving suffering. While these considerations find their most obvious modern applications in connection with the ethical dilemmas of industrial farming and animal experimentation, they may also extend to issues involving the treatment of animals in the wild (i.e., Judaism’s long-standing abhorrence of hunting for sport).

R’shut harabim (“Public domain”)

Various halakhic rulings deal with the protection of public spaces. These are mostly concerned with the damages and fines that must be paid by those who compromise other people’s safety by digging holes and creating other obstacles in public places. An anecdote quoted in the Talmud from the *Tosefta* (an ancient legal compilation of rulings not included in the *Mishnah*) may indicate how halakhic discussions of *r’shut harabim* may bear on modern worries regarding the misuse of public resources:

It happened that a certain man was clearing stones from his own property onto *r’shut harabim*. A pious man found him, saying, “Fool, why do you clear stones from a domain which does not belong to you onto your own property?” [The man] laughed at him. Some time later, after the man had to sell his field, he walked through the very same *r’shut harabim* [where he dumped the stones] and stumbled [on them]. He said, that pious man spoke well to me [when he said], “Why do you clear stones from a domain which does not belong to you onto your own property?” (BT *Baba Kama* 50b).

Hilkhot sh’kheinim (“The laws of neighbors”)

The legal category known as *hilkhot sh’kheinim* regulates, among other things, activities in one’s own private domain, which may adversely affect people living in neighboring domains. It is a promising source for anti-pollution legislation in the *halakhah*. Summarizing some of these regulations, Moses Maimonides (d. 1204) wrote in his authoritative legal code, the *Mishneh Torah*,

One who made a threshing-floor within his domain, or set up an out-house, or does work producing dust or dirt and the like, must distance them so that the dirt or out-house odor or dust does not reach his fellow, in order not to harm him (*Kinyan, Hilkhot Sh’kheinim* 11:1).

Similar rulings regulate noise and thermal pollution. Serious health hazards, including tanneries, graves, animal carcasses and permanent threshing floors, must be located at least fifty cubits (about 25 meters) outside of town.

Halakhic prohibition of environmental hazards and nuisances is not absolute but rather reflects a need to balance the conflicting interests of the various parties involved. For instance, in regard to noise pollution, the *Mishnah* states:

When a shop is in a courtyard, [a neighbor] may protest and say to him [i.e., to the shopkeeper], "I cannot sleep because of the noise of those entering and because of the noise of those leaving [your shop]." When [an artisan] makes wares and goes out and sells them in the market, [a neighbor] may not protest and say to him, "I cannot sleep because of the hammer's noise, or because of the noise of millstones, or because of the noise of children [being instructed by a teacher in his home]" (BT *Baba Batra* 2:3).

Here the neighbor's need for quiet must be balanced against the artisan's need to make a living, and vice versa.

The technical details of traditional Jewish regulations of environmental hazards often reflect pre-modern conditions and pre-modern knowledge of environmental science and public health. However, the rabbis themselves have always been aware of the dynamic nature of the empirical foundations of their rulings. In regard to the measures required to avoid damage due to particular sources of noise, Rabbi Moses Isserles (d. 1572) wrote, "they should be estimated by artisans and experts." Similarly, today's halakhic authorities are usually quite willing to accept the validity of up-to-date scientific opinion in such practical matters.

For over two thousand years, halakhic scholars have worked at developing and refining a conceptual framework that strikes a balance between the various needs of individuals and communities and which defines the legitimate use of animals and other natural resources. A brief encyclopedic entry could not begin to relay the subtlety and sophistication achieved in halakhic discourse. Judaism can make a crucial contribution by applying the ideas and principles of the *halakhah* to the legal and ethical quandaries posed by contemporary environmental concerns.

Berel Dov Lerner

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See also: Animal Rights in the Jewish Tradition; Judaism and Animal Experimentation; Judaism and Sustainability; Kabbalah; Vegetarianism and Judaism.

Jewish Law and Genetic Engineering

How does the Jewish tradition relate to the modern phenomenon of genetic engineering? To answer this question, we need to understand how Jewish tradition views the natural world and human interactions with the natural world. Jewish tradition takes a very positivistic view of the natural world, stressing how each progressive step in the creation of the natural world was "good" in the eyes of God the Creator (Gen. 1:1–25). After the creation of man, with his free will and his ability to alter the creation, the Bible informs us that it was all "very good" in the eyes of God (Gen. 1:31).

Jewish tradition posits that humans were created, in the "image of God" (Gen. 1:27) to be a partner with God in mastering and perfecting themselves and the natural world. For example, the Bible commands humans to "replenish the Earth and subdue it and have dominion over the fish of the seas and over the birds of the air and over every living thing that moves on the Earth" (Gen. 1:28). Rabbi Akiva demonstrated to the Roman general, Turnus Rufus, that the works of man, as finishing touches to the creation, are better than the unfinished works of the Creator (*Midrash Tanchuma – Tazri'a* 19).

While Jewish tradition assigns humans the God-given obligation to manipulate nature in order to bring benefit to humankind and the world, it also recognizes that humans can negatively interfere with the creation to the point of destroying themselves and the natural world. God placed limits on human activities both in the form of the laws of nature and in the form of religious laws.

Where does genetic engineering fit in with the Jewish perspective on humankind and the natural world? Only recently have humans learned how to circumvent the natural laws in order to manipulate and transfer genetic material between different species. The ethical implications of this newfound "freedom" will be discussed further on. First, we will discuss the Jewish religious laws that are

relevant to bioengineering. We will focus on two main categories of genetic engineering: 1) Medical procedures which can save and prolong human life; and 2) Procedures which can modify the characteristics of plants and animals allowing greater productivity, improved nutrient content and enhanced aesthetic qualities.

Beginning with the first category, Jewish tradition places supreme importance on *pikuach nefesh* – the preservation of human life. Judaism obligates its adherents to violate all prohibitions except for murder, idolatry or adultery to preserve human life. Therefore, the utilization of genetic engineering to save or prolong human life is certainly permitted and may be required as long as the likely effectiveness of the procedure would justify the risks involved. Genetic engineering that constitutes a threat to human life is likewise prohibited. The second category, where *pikuach nefesh* is not a factor, is more complex, requiring further separation into halakhic (legal) and ethical perspectives.

Jewish Legal Perspectives on Genetic Engineering of Animals and Plants

The two areas of Jewish law most frequently encountered in genetic engineering of animals and plants are *kashrut* (prohibited foods) and *kilayim* (prohibition of mixing different species of plants and animals). Relative to genetic engineering, these laws are only concerned with the transference of genetic material across species boundaries, not within the same species. The *kashrut* laws, (Lev. 11:1–47) delineate between species of animals which Jews are permitted to eat and those which are not kosher. When genetic material from non-kosher species of animals are mixed with kosher species of plants and animals, does this render the receptor non-kosher? Rabbinic authorities consider genetic material that is separated from, or synthesized from, the parent organism to be essentially “inert,” in other words independent of the defining characteristics of the parent organism. Therefore, genetic material from non-kosher species is not itself considered non-kosher and does not render the new host organism non-kosher.

The biblical prohibition of *kilayim*, which forbids the mixing of different species of animals and plants, appears in Leviticus 19:19: “Keep my decrees. Do not mate different kinds of animals. Do not plant your field with two kinds of seed. Do not wear clothing woven of two kinds of material.” The prohibition of *kilayim* applies only to the act of mixing different species and does not forbid the usage of the products of this mixing (except for the prohibition on intermixing grapes with certain plant species, where it is forbidden to derive benefit from the product as well). Furthermore, according to almost all rabbinic authorities, the prohibition of *kilayim* applies only to Jews. Most rabbinic authorities rule that the prohibition of *kilayim* is restricted to the specific acts of interbreeding

spelled out in Leviticus 19:19. Therefore, the non-sexual transfer of genetic material between different species of animals or between animals and plants is not prohibited. The transfer of genetic material between different species of plants is less clear, and there is some disagreement among rabbinic authorities as to the permissibility of performing certain types of genetic engineering on plants.

The legal allowances are consistent with the general principle that anything not explicitly prohibited in the Bible and Talmud is assumed to be permitted. In the words of the early nineteenth-century commentator Rabbi Yisrael Lifshutz, “Anything which we have no reason to prohibit is permitted, without having to find a reason for its permissibility. For the Torah does not mention every permissible thing, but rather only those things which are forbidden” (*Tiferet Yisrael* on *Mishnah Yadayim* 4:3).

Jewish Ethical Perspectives on Genetic Engineering

Genetic engineering crosses God-created boundaries that were until recently closed to humankind. There is a great deal of uncertainty as to the effects (spiritual as well as physical) of genetic engineering on humans and their environment. As discussed above, the extreme importance placed on the preservation of human life may require us to cross these boundaries. The ethical implications of non-life-preserving aspects of genetic engineering are less clear.

Does genetic engineering in non-life-preserving situations violate the “spirit of the law” of *kashrut* or *kilayim*, or otherwise negatively interfere in God’s creation, even if it does not violate the letter of the law? One approach may suggest that it does. For example, the twelfth-century sage Nachmanides writes in his commentary on Leviticus 19:19 that one who mixes two different species is “changing and denying the Divine Creation of the world.” The thirteenth-century author of “*Sefer HaChinukh*” writes on the prohibition of mixing species, “all that God did is intended for the perfection of that which is needed in His world . . . and the species should not be mixed, lest it detract from the perfection and there won’t be (God’s) blessing.” The eighteenth-century German Rabbi Samson Raphael Hirsch writes in his commentary on the Bible:

[T]he Torah must consider this law (against mixing different species) which God implanted in the organic world of nature to be of the very highest importance for our human and Jewish calling, for it has interwoven consideration of it (the prohibition of mixing different species) in the whole of our life. Not only does it forbid us actual interference with this law by the prohibition of interbreeding animals and grafting trees, the unnatural crossing of species of plants and animals which are of different species in nature, but in our whole association with the

organic world – as sowing and planting, at the use of animals for work, at using materials obtained from animal and vegetable sources for our clothes, and at the food we eat . . . It teaches us to keep such order that brings to our minds again and again the great law of “keeping species separate,” and its greater Lawgiver (author’s translation).

A second, more liberal approach finds less if any ethical objections. Most contemporary Jewish authorities take a permissive but cautious position on genetic engineering. Rabbi Dr. Avraham Steinberg, for example, believes that we should proceed with genetic engineering as long as it “does not violate halakhic prohibitions or lead to results that would be halakhically prohibited” (Wolff 2001: 9).

In conclusion, Judaism posits that the natural world, as created by God, started out as intrinsically good. Humans were given the mandate to perfect themselves and the natural world as a partner with the Creator. To fulfill this task, humans may manipulate the creation, but only within certain limitations – these being defined by the natural and religious laws given by the Creator. The defining ethical criteria is that all of the permitted actions must bring the world closer to perfection and not further away. For the sake of preserving human life, genetic engineering is certainly permissible, and may even be obligatory. Aside from situations where human life is at stake, the majority of rabbinic authorities rule that most forms of genetic engineering do not violate the Jewish religious laws. There is disagreement as to the ethical permissibility of certain areas of genetic engineering. As genetic engineering continues to advance and expand around the world, there is a great need for further research and discussion among Jewish authorities in order to address the legal and ethical issues involved.

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- See also: Animal Rights in the Jewish Tradition; Environmental Ethics; Globalization; Jewish Law and Environmental Protection; Judaism; Radical Environmentalism; Seeds in South Asia.

Jubilee and Jubilee 2000

Jubilee is derived from the Hebrew Sabbath laws and marks the seventh Sabbath year. While the Sabbath or Sabbatical year was a year of rest for the land (Ex. 23:10–12; Lev. 25:1–7) and loan forgiveness (Deut. 15:1–18), the Jubilee year aims to reverse the effect of debt slavery and debt-related land loss through slave redemption (Lev. 25:39–42) and land restoration every fiftieth year (Lev. 25:8–28). These practices stress divine ownership of the land, on which Israel is tenant, but which it does not own. There is, however, no extant historical evidence of such a national Jubilee and Jewish sources reveal considerable complexity on this issue.

The Catholic Church established a recurring Jubilee year beginning in 1300. The year 2000 was one such year. “Jubilee 2000” was a campaign of heightened calls for international debt relief supported by Catholic and many mainline Protestant churches. The movement became worldwide, ecumenical beyond the boundaries of established churches. Most of its local and grassroots leaders were women. After the year 2000, there are continued efforts for debt relief through follow-up campaigns. The rhetoric of “Jubilee 2000” and related initiatives foregrounds the welfare of human beings, but recognizes the existence of humans as densely interwoven with the land as well as the destructive side effects of large international debts on the environment. Some contemporary Jewish voices are reticent about Christian applications of Jubilee. Other voices have raised questions about the viability of complete debt relief. While there remain questions about the application and interpretation of the Jubilee concept, its concerns touch at the core of human and environmental exploitation.

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- See also: Jewish Intertestamental Literature; Judaism; Sabbath–Jubilee Cycle.

Judaism

Judaism is the religious civilization that evolved out of the religion of ancient Israel, taking its shape as a scriptural religion during the Second Temple period (516 B.C.E.–70 C.E.). In subsequent centuries, Judaism developed in

response to changing historical circumstances and through conversations with other civilizations, especially Islam and Christianity. A variegated religious civilization, Judaism has harbored diverse conceptions of nature, reflecting the socio-economic circumstances of the Jewish people, changing intellectual conventions and modes of thought, and the internal debate within Judaism about the meaning of being Jewish.

The Bible is the foundational document of Judaism. While the biblical text reflects events, cultic rituals, social legislation, prophetic teachings, historiography, and poetry of ancient Israel, the biblical text was edited in stages during the Second Temple period. Regarded as canonic scripture, the biblical text was believed to be divinely revealed and authoritative, a Torah or "divine instruction." Given the complex process by which the Bible came into existence, the sacred text we have reflects both the life of ancient Israel during the First Temple period (roughly from 1200 B.C.E. to 587 B.C.E.), as well as the emergence of Judaism as a scriptural religion in the Second Temple period. Whereas in the First Temple period, ancient Israel communicated with God through sacrifices and prophetic oracles, in the Second Temple period communication was carried on increasingly through the study of God's revealed Torah. Especially after 70 C.E., when rabbinic Judaism came into existence, the revealed Scriptures provided information about God's created world and determined how one must treat the physical environment, nonhuman creatures, the human body, and other human beings. In Judaism approaches to God's creation are framed through the prism of revealed scriptures.

Israelite religion was both a product of the Ancient Near Eastern milieu as well as a critical rejection of it. In the Bible, therefore, the Israelite God, Yahweh, is depicted both as part of nature, resembling other Ancient Near Eastern deities, as well as the Creator of nature who has complete control and power over nature. The degree to which God is or is not part of nature demarcated the boundaries between Israelite religion and the neighboring culture, since the worship of nature as a divine entity in itself was viewed by biblical prophets as idolatry. The tension between the belief in God's transcendence, on the one hand, and the belief in God's immanence, on the other hand, was never resolved in Judaism. It continues to inform Jewish thinking to this day, giving rise to diverse understandings of nature.

From the rabbinic perspective, the belief that nature is created by God means that the created world, or "nature," is good and that underlying its multiple forms there is a fundamental unity. The biblical creation narrative in Genesis provides the general outline of the creative process: an undifferentiated reality becomes increasingly differentiated through the process of separation – the separation of light from darkness, upper from lower

waters, land from sea, plant from animal life, humans from other animals, and finally, woman from man. The formation of boundaries in the act of creation is adduced by scholars as the rationale for the distinction between the sacred and the profane, the permitted and the forbidden in the legal parts of the Bible. Thus the prohibition on mixing different seeds in the same field, the interbreeding of diverse species of animals, the wearing of garments of mixed wool and linens, and the differentiation between clean and unclean foods are all traced back to the setting of boundaries at the moment of creation (Lev. 10:10–11; 19:19; Deut. 22:11).

Having created the universe, God continues to sustain it and govern it. Thus nature itself reflects God's goodness, generosity, glory, greatness, and kingship. The greatest expression of God's concern for the world is the revelation of the divine will in the form of Law to the Chosen People, Israel. The revealed Torah defines the ideal: what ought to be and what Israel should do in order to attain the ideal. The very revelation of the Torah indicates that although nature is good, it is neither perfect nor holy. Nature can be perfected and made holy, only when humans, who are created in the image of God, treat nature in accord with the will of God. In this regard, humans can be viewed as partners of God in the care-taking of nature.

The Hebrew Bible is the earliest articulation of the principle of stewardship toward nature. Created out of the Earth (*adamah*), the human earthling (*adam*) is also made in the "image of God" (*tzelem elohim*) (Genesis 1:26). As a created being, the human is part of nature, but as a recipient of divine command, the human is able to transcend nature by emulating God. The relationship between the human species and the natural world is, therefore, complex: on the one hand, the human species is privileged over other creatures, but, on the other hand, the human is given responsibility toward nature. If humanity is to emulate God, humanity must govern nature with intelligence and benevolence, as a good steward does, while never forgetting that God and not humanity is the true King of the universe. Thus the divine command to the first earthling "to fill the Earth and subdue it" (Gen. 1:28) should be understood as something other than a license to exploit and destroy the Earth, in light of humanity's role in another verse which states that "The Lord God took the man and put him in the garden of Eden to till it and keep it" (Gen. 2:15). This verse spells the biblical understanding of the human task: only by observing God's will can the human be a true steward of nature, ensuring the well-being of God's creation. If originally, the protection of the Garden of Eden was a holy task, presumably to be accomplished effortlessly, after the sin, the tilling of the land was to be done with pain and suffering (Gen. 9:17–19), indicating the separation between the human earthling and the soil from which he was created.

The belief that nature is created by God facilitates interest in and reverence toward the natural world. The more one observes the natural world, the more one comes to revere the Creator. Psalm 19:1 expressed the point poetically: "The heavens are telling the glory of God/and the firmament proclaims his handiworks." Psalm 148 depicts all of creation as engaged in praising God and recognizing God's commanding power over nature. Nature also fears God (Ps. 68:9) and observes the relationship between God and Israel, expressing either sorrow or joy at the fortunes of the Israelites (Joel 1:12; Amos 1:2; Jon. 3:7–9; Is. a 14:7–8). No matter how much the Bible recognizes the majesty of nature the biblical text never revels in nature only for its own sake. Nature is not an end but always points to the divine Creator who governs and sustains nature in his goodness and generosity. The biblical emphasis on orderliness of creation explains why the Bible does not glorify wilderness and why the cultivated field is the primary model for the created universe in the Bible. The Bible does not despise wilderness (after all, the wilderness is the location of revelation), but the Bible clearly links the aridity of the desert with divine punishment and the dialectics of blessing and curse. The successfully cultivated land manifests the presence of God in the life of the people, and, conversely disloyalty to God incurs divine punishment in the form of loss of life's necessities.

Descriptions of nature or figurative usages of nature's forces to teach a religious lesson abound in the Bible. In one famous parable, fruit trees and vines willingly serve the human in ritual observance by providing oil, fruit, and wine (Judg. 9:8–13). Conversely, nature does God's bidding when it serves to punish and destroy the people of Israel if they sin; ungodly behavior leads to ecological punishment. Since God is the sole Creator, it is God's prerogative to sustain or to destroy nature (Ps. 29:5–6; Zech. 11:1–3; Hab. 3:5–8). Nature itself becomes a witness to the covenantal relationship between Israel and God and the ongoing drama of righteousness, chastisement, and rebuke. Mostly the Bible emphasizes divine care of all creatures: God provides food to all (Ps. 147:9); God is concerned about humans and beasts (Ps. 104:14–14; 15:16); God's care is extended to animals that can be used by humans, such as goats and rabbits (Ps. 104:18) as well as to lion cubs and ravens that do not serve human interest. Because God takes care of animals, they turn to God in time of need (Ps. 104:21; 27; Job 38:41).

The people of Israel, with whom God entered an eternal covenant, are the paradigm of the stewardship of nature sanctioned by scripture. Various land-based commandments express the belief that God is the rightful owner of the land of Israel and the source of its fertility. The Israelites who till the land are but God's tenant farmers who are obligated to return the first portion of the land's yield to its rightful owner in order to ensure the land's continuing fertility and the farmer's sustenance and

prosperity. Caring is extended both to vegetation and to animals. In war-time, fruit-bearing trees must not be chopped down while the city is under siege (Deut. 20:19). While this commandment indicates a human perspective, it also indicates that the Bible recognizes the interdependence between humans and trees, on the one hand, and the capacity of humans to destroy natural things on the other. In terms of treatment of animals, the Bible prohibits cruelty to animals and commands instead that animals be treated with love; thus killing of a bird with her young is forbidden, as is the yoking of an ass and an ox together (Deut. 22:10). Some commentators understand this as a way to emulate God's attribute of mercy and follow the overarching commandment "Be holy as I the Lord am Holy" (Lev. 19:2). The prohibition to boil a kid in its mother's milk (Ex. 23:19; 34:26; Deut. 14:21) is also explained by later Jewish sources as an attempt to prevent cruelty in human beings.

The doctrine of creation is also the basis of the most unique aspect of the biblical approach toward nature: the notion of imposed rest – the Sabbath. Viewed as completion of the act of creation and a celebration of human tenancy and stewardship, the Sabbath imitates God's rest. Hence, on the Sabbath humans must neither create nor destroy and only enjoy the bounty of God's creation. As an "island in time," to use Abraham Joshua Heschel's apt phrase, the Sabbath disrupts the eternal cycles of nature, reminding the observer that nature is created by God and must be treated in accord with God's laws. The command to rest on the Sabbath is extended not only to humans but also to domestic animals (Deut. 5:13). In the Sabbatical year (*sh'mitah* or "release"), rest is extended to the land, illustrating the biblical connection between moral quality of human life and the vitality of God's created nature (Lev. 25:2ff.) On the Sabbatical year the land's produce is given to all creatures equally, not just the poor and servants, but also the stranger, and all the domestic and wild animals. In all times, the corner of the field, the gleanings of stalks, the forgotten sheaf, the separated fruits and the defective clusters are to be given to those who do not own land – the poor, the widow, and the orphan. In the Jubilee year (Yovel) a more extensive land reform is offered on the ground that "The land cannot be sold in perpetuity, for the land is mine, and you are strangers and sojourners with me" (Lev. 25:23). In the Jubilee year all slaves are to be freed and returned to their families (Lev. 25:11). By observing the Sabbath year the soil itself becomes holy and the person who obeys the commandments ensures the religious-moral purity necessary for residence in God's land (Lev. 26:3–12). According to the Torah and the rabbis, exile is conversely caused by failing to let the land rest (Lev. 26:14ff.). However, the institution of the Sabbatical year was itself a subject of dispute by the rabbis after the fall of the Second Temple in 70 C.E. and many further rulings were introduced to ease its economic hardships.

The Bible was edited and canonized during the Second Temple period, when the Near East was dominated by Hellenistic culture. The encounter of Judaism with Hellenistic culture was uneven: all Jews were affected by Hellenism, but not to the same degree. A major aspect of the encounter with Greek culture was the rise of Jewish philosophical reflections about the cosmos as a whole. The main question for the Judeo-Hellenistic philosophers was where can the Wisdom of God be found and how can human beings access it. Building on the Wisdom stratum of the Bible, Jewish philosophers identified God's Wisdom with the Torah and wondered whether Torah/Wisdom pre-existed the world or whether it too was created like the heaven and the Earth. Aristobulus of Paneas (mid-second century B.C.E.) held that Wisdom/Torah existed prior to the heaven and the Earth and that God's power extends to all created things, and is therefore immanent in the world. The anonymous author of 2 Maccabees was the first to state that God created the world *ex nihilo*, thereby proposing a philosophical solution to a problem not yet recognized by the biblical text itself. The book of 4 Maccabees (first century B.C.E.) was the first Jewish text to cite the Stoic definition of Wisdom and identify it with the Torah. That notion, but without the Stoic reference, was also shared by Joshua, son of Ben Sira (early second century B.C.E.), the author of the Wisdom of Ben Sira. The identification of Torah and divine Wisdom entails that those who study Torah possess a deeper understanding of nature, and conversely, that the study of nature itself yields a deeper understanding of God's revelation.

Philo of Alexandria (ca. 15 B.C.E. – 40) elaborated these ideas in his doctrine of Logos. Echoing Middle Platonism, Philo envisioned the Logos as an intelligible world of Ideas, the paradigm of all things as well as their causes. The Logos is the first entity to be created by God in a non-temporal process. The physical world as we know it was created out of matter, but it is not clear whether matter itself is created or uncreated according to Philo. The immanent Logos produces the laws of nature, but since God created these laws, God can also change them, if God so desires. This claim makes miracles logically possible. In his prolific biblical commentaries, Philo interpreted the biblical text allegorically, thereby turning description of natural entities into abstract philosophical and/or ethical ideas. Thus, while Philo articulated a philosophy of nature, he had little interest in the description or the operation of the natural world itself.

The desire to understand how the natural world works is found in the apocalyptic literature produced by sectarian Jews from the third century B.C.E. to the second century C.E. While this literature has not been integrated into rabbinic Judaism, it indicates how interest in nature flourished among Jews during the Second Temple period. Thus, for the apocalyptic visionaries, divine Wisdom resides not in the perceptible world but in the heavens and

access to Wisdom was to be given to individuals through revelatory experiences that “disclose” or “reveal” the mysteries of the natural world. A telling example is I Enoch, a collection of several apocalyptic compositions, the oldest of which dates to the third century B.C.E. The hero, Enoch, is depicted to have undergone experiences that transport him to the heavens, to places of light and fire that were not accessible to any other human. In the extremities of the cosmos, Enoch encounters angels, namely, “the leaders of the heads of thousands who are in charge of the whole creation and in charge of all the stars . . .” (chapter 75:1). These angels reveal to Enoch information about the structure of the universe and about God's government of history, answering questions which the Book of Job claimed to be out of reach of humans (Job 38), especially in regard to the punishment of the wicked (the “Fallen Angels” in *I Enoch*) and the reward of the righteous in the end of time. The revelations about the cosmos are intrinsically linked to eschatology.

Though the discourse on angels is an attempt to explain how the universe is ordered and how it works, the narratives are not intended as mere theory, but are directly related to the calculation of the calendar, a hotly debated issue among the Jewish sects in the late Second Temple period. In *I Enoch*, a solar calendar of 364 days is presupposed and the primary goal of the composition, called “the Astronomical Book,” is to prevent sin due to calendar error. Enoch's eyewitnessing and understanding of the heavenly bodies, under their angelic leaders, is meant to impart the right knowledge in this regard. In the “Animal Apocalypse” of *I Enoch* (chapters 85–91) the figures of biblical history are represented by animals, for example, Adam is a white bull; Cain and Able are black and red bullocks. These are not descriptions of the perceptible natural beings but a coded language about the political reality during the Maccabean revolt (167–164 B.C.E.), using animals as allegories. If read as a political allegory, this section in *I Enoch* states that ultimately judgment is at hand and that heavenly angels will dispose of the Gentile rulers as they originally disposed of the “Watchers.” Victory is in the hands of God and his angels and the resolution involves a resurrection beyond this life, even if it is located on Earth.

A different type of cosmological speculation is found in the anonymous *Sefer Yetzirah* (Book of Creation), whose time of composition was probably the first century, while the Jerusalem Temple was still in existence. Unlike *I Enoch*, here the mysteries of creation are to be found not in the extremities of the universe, but in understanding the linguistic process that underlies divine creation: God created the universe through speech. The units of creation are the twenty-two letters of the Hebrew alphabet and the ten *Sefirot*, the ten “extensions” or “depths” (*omqim*), which together constitute the thirty-two “Paths of Wisdom.” As a linguistic product, the cosmos is to be

decoded not through biblical exegesis but through independent wisdom (i.e., *gnosis*) accessible to the sectarians who produced the text. While the obscure *Sefer Yetzirah* did not become part of standard rabbinic curriculum, its ideas would become the foundation for philosophic and kabbalistic speculations about the origin and structure of the universe in the Middle Ages.

With the destruction of the Temple in 70 C.E., the robust Jewish sectarianism came to an end, and the rabbis, the heirs of the Pharisees, became the sole interpreters of the Jewish tradition. A small scholarly elite, the rabbis articulated the ideology of dual Torahs – one Written, one Oral – both of which were believed to have been revealed by God to Moses at Sinai. As authoritative divine command, the Written Torah and the Oral Torah together constituted *halakhah* (literally, “the Path” or “the Way”), signifying Jewish Law as a whole.

The rabbinic corpus encompasses conflicting attitudes toward cosmological speculations. R. Akiba and his disciples were reticent about them and considered the “Account of Creation” (*ma’aseh b’reishit*) esoteric lore that was “not to be expounded before two people” (Mishnah Chagigah 2:1). Speculations about “what is above, what is beneath, what is before, and what is after” were to be limited to a small elite (Mishnah Chagigah 2:1). By contrast, R. Ishmael permitted such speculations (JT Chagigah 2:1 77c). The rabbinic commentary on Genesis known as *Genesis Rabbah* includes extensive cosmological discussion. Ascribed to the sages Shammai and Hillel, who lived prior to 70, *Genesis Rabbah* includes debates about the precise order of creation. According to the School of Shammai the heavens were created first, and then the Earth, while the School of Hillel maintained the reverse order (*Genesis Rabbah* 1:15). Likewise the School of Shammai maintained that the intention (“thought”) of creation was at night and the act by day, whereas House of Hillel maintained that “both intention and act took place by day” (*Genesis Rabbah* 12:14). By the second century, the dominant view among the rabbis was that “both were created together like a pot and its cover” (*Genesis Rabbah* 1:15) and that “the intention was both by day and by night while the fulfillment was with the waning of the sun” (*Genesis Rabbah* 12:14). In these speculations, special attention was given to the creation of light, since according to the biblical narrative the sun was not created until the fourth day. The anonymous sages opined that the luminaries were created on the first day, but they were not “suspended” until the fourth. Rabbi Jacob and R. Eleazar were of the opinion that the light created on the first day was a special light with which “one could see from one end of the world to the other” but it was hidden away and reserved for the righteous in the time to come because of the future corruption of the world in the days of the flood and the tower of Babel” (BT Hagigah 12a).

Unlike the apocalyptic literature that speculated about

nature on the basis of revelatory experiences, the rabbis develop their ideas on the basis of close reading of the biblical text, on the assumption that the revealed text contains the Wisdom of God. Insisting on God as a sole Creator, the rabbis intended to refute the view, common among Jewish sectarians, that God was not alone in the creative process and that the angels were involved. The rabbis also rejected the notion, prevalent among the Gnostics, that the material universe was created by a lesser and evil deity. According to the rabbis, the angels were created by God (*Genesis Rabbah* 1:3; 3:8), and it is stated that “all agree that none were created on the first day, that no one should say that Michael stretched out [the firmament] in the south and Gabriel in the north, and the Holy One, blessed be he, made its measurements in the center.” The angels themselves were created either on the second day or on the fifth day (*Genesis Rabbah* 1:4).

In the rabbinic corpus knowledge of nature is subordinated to practical and ethical concerns. For example, observation of celestial bodies that several rabbis such as R. Yochanan ben Zakkai, Gam’liel II and Joshua ben Chananya were reputed to have was directly linked to calculation of the lunar-solar calendar. Astronomical information about the motions of celestial bodies, the four seasons, the planets, the Zodiac, and even comets is directly related to calendar. More importantly, the interest in nature is linked to the moral-religious vision of rabbinic Judaism: communication with God is possible only through Torah and requires the cultivation of the proper virtues through observance of divine commands.

The rabbis were concerned about the relationship between revealed morality (prescriptive law) and the laws of nature (descriptive laws), but even here one can identify diverse and conflicting views. One theme highlights the regularity of nature and its indifference to human concerns: “nature pursues its own course” (*olam k’minhago noheg*) (BT *Avodah Zarah* 54b). Accordingly nature is independent of the revealed Torah and the laws of nature are different from the laws of the Torah. A contrary viewpoint, however, holds that the natural world is contingent upon the acceptance of the Torah by the Jewish people; had they rejected the Torah, the world would have reverted to primeval chaos. The link between nature and the moral conduct of humans is expressed in yet a third view that original natural order was perfect but suffered a radical change as a result of human original sin (BT *Kiddushin* 82b). And a fourth view posits “the animals of the righteous” as models for human conduct. Presumably these animals do not sin, because they know intuitively what the law is and what is required of them, and they know how to apply the Torah to the world in which they live. Since the “animals of the righteous” live in perfect harmony with their Creator, humanity has much to learn from them, not only in terms of the principle of observing God’s will but also specific lessons (BT *Pesachim* 53b). Finally, there is a

rabbinic teaching not only that animals observe the moral laws, but also that all of nature is perceived as fulfilling the will of God in the performance of its normal functions (JT *Peah* 1:1).

Biblical legislation served as the point of departure for the rabbinic sanctification of nature. For example, the protection of fruit-bearing trees in the Bible became the foundation of the rabbinic principle "Do not destroy" (*Bal Tashchit*). The biblical injunction was extended to cover all destruction, complete or incomplete, direct or indirect, of all objects that may be of potential benefit to humans. A sweeping legislation of environmental regulations is legitimized by appeal to this principle: the prohibition of cutting off of water supplies to trees, overgrazing of the countryside, the unjustified killing of animals or feeding them harmful foods, the hunting of animals for sport, species extinction and the destruction of cultivated plant varieties, pollution of air and water, overconsumption of anything, and the waste of mineral and other resources.

Similarly, the merciful treatment of animals is elaborated in order to produce the righteous personality that could stand in the proper relationship with God. Thus the prohibition on seething a kid in its mother's milk becomes the basis of an elaborate system of ritual separation of milk and meat products, which are explained as an attempt to prevent cruelty in humans (*Deuteronomy Rabbah* 6:1). Merciful treatment of animals is but one way by which Israel is separated from the surrounding pagan culture and becomes a holy nation. Scripture forbids cutting of a limb from a living creation even to feed it to dogs, even in the case of animals that are not to be eaten at all because they are unclean. The rabbis interpreted this law as applicable to all humanity, not just the Jewish people. The rabbis prescribe particular modes of slaughter which are performed with a sharp, clean blade so that they will be swift and relatively painless. The concern for unnecessary suffering of animals (*tza'ar ba'aley chayyim*) illustrates how the rabbis interpreted the command "to be holy as I the Lord am holy" so that Israel could stand in a covenantal relationship with God.

Attainment of religious perfection concerns not just how one treats another human being, but also how one cares for the human body itself. The rabbis had much to say about the operation of the human body and the rabbinic corpus is rich in details about the skeleton, the digestive organs, the respiratory system, the heart, the genitals, and other organs. The material includes both accurate description as well as fanciful material and it is totally lacking in graphic illustration. The discussion pertains primarily to physical disfigurements that disqualify men from the priesthood, with rules concerning menstruating women, and with other sources of ritual pollution. The rabbinic corpus also includes informative claims about embryology, diagnoses of diseases, and a host of medications and hygienic strategies for prevention of dis-

ease. Likewise, there is extensive detail about animal physiology as it relates to embryology, sacrifice, and other issues. The physician is viewed as an instrument of God, treated with utmost respect, and several Talmudic scholars were themselves physicians.

Precisely because the natural world is God's creation, the value of nature in Judaism cannot be simply utilitarian: the natural world does not belong to humans, but to God, and the world was created not for the sake of human needs but for God's sake. On the basis of Isaiah 43:7 the rabbis expressed this point succinctly when they stated that "Whatever God created, He created for His own Glory" (*Pirkei Avot* 6:12; *BT Yoma* 38a). The worship of God is expressed through the exclusive commitment to the Torah and its commandments. It is precisely because the rabbis made Torah study the highest value, that their attitude toward nature was complicated. On the one hand, the rabbis made the study of Torah a substitute of interest in nature, and on the other hand, it was from the Torah itself that one derives the values and ethical standards that guide one's treatment of nature.

The Judaism of the rabbis became normative after the redaction of the Talmud in the sixth century. During the Middle Ages, rabbinic Judaism underwent further changes as a result of the interaction between Judaism and two other civilizations: Islam and Christendom. In medieval Islam, Jewish life was profoundly transformed when Jews turned from agriculture to commerce, trade, arts, and crafts as part of a comprehensive process of urbanization. In medieval Christendom, the Jewish estrangement from the land was even more pronounced because feudal regulations excluded Jews from land ownership. Although in some parts of Europe Jews were granted estates as late as the thirteenth century, in general Jews were increasingly forced to engage in money lending, pawnbroking, and trade, merchandising and the sale of second-hand goods.

Frequent expulsions and voluntary migrations further estranged Jews from land cultivation, turning the agrarian past into a distant memory. No longer practiced, the prescribed land-based rituals of Judaism fueled the hope for the ideal messianic age in the remote future when the exiled people would return to the Holy Land. For two millennia Jews continued to dream about their return to the land while they waited for divine intervention to bring it about. Until that time, Jewish life was to be shaped by the norms of rabbinic Judaism, whose comprehensiveness enabled Jews to remain loyal to their religious tradition, despite the loss of political sovereignty and in the face of hostility and discrimination.

The comprehensive lifestyle articulated by rabbinic Judaism made the sanctification of nature a major concern of Jewish religious life. Ironically, it was precisely the comprehensiveness of rabbinic Judaism that enabled the Jews to live meaningfully outside the land of Israel and

defer the return to the Holy Land to the remote messianic future. In this regard the Torah became a substitute for nature and the land of Israel became an ideal, spiritual reality. In daily prayers, the Jewish worshipper sanctified nature by expressing gratitude to the Creator “who in his Goodness creates each day.” The prayers recognized the daily changes in the rhythm of nature – morning, evening and night – and recognized the power of God to bring these changes about. Similarly, the blessings that Jews are required to utter when they witness a storm or observe a tree blossoming bear witness to God’s power in nature. Even the natural functions of the human body are blessed, as is food that God provides to nourish the body. By means of these blessings all acts from which the worshipper derives either benefit or pleasure are consecrated to God. To act otherwise is considered a form of theft (BT *Berakhot* 35a).

The consecration of nature through prescriptive acts was compatible with the attempt to fathom how the natural world works. In Islam during the ninth century, Jewish scholars were confronted once again with Greek philosophy and science, now available in Arabic translations. The desire to understand how nature works and how God governs his created world was now carried out in the context of Aristotelian and Neoplatonic philosophies. In general, the medieval study of nature was a bookish activity, dominated by the determination to understand the causes of things and it presupposed the standard Aristotelian-Ptolemaic cosmology of the Middle Ages.

In medieval cosmology, the Earth was in the center of a finite and spherical cosmos within which there was a sharp distinction between celestial and terrestrial realms. The former comprises concentric orbs and is made of refined ether; the latter comprises the remaining space, which is occupied by the Earth and its atmosphere and in things consists of various combinations of the Four Elements (Water, Earth, Fire, and Air). Both realms are made up of matter and form but they exhibit different types of motion: the heavenly bodies are engaged in unceasing, perfect, circular motion, whereas in the terrestrial realm things are undergoing constant change due to generation, growth, and corruption, constantly exchanging one form for another. All terrestrial processes are driven by the motion of the heavenly spheres which are living and intelligent, and possess souls. The intellects of the heavenly bodies are the Separate Intellects that emanate from God. (Whether God is the First Intellect or the First Cause outside the series of emanated Intellects was a debated issue among philosophers-scientists.) Among the earthly individuals, only human beings have the potential to perfect themselves because they, like God, possess an intellect, having been created in the “image of God.”

While medieval Jewish philosophers were genuinely interested in understanding how nature works, their reflections were not divorced from the study of the

revealed Torah. Elaborating the notion that the Torah is identical with the Wisdom of God, the philosophers presupposed that in principle there could be no genuine contradiction between the truth revealed in the text and scientific knowledge about the world; both were believed to manifest the wisdom of God. The order of the cosmos was itself the ultimate reality and the highest human task was reverently to perceive it. God is the supreme *telos* of the universe, the intelligent and intelligible apex of the entire cosmos, accessible through philosophy and through prophecy, which according to these philosophers was the ultimate cognitive attainment. Apparent conflicts between Judaism and science emerge either because a non-demonstrable scientific theory is adopted, or because the biblical text is not interpreted in accord with philosophy and science.

Moses Maimonides (1138–1204), the most influential of medieval Jewish philosophers, is a case in point. He equated the rabbinic “Account of Creation” (*ma’aseh b’reishit*) with the science of physics as taught by Aristotle and his medieval Muslim interpreters. Accordingly, for Maimonides the biblical creation narrative had to be understood as follows: “water” refers to undifferentiated primeval stuff. Parts of this “water” were given different forms, resulting in a fundamental division in the material components of the universe. The “upper waters” are equated with Aristotle’s hot exhalation, while the “firmament” (*raqi’a*) is the lower stratus occupied by the cold exhalation, and the “oceans” refer to the elemental waters found on Earth. However, most commentators on Maimonides in subsequent centuries understood the process of creation to refer to the stratification of the atmosphere, and read the biblical text in line with Aristotle’s *Meteorology*.

The Jewish rationalist philosophers did not agree on the interpretation of the creation narrative, but they agreed that the Torah is a philosophic-scientific text that manifests the laws by which God governs nature. Since God is absolutely one, in God there is no distinction between what God knows and what God does. Divine activities in the physical environment manifest divine wisdom and God’s continued care for the world, that is, divine Providence. The philosophers studied the natural world in order to understand the mind of God, emphasizing orderliness, stability, and predictability of nature. The human ability to understand how God works in nature was ascribed to the human capacity for reason, which the philosophers equated with the “image of God” mentioned in Genesis. By virtue of reason, humans are able to understand the orderliness and purposefulness of nature which the rationalist philosophers interpreted in accord with medieval Aristotelian cosmology and physics. The medieval philosophers regarded the study of God’s created world as a theoretical activity whose reward was the immortality of the rational soul, or the intellect. Through

the study of nature the philosophers came closer to God and attained the ultimate end of human life – the knowledge of God.

Though Maimonides accepted Aristotelian science in regard to the sublunar world, he rejected Aristotelian astronomy as non-demonstrable knowledge. He also totally discredited the science of astrology and viewed it as a challenge to the Jewish understanding of human freedom. In the thirteenth century, however, other Jewish scholars were more forthcoming in accepting astrology and participated in its study along with the study of astronomy in the court of Alphonso X, “the Wise” (1252–1284). They were largely responsible for the construction of the Alphonsine Tables for computing planetary positions that remained popular until the mid-seventeenth century. As for the science of astrology, most Jewish philosophers-scientists in the thirteenth and fourteenth centuries accepted it as valid and practiced it to prognosticate future events and to heal the sick. The most sophisticated Jewish astronomer-astrologer was Levi ben Gershom (Gersonides) (1288–1344) who designed an instrument to measure the relative distance of celestial objects, the Jacob Staff, which remained in use by European navigators until the mid-eighteenth century. In the second half of the fourteenth century, Jewish philosophers, such as Isaac de Lates, Prat Maimon, Jacob Farisol, Nathanel Kaspi and Solomon ben Judah of Lunel, would apply the science of astrology to the interpretation of the biblical text in a concerted effort to show how biblical practices can be understood as mediums to draw the spiritual energy of the heavens to Earth, especially for the benefit of Israel. Some scholars who were engaged in the study of astrology, such as Gersonides, also insisted that the intellectual perfection attained through the knowledge of natural processes enables the intellectually perfect to transcend natural causality.

The assumption that natural phenomena must be understood in light of the Torah, since the Torah is the blueprint of creation, was shared by rationalist philosophers and by kabbalists alike, but the latter revived and elaborated the esoteric, quasi-scientific lore of the Greco-Roman period, especially the emanationist cosmology of the neo-Platonists. Focusing on the linguistic aspect of the creative act was the primary focus of the kabbalistic approach to nature. On the basis of *Sefer Yetzirah* and its cognate literature, kabbalists equated the “building blocks” of the created world with the letters of the Hebrew alphabet. Understood as units of divine energy, the various permutations of the Hebrew letters accounted for the diversity of nature. Nature, in other words, was understood as an information system, a linguistic text that could be decoded and manipulated by anyone who grasped its “grammar.” The one who knows how to decode nature because he possesses the knowledge of the invisible occult forces of nature created by divine speech, could understand and

manipulate the physical environment and effect changes in it. Hence, Kabbalah, especially in the fifteenth and sixteenth centuries, was closely associated with magic, astrology, and alchemy. Furthermore, the one who decodes the mysteries of nature could affect and impact God’s inner life, reunifying the feminine and masculine aspects of the Godhead that were pulled apart by the Fall of Adam.

Kabbalah yielded two seemingly opposing attitudes toward the natural world. On the one hand, kabbalistic texts abound with organic symbols that take their inspiration from the natural world. Organic symbols such as the Pomegranate and the Cosmic Tree captured the integrity and vitality of the Godhead which is beyond the ken of human, rational, discursive knowledge. However, precisely because kabbalists considered nature as a mirror of God, they were not as interested in the natural world as a physical reality and made nature into a symbolic system. The corporeal manifestation of this divine reality, namely, nature as we know through the senses, was even regarded in many texts as evil, to be transcended and spiritualized. By interpreting nature symbolically and by textualizing nature, Kabbalah further alienated Jews from the natural world, denigrating the physical. On the other hand, by trying to understand the occult powers of nature, Kabbalah also manifested a “hands on” approach to nature, leading the kabbalist to engage in the manipulation of nature in order to cause rainfall, heal the sick, or ease childbirth. Much of what might be called magical ritual in Kabbalah involved asking for or creating the possibility of blessing and redemption, for the Jewish people and for the world. In both approaches toward nature, Kabbalah remained committed to the primacy of humanity in the created order, because the human is the primary manifestation of the image of God in the created order.

In the early modern period (sixteenth to eighteenth centuries), medieval Jewish Aristotelianism declined as a creative schema for the interpretation of Judaism, replaced by Kabbalah. During the sixteenth century, kabbalists in the Land of Israel (most of whom refugees of the Spanish expulsion in 1492) delved deeply into the mysteries of the origin of the universe. On the basis of a close reading of *Sefer haZohar*, the central kabbalistic text, Isaac Luria (1534–1572) fathomed the mysteries of life itself. The act of creation in Kabbalah reflects processes that take place within the Godhead. According to Luria, creation began with an act of self-withdrawal (*tzimtzum*) to make room for a non-divine reality; the world came into existence through a dialectical process in which divinity gives birth to itself with the active help of the human intention. The Lurianic cosmogonic myth focused on the conception, impregnation, birth, suckling, and maturation of the divine Gestalt in an attempt to explain the mystery of life and chart the moral task for human beings, especially Israel. According to Lurianic Kabbalah, the goal of human life is

to liberate the divine sparks that are now trapped in the material “husks” or “shells” and thereby repair and restore the now imperfect divinity. The Lurianic speculations about the origins of life and the origins and destinies of human souls further removed these mystics from the empirical reality, even though kabbalists instituted new rituals based on symbolic meaning of natural objects such as fruits and vegetables.

Lurianic thought spread outside the land of Israel during the seventeenth century, although it was still known to a relatively few number of Jews. The complex cosmogonic myth, however, provided the ideology of the Sabbatean movement, a mass messianic movement whose messianic claimant, Shabbtai Tzvi (also “Sabbatai Zevi,” 1626–1676) challenged the authority of rabbinic tradition and even converted to Islam. In Sabbatean ideology, articulated by Nathan of Gaza, natural beings, such as serpents and crocodiles, are turned into mythical representations of the realm of Evil (the *Sitra Achra*). Presumably, the descent of Zevi into it, in order to destroy Evil from within, explains his dramatic mood swings, antinomian actions, and even his conversion to Islam. The symbolic approach to nature was even shared by Jewish philosophers-scientists in Renaissance Italy who availed themselves of new empirical knowledge about plants, animals, and minerals. Their massive new observations of the natural world were still interpreted within the linguistic doctrines of Kabbalah, and guided by the magical belief that nature could be manipulated through the manipulation of language, a belief that Jewish scholars such as Judah Moscato and Abraham Portaleone shared with Renaissance luminaries, such as Marsilio Ficino and Cornelius Agrippa.

No less threatening a challenge to rabbinic Judaism came from the skeptic philosophy of Baruch Spinoza (1632–1677) in Amsterdam, a son of ex-conversos, who challenged the identification of Torah with Wisdom that was in place in Judaism since the first century B.C.E. For Spinoza, the Bible was a human document and not a revealed text. As such, the Bible had no true scientific information about God or about the material universe but only information about ancient Israel’s political life and teachings about interhuman relations. Denying the ontological gap between the creator and the created world, Spinoza argued for the existence of one substance, which can be known either through extension or through thought. Spinoza’s monism, which might have been influenced by Kabbalah as taught by Abraham Cohen Herrera, identified God and nature; it also challenged the possibility of miracles, including the miracle of divine revelation. Concerned with religious conformity at a time of great intellectual upheaval, the Jewish community of Amsterdam could not tolerate Spinoza’s challenges and expelled him in 1656. In modern times, the Zionist movement of secular nationalism adopted Spinoza as its hero and

formally lifted the ban on him, and Spinoza’s monism helped inspire the deep ecology philosophy of Arne Naess.

The upheavals and challenges of the seventeenth century did not destroy traditional Jewish life, but gave rise to another revival movement in Eastern Europe during the eighteenth century – Hasidism. On the basis of Lurianic Kabbalah, Hasidic theology treated all natural phenomena as ensouled: divine sparks enlivened all corporeal entities, and not just human beings. The divine sparks seek release from their material entrapment. Through ritual activity, the Hasidic master attempts to draw closer to the divine energy, the liberation of which will result not only in the sanctification of nature but also in the redemption of reality and its return to its original non-corporeal state. The worship of God through the spiritualization of corporeal reality (*avodah bagashmiyut*) became a major Hasidic value, complementing the general deemphasis on Torah study. Hasidic tales were situated in nature rather than in urban settings, encouraging the Hasidic worshipper to find the divine sparks in all created beings. Yet most Hasidic masters were not primarily concerned with the well-being of the natural environment or with the protection of nature. To reach their spiritual goals, Hasidic meditative practices attempted to dissolve the corporeality of existing reality (*bitul hayesh*) and eliminate the identity of the one who meditates on nature (*bitul ha’ani*). While Hasidic thought ranged from panentheism to acosmism, the spiritualizing tendencies of Hasidism were disconnected at the extreme from any concrete concern with the natural environment.

Kabbalah, Hasidism, and traditional Talmudism (which reached ever-greater intellectual sophistication in the early modern period) contributed to the bookishness of Jewish culture and to the alienation of traditional Jews from the natural world. It was this alienation from nature that the proponents of Jewish Enlightenment (*maskilim*) cited as the reason for Jewish backwardness and inability to integrate into modern culture. For the advocates of Enlightenment, only a return to nature could facilitate the normalization of the Jews, which was the condition for their emancipation and integration into modern society.

On the national and institutional level, the extension of human rights to Jews in Western Europe in the early modern period was also in the interest of the modern nation-state and in accord with the principle of modern democracy. As a result of the emancipation, Jews could now enter the universities and turn their intellectual energies into the study of nature, at the expense of Torah study. Many Jews flocked to the newly discovered natural sciences such as chemistry and biology, which promised to improve the human condition through progress and accumulative knowledge. Some Jews converted to Christianity in order to be able to hold academic positions, and even those who remained nominally Jewish found in the scientific study of nature a substitute for traditional

Torah-study. In the nineteenth century individual Jews contributed immensely to a plethora of natural sciences but they did so as individuals and not as members of Israel.

In Hebrew literature of the nineteenth century, nature was often celebrated as the source of redemption for the deformed, uprooted, and “unnatural” Jew. The tension between the modern return to nature and the allegiance to sacred scriptures became most evident in the Zionist movement. For Zionism, the return of the Jews to nature was an integral part of the return of the Jews to their national home after two millennia of exile. Through the return to nature the Zionist movement was to re-create a new “muscular” Jew who derives vitality from the cultivation of the soil rather than from the study of sacred texts. Ironically, the return to nature necessitated first the conquest of nature, both of the physical environment and the human agent. As a backward province of the Ottoman Empire, Palestine was a place where the pioneers had to battle against nature, be it “wetlands” (*bitzot*) or “wasteland” (*sh'mamah*) as well as battle against their own physical weakness and inexperience in land cultivation. Through the conquest of nature, possession of the land was supposed to legitimize the Jewish claim for the land against the claims of another budding national movement – that of the Palestinian people. The ongoing conflict between the two movements would be waged not only over the land itself but also over scarce natural resources, especially water. Even the act of planting trees, which was promoted by the Jewish National Fund (JNF) as a central patriotic ritual that would lead to the redemption of the land (*ge'ulat ha'aretz*), would become a point of conflict between Israelis and Palestinians. By the same token, the awareness that without water no nationalism can thrive has also led to innovative cooperation between Israeli and Jordanian governments.

The ideology for the Jewish return to nature was articulated by the spiritual leader of Labor Zionism, Aharon David Gordon (1856–1922). Settling in Palestine in 1904, he joined the agricultural settlements in order to create a new kind of Jewish life and Jewish person. He viewed humans as creatures of nature but warned that humans are in constant danger of losing contact with nature. For Gordon, the regeneration of humanity and the regeneration of the Jewish people could come only through the return to nature and the development of a new understanding of labor as a the source of genuine joy and creativity. Through physical, productive labor humanity would become a partner with God in the process of creation. Rejecting the traditional Jewish focus on Torah study, Gordon viewed labor as a redemptive act, provided that the means humans employ are in accord with the divine order of things, that is, with nature. Gordon's “religion of labor” was a transvaluation of traditional Judaism.

In 1948 the State of Israel was founded in an act of defiance against the decimation of European Jewry in the Holocaust, the growing militancy of the Palestinian nationalism, and the British Mandate. The relationship between Judaism and nature came to the fore in the modern Jewish state. On the one hand, intimate familiarity with the landscape of the land of Israel, its flora and fauna, and concern for the preservation of the physical environment are very popular among secular Israelis. Nevertheless, activities related to the natural world have not usually been legitimated by appeal to the religious sources of Judaism. Even when the Bible is employed to identify plants and animals in the land of Israel, it is often not treated as a revealed text but as a historical document about the remote national past. There are, however, Jews who are anchored in the Jewish tradition who tend to link their love of the land of Israel to a certain religious nationalist vision rather than to love of nature. Their ideology finds support in the teachings of Abraham Isaac Kook (1865–1935), the first Chief Rabbi of the Jewish community in the Israel, who saw in secular Zionism the beginning of Israel's religious redemption. Religious nationalist parties now promote outdoor activities for their constituents, but these activities are rarely grounded in the sensibilities of the environmental movement.

Today there are many varied Jewish responses to environment issues. The State of Israel boasts a vigorous environmental movement, whose largest organization, the Society for the Protection of Nature (SPNI), was founded in the early 1950s as a nonprofit organization intended to protect the state's natural assets. SPNI serves as a focal point for all Israelis concerned with the quality of life and the preservation of the country's natural and historical heritage through a network of 25 field study centers located in various geographical areas throughout Israel. Through hiking and field study, SPNI attempts to consecrate nature, without particular reference to God. At the beginning of the twenty-first century a new nonprofit organization, “L'Ovedah ul'Shom'rah: Forum laS'vivah baYahadut” (“To Till and to Protect”: Forum for Ecology in Judaism) was organized in order to involve the religious sector in Israel in environmental issues, and add a Jewish religious perspective to the current environmental discourse.

Whereas Israel supports a vigorous environmentalism, the creative weaving of Judaism and environmentalism is more characteristic of American Jewry. Jewish environmentalism in the U.S. combines several groups. There are Jewish baby-boomers who were disenchanted by the suburban synagogues in America, and found their spiritual solace in the environmental movement. Some of them wound their way back to Judaism in the 1970s and 1980s as part of the Jewish Renewal Movement. These activists attempted to integrate their Jewish and environmentalist commitments by mining the Jewish tradition for

its ecological wisdom, highlighting the agricultural origins of Jewish life in ancient Israel and urging Jews to reconnect with the rhythm of nature that was the basis of many biblical festivals. A second group is comprised of Jewish thinkers, rabbis, and educators who responded to the accusation that the Judeo-Christian tradition was the direct cause of the current environmental crisis. These apologetic responses showed that the accusations were based either on misunderstanding of biblical sources or a lack of familiarity with the rich post-biblical Jewish tradition. And a third group are Jews who devote their creative talents to the articulation of spiritual and political environmentalism, although their audience is not the Jewish community and their goal goes beyond the "greening" of contemporary Judaism.

Since 1970, Reform, Conservative, Orthodox, Reconstructionist, and Humanistic Jews created a lively Jewish discourse on ecology, proving that Judaism can be part of the solution of our environmental crisis rather than part of the problem. In 1993 the Coalition for Environment and Jewish Life (COEJL) was founded as an umbrella for 29 organizations in the institutional Jewish community that were interested in environmental issues. The mission statement of the organization blends moral principles (such as "environmental justice," "responsibility toward future generations," and "prevention of harm"), with democratic principles (such as "the citizens right to know," "public involvement in decision making," and "equitable distribution and responsibility"), and with public policy issues (such as "energy independence," "governmental compliance," and "US leadership in protection of global environment"). The legislative agendas that flow from these principles in regard to waste management, testing of consumer products, pollution prevention, energy conservation, global climate change, Endangered Species Act, protection of public lands, and sustainable development are all linked by COEJL to traditional Jewish sources.

One main inspiration for Jewish ecological thinking is Abraham Joshua Heschel (1907–1972). A scion of a Hasidic family who received modern university training, Heschel was rescued from the Nazis and settled in the U.S. in 1944. Until his death he inspired scores of alienated American Jews to find their way back to the sources of Judaism in order to heal the atrocities of modernity that culminated in the Holocaust. Heschel's ecologically sensitive Depth Theology spoke of God's glory as pervading nature, leading humans to radical amazement and wonder. It viewed humans as members of the cosmic community and emphasized humility as the desired posture toward the natural world. Recognizing human kinship with the visible world, Heschel celebrated God's presence within the world but he also insisted that the divine essence is not one with nature. God is simultaneously transcendent and immanent. Under the directorship of Eilon Schwartz, an American-born environmentalist who

settled in Israel, Heschel's ecological teachings are being translated into concrete educational programs at the Abraham Joshua Heschel Center for Environmental Learning and Leadership in Tel Aviv. These programs impart ecological literacy, reverence to nature, democratic values, and communal activism. The leadership program trains Israelis of various professional pursuits to implement the vision of sustainability in Israel and to address preservation of species, coastal destruction, wetlands, water and air pollution, and waste management.

These activities in the U.S. and in Israel clearly indicate that Jewish environmentalism does exist today. At the grassroots level, in particular, Jewish individuals are raising environmental issues and organize educational activities to bring the ecological insights of Judaism to the attention of other Jews. The festival of Tu biSh'vat, which celebrates the birthday of trees, is now celebrated in many communities as a "Jewish Earth Day," and Jewish newspapers regularly report on environmental issues in connection with this festival. There is also a growing body of scholarly literature written by rabbis, Judaica scholars, and educators that makes it possible to teach college-level courses on Judaism and ecology. Judaism is also represented in the interreligious dialogue of religion and ecology. Nevertheless, in America environmentalism and ecological protection are still relatively marginal concerns of the organized Jewish community. Jewish collective concerns often focus on the physical and spiritual survival of the Jewish people rather than the survival of the Earth and natural habitats. Justifiably, Jews are preoccupied with the protracted Israeli-Arab conflict, relations between the State of Israel and the diaspora, Jewish-Christian dialogue, pluralism within Judaism, gender equality, and most recently the resurgence of anti-Semitism.

Ironically, the main challenges to Jewish environmentalism come from within. In Israel and in America, the religious sources of Judaism do not inform the identity of most Jews, and secular Jews do not appeal to them in their attempt to address environmental concerns. Furthermore, the Jewish ethics of responsibility presupposes a sense of belonging to a community which is larger than the individual self. But the successful integration of Jews into modern society entailed the disintegration of the Jewish community and the erosion of Jewish communal solidarity. In industrialized countries, social mobility meant accumulation of wealth often accompanied with a consumerist lifestyle that undermines sound ecological conduct. And if this were not enough, Jewish environmentalists themselves are not unanimous on the recommended course of action and its justification within Judaism.

Jews who come to environmentalism from a Jewish religious commitment face other challenges. Wishing to ground Jewish ecological thinking in the religious sources

of Judaism they must come to terms with the discourse of contemporary environmental philosophy and ethics which is largely, albeit not exclusively, secular. Bridging the gap between these two discourses is not easy, since it requires considerable interpretative skills on the part of Jews and a willingness to understand Jewish legal and textual reasoning on the part of non-Jews. Religiously committed Jews must become familiar with a vast literature whose worldview and philosophical assumptions may not only conflict with the beliefs of Judaism but are also in some cases self-consciously neo-pagan. This is especially evident in nature-based feminist spirituality that promotes goddess worship in order to overcome the deterioration of nature allegedly caused by the "Judeo-Christian tradition." Likewise, the biocentrism of deep ecology stands in conflict with the anthropocentric stance of Judaism, which is the basis of its ethics of stewardship and responsibility toward nature. Yet, traditional Jews can also find a nascent but growing environmental discourse that is inspired by religious values and sensibilities.

In conclusion, the Jewish tradition is rich with ecological insights and can make a distinctive contribution to the dialogue of religion and ecology. The principle "Do not destroy" can provide religious support for a range of environmental policies such as conservation of natural resources, prevention of water pollution, reforestation, proper disposal of waste products, energy conservation, recycling, and reduction of material consumption. All of these policies highlight human responsibility toward the physical environment and assume that humans are not the owners of the Earth and its inhabitants but only part of a larger interdependent whole.

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Judaism and Sustainability

The Jewish tradition relates to motifs in many guises that recur in the modern sustainability discourse and the policies that eventuate from it. As defined in The World Commission on Environment and Development publication *Our Common Future*, sustainability policies aim to meet "the needs of the present without compromising the ability of future generations to meet their own needs" (1987).

A variety of classical Jewish sources offer a specific vision of "religious sustainability" (i.e., following divine commandments) as the main precondition for the physical and moral survival of humanity in general and the Jewish people specifically.

One aspect of this view is expressed in the biblical narrative of the separation of Abraham and his nephew Lot. They have too many flocks, herds and tents for the carrying capacity of the land (Gen. 13:5–13). When Abraham suggests that Lot choose grazing resources elsewhere, he selects the Jordan Valley, prime land due to the availability of water. Lot pitches his tents near Sodom, a town whose inhabitants are so wicked that it is destroyed by God (Gen. 18). Lot and his daughters just manage to survive by fleeing upon divine instruction (Gen. 19).

This narrative is one among many indicating that moral factors are even more important for sustenance than economic or environmental ones. A key biblical motif connected to this is that the endowment or withholding of rain depends on whether the Israelites fulfill God's commandments (Deut. 11:17; 1 Kgs. 8:35–36; Isa. 5:5–6; Zech. 14:17).

The Jewish tradition also devotes much attention to the continued availability of natural resources. A biblical commandment forbids the Israelites to destroy fruit trees when laying siege to a city (Deut. 20:19–20). This prohibition is discussed in great detail in rabbinical literature, which extends it to all wanton destruction, including one's own possessions. The Talmudic sage R. Zutra declares it forbidden to make uneconomical use of fuel (Bavli Shabbat 67b). The leading medieval scholar Maimonides states that it is preferable to give clothes to the poor than to put them with the dead in the grave (Maimonides, *Mishneh Torah*, Laws of Mourning 14:24).

The laws of the Sabbatical and Jubilee years prescribe rest for the land, which the Bible says is not human beings' but the Lord's (Lev. 25:23–24). This view is also expressed in the biblical narrative of the rejection of Cain's sacrifice to God. His offering is defective because he does not offer the best from his crop and the "owner merits the best" (Gen. 4:3–5).

Several times the Bible mentions cycling and recycling, which are other important elements of the modern sustainability discourse. God tells Adam that he is dust and that he will return to dust (Gen. 3:19); thus his body will

become available again as a natural resource. The theme of humans seeing themselves as dust frequently recurs in the Bible (Ps. 3:16, 30:10; Job 10:9, 30:19, 34:15; Eccl. 3:16). Material recycling is found in the building of the tabernacle in the desert when, *inter alia*, the people's jewelry is recycled for making religious objects (Ex. 35:20–29).

Today awareness is growing that excessive consumerism endangers sustainability. Several classical Jewish sources view conspicuous consumption in a negative light. The Bible says that it may lead to idolatry or forgetting God (Deut. 8:12–14, 31:20, 32:15–18; Isa. 2:7–9, 22:12–14). Similar motifs appear in the *Mishnah*, an edited version of the oral laws passed down through the generations, which was compiled early in the third century. There the sage Ben Zoma says: "Who is rich? The man who is happy with what he has" (*Pirkei Avot* 4:1). The sage Hillel denounces gluttony, saying: "The more flesh, the more worms" (*Pirkei Avot* 2:7). A Talmudic source considers gluttony particularly inappropriate for sages (BT *Pesachim* 49a).

On the other hand, consumption based on normal use of the Earth's resources is encouraged. Those who have planted a vineyard without harvesting it are free from mobilization in times of war (Deut. 20:6–7). Maimonides considers moderation to be advisable and disapproves strongly of both extreme desires and asceticism, as we can read in Maimonides, *Introduction to Pirkei Avot*, Chapter 4.

There are also many aspects or motifs of dematerialization in the Jewish tradition. The invisible God who speaks to Abraham is non-material. The Ten Commandments forbid sculptured images (Ex. 20:4; Deut. 5:8). The Israelites are told to concentrate sacrifices in a single location, the Temple in Jerusalem. The Bible says repeatedly that these offerings are ineffective – even odious – if they are not accompanied by obedience to God (1 Sam. Ch.15; Isa. 1:11–13; Amos 5:22–25). After the destruction of the Second Temple in the year 70, this religious dematerialization goes further: prayer replaces animal sacrifice. The Talmudic sage Rabbi Elazar says that prayer is greater than sacrifices (BT *B'rakhot* 32b).

Another important motif – durability – emerges in the biblical narrative stating that the Israelites' clothing and footwear did not wear out while crossing the desert after the Exodus (Deut. 8:4, 29:4; Neh. 9:20–21).

Intergenerational equity is a central element of the modern sustainability discourse. In the Jewish tradition there are many references to the relative well-being of successive generations, including in the Ten Commandments (Ex. 20:5–6; Deut. 5:9–10).

Ancestral merit influences future generations. The merits of the Patriarchs and Matriarchs are frequently mentioned in pleas for mercy in the Bible and Talmud (Jer. 31:15–17). In the Talmud, later generations are often

considered less meritorious than earlier ones (BT *Eruvin* 53a; BT *Yoma* 9b). The sage Rabbi Zera says: "If the earlier generations were angels, we are humans; and if the earlier generations were human, we are like donkeys . . ." (BT *Shabbat* 112b). Several rabbinical texts encourage the planting of trees, which will benefit future generations (BT *Ta'anit* 23a; *Leviticus Rabbah* 25:3; *Yalkut Shim'oni* on *Kedoshim* 615).

Maintaining biodiversity, another important element of the modern sustainability discourse, is a frequently recurring motif in Jewish sources. Such a concern may be indicated by God's bringing all animals to the man in paradise to be given a name (Gen. 2:19–20). Through this "due diligence" action of taking an inventory of all creatures and giving them names their identity and specificity are recognized.

The tale of paradise shows that animals were not threatened by the first humans, who were vegetarian (Gen. 2:15–16). The narrative of Noah who, upon divine instruction, gathers specimens of all animal species into the Ark, is a further paradigm of biodiversity (Gen. 6–7). Neither will man and animals threaten each other in the Latter Days (Isa. 11:7–8; Hos. 2:20). According to the Talmud, all creatures have a place in God's world, irrespective of whether they are of use to humans (BT *Shabbat* 77b; BT *Avodah Zarah* 3b).

Reading the above texts together with many others illustrates how classical Judaism – in the framework of its theocentric worldview – relates to major elements of behavior and thought which reappear in the modern sustainability discourse.

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See also: Israel and Environmentalism; Jewish Environmentalism in North America; Sustainability and the World Council of Churches.

P Judaism and the Population Crisis

Jews are rightfully concerned about rapid population growth since many current global problems, including hunger, resource depletion, energy shortages, pollution, global climate change, poverty, and unemployment all have significant connections to population. However, there is also great concern in the Jewish community about reduced Jewish birth rates and assimilation. The National

Jewish Population Survey (NJPS) 2000–2001, which was released in September, 2003, estimated that there are 5.2 million American Jews, 5 percent less than the 5.5 million counted in the 1990 population study. It found the rate of intermarriage to be rising steadily, with 47 percent of Jewish newly-weds marrying non-Jews, a 4 percent increase from 1990. It also found that of all American Jews currently wed, one-third were intermarried.

How should Jews respond to population-related issues? Many Torah teachings stress the importance of having children.

The first commandment in the Bible indicates the duty of procreation – “Be fruitful and multiply, and replenish the Earth . . .” (Gen. 1:28). Later, this commandment was repeated to Noah after the flood had destroyed most of humanity (Gen. 9:1).

The blessing of fertility was extended to Abraham and Sarah (Gen. 17:16). Through Isaac, Abraham was to be blessed with seed as numerous as the stars of heaven and as the sand on the seashore (Gen. 15:5). This blessing was repeated to Jacob, in the early years of his life (Gen. 28:14) and also later (Gen. 35:11). The principal blessing that Torah personalities conferred on their children and grandchildren was that of fertility. This was true of Isaac’s blessing to Jacob (Gen. 28:3), Jacob’s blessing to Manasseh and Ephraim (his grandchildren) (Gen. 48:16), and Jacob’s blessing to Joseph (Gen. 49:25).

There are also many Talmudic statements that stress the importance of having children. For example, Rabbi Joseph said, “One who does not have children, it is as if he has diminished the Divine image, since it is said ‘In the image of God made He man’ (Gen. 1:27) and this is immediately followed by ‘Be fruitful and multiply’ (Gen. 1:28)” (Shapiro 1979: 71–2). The school of Shammai taught that the duty of procreation was fulfilled when one had two sons (since Moses had two sons), while the School of Hillel taught that one should have a boy and a girl, since we are to imitate God and the Bible states, “male and female created He them” (Gen. 1:27).

Despite these teachings, can Jews ignore connections between population increases and hunger, resource depletion, pollution, global climate change, and other current problems? While Judaism emphasizes the importance of procreation, there are justifications in the Bible for limiting procreation when resources are scarce:

1. While in Egypt, Joseph had two sons during the seven years of plenty, but no additional children during the seven years of famine (Gen. 41:50). The biblical commentator Rashi, interprets this to mean that when there is widespread hunger, one should not bring additional children into the world.
2. According to the Talmud, Noah was commanded to desist from procreation on the ark, since it contained only enough provisions for those who entered the ark.

3. It can be argued that when Adam and later Noah were commanded to “Be fruitful and multiply,” the Earth was far emptier than it is today. Hence, the commandment may no longer apply.

Judaism teaches that those who have no biological children can give “birth” in other ways. For example, the Talmud states that if someone teaches Torah to his friend’s child, “it is as if he gave birth to him,” as it is written: “These are the offspring of Aaron and Moses . . .” (Num. 3:1). The Talmud points out that the verses which follow only list the sons of Aaron, yet the Torah calls them the “offspring” of both Moses and Aaron! This is because Moses taught them Torah, and through his teaching, states the Talmud, he became their spiritual parent.

There need be no inconsistency between working for Jewish survival and global survival, in the area of population growth. A Jew can have a large family and still help reduce poverty, hunger, and pollution by working for a more just, humane, and environmentally sustainable world.

A Jew who has few or no children can work for Jewish survival by striving to increase Jewish commitment through example, teaching, and writing. Judaism teaches that our good deeds can be our main offspring.

While helping Jews who wish to have large families, the Jewish community should also strive to create a more meaningful, dynamic, committed Jewish life, and also work for a global society that conserves resources, practices justice, seeks peace, and reduces hunger and poverty, thereby lessening people’s perceived need to have many children. Finally, while working for a more just and equitable sharing of the Earth’s abundant resources and improved conditions for the world’s people, we should also help make others aware that this is the most effective way to move the world to a more sustainable population path.

Richard H. Schwartz

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- See also: Abortion; Fertility and Abortion; Judaism; Judaism and Sustainability; Population and Consumption – Contemporary Religious Responses.

Judaism and Paganism – See Paganism and Judaism; Paganism – A Jewish Perspective.

Jung, Carl Gustav (1875–1961)

The psychiatrist, psychoanalyst and self-named “analytical psychologist” Carl Gustav Jung was born on 26 July 1875 and died on 6 June 1961. Born near Basel, Switzerland, over the last sixty years of his life he lived, worked – and died – near the banks of Lake Zurich. Although he is often coupled with his one-time mentor Sigmund Freud (1856–1939) in discussion of his life and work, this association, although pivotal for Jung, lasted only from 1905 to 1913 and is grossly overemphasized in the extant literature. Jung’s “analytical psychology” is comprised of six separate but interconnected theories: 1) the complex theory (1902); 2) the theory of psychological types (1913, 1921); 3) the vitalistic theory of a biologically based phylogenetic unconscious (1909, but revised in 1916); 4) the theory of the collective unconscious, originally called “the Land of the Dead” (1916); 5) the theory of the dominants (1917), borrowed from the work of the neo-vitalist botanist Johannes Reinke, or Platonic archetypes (1919) of the collective unconscious; and 6) the principle of individuation (1916).

Jung’s own unique theoretical formulations about nature, human and otherwise, were in fact a major departure from Freudian psychoanalysis. Freud’s outlook was decidedly atheistic (“a godless Jew,” as he termed it), materialistic monist, and urban. He rejected religion and mystical experience as symptoms of mental disorder and his vast corpus of writings virtually ignores the place of the natural world in the life of human beings except as a source of fear and unpredictability (hence the neurotic need for illusory protection of religious concepts). Jung’s, on the other hand, was deeply rooted in the philosophy, magic and mystery cult initiatory practices of Hellenistic paganism, German Romantic science and its roots in natural philosophy (*Naturphilosophie*) and nature mysticism, vitalism (materialistic dualism), Aryan solar mysticism, and occult sciences such as alchemy, astrology, spiritualism, and divination (such as the *I Ching* and oneiromancy). Indeed, the theories and practices of Jung’s post-1913 analytical psychology are so deeply rooted in these nonscientific traditions that one scholar, Wouter Hanegraaff of the Netherlands, argues in his magisterial *New Age Religion and Western Culture: Esotericism in the Mirror of Secular Thought* that Jung’s

contribution consisted in his ability to present an esoteric worldview in psychological terms, thereby providing a “scientific” alternative to occultism. More importantly, he not only psychologized esotericism but he also sacralized psychology, by filling it with the contents of esoteric speculation. The

result was a body of theories which enable people to talk about God while really meaning their own psyche, and about their own psyche while really meaning the divine (1996: 513).

As essentially a German Romantic esotericist, to use Hanegraaff’s characterization, Jung believed in a non-Darwinian evolutionary process in which humans were at the biological and spiritual apex of the Great Chain of Being. Echoing his beloved Romantic natural philosophers (*Naturphilosophen*) Schelling and Goethe, Jung believed that living nature, in both its material and mental/spiritual mirrors of an underlying unitary reality or substance, manifested, or was shaped by, fundamental organic types known as “archetypes” (*archetypi*, *Urtypen*, *Haupttypen*, *Urbilden*, and so on). The dynamic forces of nature and mental/spiritual life emerged from the tension of essential polarities, and hence the internal logic of Jungian psychology is firmly anchored in this principle (conscious/unconscious, extraversion/introversion, thinking type/feeling type, ego/Self, anima/animus, and so on). Jung’s main rhetorical device for presenting evidence – analogy – echoes those of ancient Greek philosophers and the German Romantic natural philosophers. Like the *Naturphilosophen*, Jung believed individual organisms and nature as a whole to be telologically ordered rather than a product of mechanistic causal forces. Nature was self-productive and organic, gestating and evolving, and Jung, like his Romantic forebears, often expressed opinions that hinted at his Spinoza-like belief that God and nature were one (*Deus sive natura*).

However, unlike Goethe and the other *Naturphilosophen*, Jung esotericized these concepts in unique ways. For example, from alchemy Jung adopted the belief that all nature, organic and inorganic, was “alive” in the sense that it was constantly evolving toward a more highly complex and perfected state of being. Jung believed that human consciousness coevolved with matter, and that through the distillation of psychological processes in individual humans not only nature, but also God, could be redeemed. Jung also believed in ideas associated with nineteenth-century German ideas associated with Aryan *Blut und Boden* (Blood and Soil) mysticism. As with heredity in the biological realm, the non-living geological world also had a kind of “memory” and could influence the form and behavior of biological entities, including humans. For example, Jung reinterpreted the erroneous observations of the early twentieth-century anthropologist Franz Boas about how the environment changes skeletal structure across generations as evidence that the blood/life-force of Native Americans in the American soil could actually make European immigrants to America look “Indian” within just two generations.

After being exposed to the neo-vitalist Gustav von

Bumke (1844–1920) in medical school in Basel in the late 1890s, and later to the works of neo-vitalists such as Johannes Reinke (1849–1921) and Hans Dreisch (1867–1941), Jung adopted his belief in vitalism, a form of materialistic dualism, in which it was believed that there were two rule books for the physics of matter, one for life and the other for non-life. Living things were animated by a special life-force (*Lebenskraft*) that Jung termed *libido*. Despite the total rejection of vitalism as a viable biological hypothesis by 1930, Jung never recanted his belief in it.

Richard Noll

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See also: Ecopsychology; New Age; Perennial Philosophy; Philosophy of Nature; Romanticism (various); Transpersonal Psychology; Western Esotericism.

SP Jung, Carl – A Perspective

Jung was one of the most influential of early twentieth-century psychological interpreters of culture; Peter Homans credits him with articulating many of the most important issues in psychoanalysis. His intellectual contexts were those of many of early twentieth-century European intellectuals – including widespread interests in spiritualism, Gnosticism, alchemy, tribalism, and “natural beings” (*Naturvölker*). Most of his writings were extraordinarily packed with careful research and reflection, and their extent is remarkable. Even to try to catalogue the various ways in which he approached *Homo religiosus* (humankind as innately religious) could commandeer a huge volume (see the many relevant essays in his *Collected Works*).

While many entries in this encyclopedia refer to practical, everyday issues in what we lightly refer to as “the real world,” others relate to less immediately tangible ideas. Since Jung died in 1961, for instance, we cannot expect him to treat concrete ecological concerns that only arose later. Nevertheless, his name is often mentioned in New Age contexts, even within new-ecology circles, as having provided important underpinnings for *why* those with strong ecological agendas hold them. Consequently

on the most important Jung website, mounted by Donald Williams, there is an extensive list of links to “Environment and Science” sites.

Jung’s somewhat Romantic primitivism – I am referring to his enchantment with primordial cultures of antiquity or with his own day’s Third World peoples he visited – highlighted important values regarding a highly idealized version of nature. While nature was represented somewhat simplistically and naively as “a patch of green or a blossoming tree” (Jung in Sabini 2001: 155), for the factory worker of mass society, it and the relationship of “primitive” cultures to nature were constant referents in his attempts to reconcile traditional (often ancient) and contemporary modes of human existence (see his work originally published as *Modern Man in Search of a Soul* [1933], and Meredith Sabini’s collection of Jung’s statements on nature).

Jung claimed that highly self-conscious and rational moderns have suppressed wrongly the voices of the unconscious, instinctual being-in-the-world that characterizes Natural Man. That suppression can be dangerous in that the *physical-biological-instinctual* has guided human existence for a far longer period within human existence than *rationality*. The latter may have to be revised extensively when nature/fate redresses the series of catastrophes that our age has unleashed: overpopulation, global military applications of technology such as the hydrogen bomb that can obliterate the majority of life forms within a day or two, or the unbridled pollution of air and water and indeed Earth itself, all in the supposed “natural” evolution of “progress.”

“Progress” in Jung’s own Modernist day often entailed a sort of capitalist individualism that has come increasingly to seem only a feature of greedy right-wing politics, so we need to be aware of the specific historical-sitedness of any mentor from the near-past. To be sure, for Jung, individualism – a developmental strengthening of the personal ego – was not the same as what he called *individuation*. That refers to intimate connection with an ultimately-self-transcendent archetypal *Self* that encompassed the millennial coextension of all humankind, always experienced within the specific social features of one’s own day and locale. While Jung has been tarred with the “Platonic idealism” brush, he was careful to stress the embodied manifestation of archetypes rather than Plato’s spacey abstractions.

This archetypal Self represented not a greedy “me first” attitude but a sense of participating in primary significances represented variously in literature, the graphic arts, drama, religion, attitudes toward nature, and dreams. Jung was not anti-social, but certainly gave priority over the society to the individual’s inner experience *within* a supportive commonweal. Indeed the social context was never left out of Jung’s thinking, even though his immediate therapeutic work was always with individuals (whose

names were and mostly remain today strictly shielded, as compared with Freud's hints and disclosures).

Jung was less interested in the anthropologists' recovery of ancient lifeways (including religion and relationship to nature) than in the feeling dimension that learning about them could evoke. He felt confident that moderns could recycle the wisdom of the ancients in contemporary (and often primarily interior) manifestations, an opinion that deeply influenced Joseph Campbell. Frequently speaking out against urbanized configurations of Western society, Jung rejected their too-conscious manipulations of the human spirit (psyche). Too much consciousness or rationality, he suggested, might well lead to ignorance of the underlying *moral* consequences of developments within the natural and technological sciences – and some decades after Jung's death, we can now recognize the results of such ignorance and over-reaching on all sides of our culture.

Jung promoted a "back to nature" lifestyle (illustrated most frequently in terms of having a garden, as noted above) in his own (we now see: patrician) lifestyle at his weekend retreat at Bollingen outside Zürich, where he built by hand a stone tower, bas reliefs, and living spaces, and apparently appreciated being photographed in his shirtsleeves chopping his own kindling with a Swiss machete (shown in several "Here's the Real Jung" publications).

Beyond the apparently shallow dimensions so played up in the biographies that worship "guru Jung," however, it is pretty clear that Jung would have supported deep ecology as expressed by Gottlieb: "enlarging our sense of our own selfhood" (Gottlieb 1996: 518) and rejecting definitions that might separate "human beings from the rest of the natural world" (Gottlieb 1996: 517). But that world may be almost unintelligible to our own day that now trivializes or lacks appreciative connections to the traditional worlds of fairytale, myth, and folklore – even though such folk materials establish (usually at a very young, impressionable age) basic cultural understandings of the relative merit of humankind within the world of nature.

Jung's references to dreams as "pure nature, needing human reflection and discernment" (Jung in Sabini 2001: 19) would surely strike participants in the social and natural science portions of the contemporary world as ridiculous. But Jung was less impressed with contemporary progress than with the continuity of civilizations across time and space, and especially with giving high priority to the ancient past (especially alchemy, where he found many profound psychological and religious insights), not the present – his emphasis representing a nostalgic aspect of many early twentieth-century thinkers that now seems increasingly suspect as colonialist. His refusal to shirk looking at the dark side of human personality and culture leaves him looking

occasionally like a mischievous trickster, and may explain why institutional theologians were so suspicious of his thought with respect to religion, which they do not associate with humor.

A very large number of publications discuss Jung and spirituality/religion/psychology. In 1990, Murray Stein reflected that James Heisig's 1973 bibliographical essay had listed 442 items, but suggested that subsequently the quantity had increased by a factor of at least three or four (Stein in Moore and Meckel 1990: 3). Gottlieb is right on target in suggesting that Jung always emphasized the soul/psyche/spirit, often in a manner that made orthodox Christians uncomfortable, especially when he unveiled some of the vast symbolic networks present in the Mass or crucifixion (as in *Jung on Christianity*, ed. Stein 1999). Moore and Meckel note that Jung was tarred and praised simultaneously; an instance of the former: "in a recent fundamentalist Christian publication Jung and his school of psychoanalysis were excoriated as being dangerous enemies of Christianity" (Moore and Meckel 1990: 1); Richard Noll, from the position of history of science, treats Jung as being "a charismatic leader" (1994: 17) who set about to establish a mystery cult (1994: 141). Nonetheless, Ellenberger reports that the Protestant pastor at his memorial service praised him for "staying the overwhelming flow of rationalism [and for giving] man the courage to have a soul again" (1970: 678–9), and he has been extensively influential in the field of pastoral theology – the care of souls. A neo-Jungian thinker of much power, James Hillman, has grounded some of his pro-ecological writings in Jung's work.

David Tacey observes that Jung initially seems to be "antagonistic to Western religion, anti-church, and in favor of personal mysticism" – but he quickly adds that Jung was "far more complex than this populist perception" (Tacey 2001: 17). Indeed part of that complexity was that "the master did indeed cultivate the image of prophet and wise man actively and systematically," and thereby became "a mentor of the New Age whether we like it or not" (Tacey 2001: 30; see also David Tacey, "Jung and the New Age – A Study of Contrasts." The C.G. Jung Page, 1998. Accessed on 02.21.03). Certainly he had little appreciative to say about institutional Christianity: Charet notes that "instead of going to church on Sundays, Jung studied Kant" (1993: 127).

Tacey correctly understands the importance of Jung for New Age developments of what Jung called the "religious attitude" – which was of much more interest to him than corporate religious institutions – what we today refer to as "spirituality" (2001: 102). Certainly this is the religiosity reflected in the volume that the 82-year-old Jung excluded from publication within his *Collected Works*; the partly autobiographical *Myths, Dreams, Reflections* (Sonu Shamdasani [1995] shows how greatly its original manuscripts and stenographic notes differ from

the subsequently revised, edited, and expanded redactions into several languages).

This work has become “a spiritual document of our time”; it became the capstone myth about the founder of Jungian psychology (Charet 2000: 211). Just what Freud rejected, *Memories, Dreams, Reflections* emphasizes – but then for Jung, humankind is not just religious due to an inauthentic syndrome tinged with neurotic sexuality (Freud’s view), but “man is naturally religious”; Jung can refer readily to “the natural function of religion” (Ellenberger 1970: 724, 734). Within the last sentences in *Memories, Dreams, Reflections*, Jung writes that “there is so much that fills me: plants, animals, clouds, day and night, and the eternal in man. [. . .] There has grown up in me a feeling of kinship with all things” (Jung 1973: 359).

The sphere of the religious is especially the realm where the huge transcendental and universal encounters with transpersonal forces/beings and their expressions occur: the realm of the archetypes and their manifestation in the peculiar historical contexts of all people. The range of New Age religious incorporations of Jung’s thought vary from the strictly-secular to those like the 25-year-old organization, Journey Into Wholeness, which understands “Jung’s psychology [as] an alternative to the rationalistic materialism of our culture to which even religion has fallen victim.” And “The Jungian–Christian Dialogue” promotes a meeting of Jungian psychology with Christian philosophy, theology, and spirituality.

For many “religious Jungians,” Jung’s “spirituality without religion” (Tacey 2001: 45) “merges almost effortlessly with ecospirituality, the worship of nature spirits, paganism, pantheism, and Wicca” (Tacey 2001: 179). But against the claims of Richard Noll’s *The Jung Cult: Origins of a Charismatic Movement*, others reject decisively claims that Jung sought to become the much-worshipped high priest of a psycho-religious cult.

Likewise, Jung’s own materials must now be carefully distinguished from those of the generations of Post- and Neo-Jungians (largely excoriated in Tacey 2001: ch. 4, “American New Age Jungian Inflation”). Already in 1981 Marilyn Ferguson, in *The Aquarian Conspiracy*, reported a survey of New Age people who listed overwhelmingly Teilhard de Chardin and C.G. Jung as their most-important international spiritual idols. But Tacey, who provides this reference, is quite aware that what a few New Agers at most might have actually studied would be at best a few passages in *Myths, Dreams, Reflections*. And many applications feature the shoddy pop-psych represented by Casey’s *Making the Gods Work for You*.

Jung was a figure upon which many psychological projections have been made – especially rather negative projections upon Jung (“devilish!”) by various institutional religious establishments. In an essay written for The C.G. Jung Page on the Web (1998), Tacey notes that there

are then also ways in which one might “find the New Age to be non-Jungian or even anti-Jungian in a number of important respects.” Nonetheless, Jung’s vision of the universe and human psychology within it have supported many ecological visions stressing a “one-world” framework.

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- [In the selections of *Collected Works*, the numbers following the volume numbers refer to the long-established paragraph numbers in the Princeton University Press edition, not to pages.]
- See also: Campbell, Joseph; Deep Ecology; Ecopsychology; Jung, Carl Gustav; New Age; New Religious Movements; Transpersonal Psychology.



