



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

Further Reading

Jackson, Wes. "The Changing Relationship Between the Tree of Knowledge and the Tree of Life." *The Land Report* 68 (Fall 2000).

Jackson, Wes. *Becoming Native to This Place*. Lexington, KY: University Press of Kentucky, 1994.

Jackson, Wes. *Altars of Unhewn Stone: Science and the Earth*. San Francisco: North Point Press, 1987.

Jackson, Wes, Wendell Berry and Bruce Colman, eds. *Man and the Environment, New Roots for Agriculture, Meeting the Expectations of the Land*. San Francisco: Friends of the Earth, 1980.

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” (I.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.

Christopher Key Chapple

Further Reading

- Ahimsa Quarterly Magazine* 1 (1991).
- Babb, Lawrence. *Absent Lord: Ascetics and Kings in a Jain Ritual Culture*. Berkeley: University of California Press, 1996.
- Chapple, Christopher Key, ed. *Jainism and Ecology: Nonviolence in the Web of Life*. Cambridge, MA: Harvard University Press, 2002.
- Chapple, Christopher Key, ed. "The Living Cosmos of Jainism: A Traditional Science Grounded in Environmental Ethics." *Daedalus: Journal of the American Academy of Arts and Sciences* 130:4 (Fall 2001), 207–24.
- Chapple, Christopher Key, ed. "Toward an Indigenous Indian Environmentalism." In Lance Nelson, ed. *Purifying the Earthly Body of God: Religion and Ecology in Hindu India*. Albany: State University of New York Press, 1998.
- Chapple, Christopher Key. *Nonviolence to Animals, Earth, and Self in Asian Traditions*. Albany: State University of New York Press, 1993.
- Cort, John E. "Who is a King? Jain Narratives of Kingship in Medieval Western India." In John E. Cort, ed. *Open Boundaries: Jain Communities and Cultures in Indian History*. Albany: State University of New York Press, 1998.
- Jacobi, Hermann, tr. *Jaina Sutras: Part I, The Akaranga Sutra, The Kalpa Sutra*. New York: Dover, 1968 (1st edn, 1884).
- Saletore, Bhasker Anand. *Medieval Jainism with Special Reference to the Vijayangara Empire*. Bombay: Karnatak Publishing House, 1938.
- Singhvi, L.M. *The Jain Declaration on Nature*. London: The Jain Sacred Literature Trust, 1990.
- Suri, Santi. *Jiva Vicara Prakaranam along with Pathaka Ratnakara's Commentary*. Muni Ratna-Prabha Vijaya, ed.; Jayant P. Thaker, tr. Madras: Jain Mission Society, 1950.
- Umasvati. *That Which Is (Tattvartha Sutra): A Classic Jain Manual for Understanding the True Nature of Reality*. Nathmal Tatia, tr. San Francisco: HarperCollins, 1994.
- 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

Further Reading

Berkes, Fikret. *Sacred Ecology: Traditional Ecological Knowledge and Resource Management*. Philadelphia: Taylor & Francis, 1999.

Brightman, Robert A. *Grateful Prey: Rock Cree Human-Animal Relationships*. Berkeley: University of California Press, 1993.

Preston, Richard J. *Cree Narrative: Expressing the Personal Meanings of Events*. Ottawa: National Museum of Canada, 1975. (Revised edition, Montreal and Kingston: McGill-Queen's University Press, 2002.)

Richardson, Boyce. *Strangers Devour the Land*. Toronto: Macmillan, 1975. Reprinted: Post Mills, VT: Chelsea Green, 1991.

Tanner, Adrian. *Bringing Home Animals: Religious Ideology and Mode of Production of the Mistassini Cree Hunter*. London: Hurst, 1979.

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

Further Reading

- Barnard, G. William. *Exploring Unseen Worlds: William James and the Philosophy of Mysticism*. Albany: State University of New York Press, 1997.
- Croce, Paul Jerome. *Science and Religion in the Era of William James, Volume One: Eclipse of Certainty, 1820–1880*. Chapel Hill: University of North Carolina Press, 1995.
- Gerald Myers. *William James: His Life and Thought*. New Haven: Yale University Press, 1986.
- Ralph Barton Perry. *The Thought and Character of William James*. 2 vols. Boston: Little Brown, 1935.
- Simon, Linda. *Genuine Reality: A Life of William James*. New York: Harcourt Brace, 1998.
- Taylor, Eugene. *William James on Exceptional Mental States*. Princeton, NJ: Princeton University Press, 1996.
- 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” (*karesansui*) 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.

David Landis Barnhill

Further Reading

- Berthier, François and Graham Parkes. *Reading Zen in the Rocks: The Japanese Dry Landscape Garden*. Chicago: University of Chicago Press, 2000.
- Elder, John. “Wildness and Walls.” In *Following the Brush: An American Encounter with Classical Japanese Culture*. Boston: Beacon Press, 1993.
- Holburn, Mark. *Ocean in the Sand – Japan: From Landscape to Garden*. Boston: Shambhala, 1978.
- Itō, Teiji. *Space and Illusion in the Japanese Garden*. New York: Weatherhill, 1973.
- Kuck, Lorain. *The World of the Japanese Garden: From Chinese Origins to Modern Landscape Art*. New York: Weatherhill, 1968.

See also: Aesthetics and Nature in China and Japan; Buddhism; Buddhism – East Asia; Eden and Other Gardens; The Fall; Gardens in Islam; Gardening and Nature Spirituality; Japanese Love of Nature; Japanese Religions; Zen Buddhism.

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” (*bussshō*) 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.

Christopher Ives

Further Reading

Asquith, Pamela J. and Arne Kalland, eds. *Japanese Images of Nature: Cultural Perspectives*. London: Curzon Press, 1997.

Bruun, Ole and Arne Kalland, eds. *Asian Perspectives of Nature: A Critical Approach*. London: Curzon Press, 1995.

Callicott, J. Baird and Roger T. Ames, eds. *Nature in Asian Traditions of Thought: Essays in Environmental Philosophy*. Albany: State University of New York Press, 1989.

Suzuki, Daisetz T. *Zen and Japanese Culture*. Princeton, NJ: Princeton University Press, 1973.

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.

Yotaro Miyamoto

Further Reading

- Anesaki, Masaharu. *Art, Life, and Nature in Japan*. Westport: Greenwood Press, 1971.
- Asquith, Pamela J. and Arne Kalland, eds. *Japanese Images of Nature: Cultural Perspectives*. Richmond: Curzon, 1997.
- Colligan-Taylor, Karen. *The Emergence of Environmental Literature in Japan*. New York and London: Garland, 1990.
- Earhart, Byron. *Japanese Religion: Unity and Diversity*. Belmont: Wadsworth Publishing Company, 1982 (3rd edn).
- Kalland, Arne and Pamela Asquith. “Japanese Perceptions of Nature: Ideals and Illusions.” In Pamela J. Asquith and Arne Kalland, eds. *Japanese Images of Nature: Cultural Perspectives*. Richmond: Curzon, 1997.
- Kyburz, Joseph. “Magical Thought at the Interface of Nature and Culture.” In Pamela J. Asquith and Arne Kalland eds. *Japanese Images of Nature: Cultural Perspectives*. Richmond: Curzon, 1997.
- Morris-Suzuki, Tessa. *Reinventing Japan: Time, Space, Nation*. New York: Sharpe, 1998.
- Yanagita, Kunio. *About Our Ancestors: the Japanese Family System*. Fanny Hagin Mayer and Ishiwara Yasuyo, trans. Tokyo: Yushodo, 1970.
- See also: Aesthetics and Nature in China and Japan; Ani-

mism; Buddhism – East Asia; Daoism; Japanese Gardens; Japanese Love of Nature; Kawabata, Yasunari; Matsuo Bashō; Mt. Hiei (Japan); Religious Environmentalist Paradigm; Sacred Mountains; Umehara, Takeshi; Watsuji, Tetsuro; Whales and Japanese Cultures; World Heritage Sites and Religion in Japan.

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 Brahmadata 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.

Knut A. Jacobsen

Further Reading

Chapple, Christopher Key. "Animals and Environment in the Buddhist Birth Stories." In Mary Evelyn Tucker and Duncan Ryuken Williams, eds. *Buddhism and Ecology: The Interconnection of Dharma and Deeds*. Cambridge, MA: Harvard University Press, 1997, 131-48.

Jacobsen, Knut A. "Humankind and Nature in Buddhism." In Eliot Deutsch and Ron Bontekoe, eds. *A Companion to World Philosophies*. Oxford: Blackwell, 1977, 381-91.

The Jataka or Stories of the Buddha's Former Births. 6 vols. E.B. Cowell, ed. London: The Pali Text Society, 1957 (1897).

Winternitz, Maurice. *A History of Indian Literature*, vol. II. Delhi: Motilal Banarsidass, 1983, 108-51.

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

Further Reading

- Brophy, Robert. *Robinson Jeffers: Myth, Ritual, and Symbol in His Narrative Poems*. Cleveland: Case Western Reserve University Press, 1973.
- Everson, William. *The Excess of God: Robinson Jeffers as a Religious Figure*. Stanford: Stanford University Press, 1988.
- Jeffers, Robinson. *The Collected Poetry of Robinson Jeffers*, vols I–V. Tim Hunt, ed. Stanford: Stanford University Press, 2001.

Karman, James. *Robinson Jeffers: Poet of California*. Ashland, Oregon: Story Line Press, 1995.

Zaller, Robert. *The Cliffs of Solitude: A Reading of Robinson Jeffers*. Cambridge: Cambridge University Press, 1983.

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).

Harry O. Maier

Further Reading

- Cotter, Wendy. “The Parables of the Mustard Seed and the Leaven.” *Toronto Journal of Theology* 8:1 (1992), 38–51.
- Edwards, Denis. *Jesus the Wisdom of God: An Ecological Theology*. New York: Orbis, 1995.

- Freyne, Seán. *Galilee, Jesus, and the Gospels: Literary Approaches and Historical Investigations*. Philadelphia: Fortress Press, 1988.
- Galinsky, Karl. *Augustan Culture: An Interpretive Introduction*. Princeton, NJ: Princeton University Press, 1996.
- Herzog II, William R. *Parables as Subversive Speech: Jesus as Pedagogue of the Oppressed*. Philadelphia: Westminster/John Knox Press, 1994.
- Hughes, J. Donald. *Pan's Travail: Environmental Problems of the Ancient Greeks and Romans*. Baltimore/London: Johns Hopkins University Press, 1994.
- Kloppenborg Verbin, John S. *Excavating Q: The History and Setting of the Sayings Gospel*. Minneapolis: Fortress Press, 2000.
- Oakman, Douglas E. and K.C. Hanson. *Palestine in the Time of Jesus: Social Structures and Social Conflicts*. Minneapolis: Fortress Press, 1998.
- Sawicki, Marianne. *Crossing Galilee: Architectures of Contact in the Occupied Land of Jesus*. Harrisburg, PA: Trinity Press International, 2000.
- 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 Anshe 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 biShvat* 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 Rubín 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.

David Seidenberg

Further Reading

- Bernstein, Ellen, ed. *Ecology and the Jewish Spirit: Where Nature and the Sacred Meet*. Woodstock VT: Jewish Lights Publishing, 1998.
- Bernstein, Ellen. *The Tree's Birthday: A Tu B'Shvat Haggadah*. Philadelphia: Turtle River Press, 1988.
- Bernstein, Ellen and Dan Fink, eds. *Let the Earth Teach You Torah*. Philadelphia: Shomrei Adamah, 1992.
- Cohen, Jeremy. “Be Fertile and Increase, Fill the Earth and Master It”: *The Ancient and Medieval Career of a Biblical Text*. Ithaca, NY: Cornell University Press, 1989.
- Diamond, Irene and David Seidenberg. “Sensuous Minds and the Possibility of a Jewish Ecofeminist Practice.” *Ethics and the Environment* 4:2 (2000), 185–95; repr. as “Recovering the Sensuous through Jewish Ecofeminist Practice.” In Arthur Waskow, ed. *Torah of the Earth* v.2, Woodstock VT: Jewish Lights Publishing, 2000, 245–60.
- Elon, Ari, Naomi Hyman, and Arthur Waskow, eds. *Trees, Earth, and Torah: A Tu B'Shvat Anthology*. Philadelphia: Jewish Publication Society, 1999.
- COEJL, ed. *Operation Noah: Texts and Commentaries on Biological Diversity and Human Responsibility: A Study Guide*. New York: COEJL, 1996.
- COEJL, ed. *To Till and To Tend: A Guide to Jewish Environmental Study and Action*. New York: The Coalition on the Environment and Jewish Life, 1995.
- Freudenstein, Eric G. “Ecology and the Jewish Tradition.” *Judaism* 19:4 (1970), 406–14; repr. in Milton R. Konvitz, ed. *Judaism and Human Rights*. New York: W.W. Norton, 1972, 265–74; and Marc Swetlitz, ed. *Judaism and Ecology*. Philadelphia, PA: Shomrei Adamah, 1990, 29–33.
- Gendler, Everett. “On the Judaism of Nature.” In James A. Sleeper and Alan L. Mintz, eds. *The New Jews*. New York: Random House, 1971, 233–43.; repr. in Marc Swetlitz, ed. *Judaism and Ecology*. Philadelphia: Shomrei Adamah, 1990, 53–8.
- Gordis, Robert. “Ecology in the Jewish Tradition” *Midstream* 28: Aug.–Sept. (1982), 202–21; repr. in *Judaic Ethics for a Lawless World*. New York: JTS, 1986; and Marc Swetlitz, ed. *Judaism and Ecology*. Philadelphia, PA: Shomrei Adamah, 1990, 47–52.
- Green, Arthur. *Seek My Face, Speak My Name*. New York: Jason Aronson, 1994.
- Jacobs, Mark X. “Jewish Environmentalism: Past Accomplishments and Future Challenges.” In Hava Tirosch-Samuelson, ed. *Judaism and Ecology*. Cambridge: Harvard University Press, 2002, 449–80.
- Kinberg, Clare, ed. “Jewish Women and Land.” Special issue of *Bridges* 5:2 (1995).
- Rauch, Eduardo, et al., ed. Special Issues on Ecology of *The Melton Journal* 24 and 25 (1991 & 1992).
- Schwartz, Richard. *Judaism and Global Survival*. New York: Vantage Books, 1984; New York: Lantern Books, 2002.
- Schwartz, Richard. *Judaism and Vegetarianism*. Smithtown: Exposition Press, 1982; New York: Lantern Books, 2001.
- Tirosch-Samuelson, Hava, ed. *Judaism and Ecology*. Cambridge: Harvard University Press, 2002.
- Waskow, Arthur, ed. *Torah of the Earth*, v.1 and 2. Woodstock VT: Jewish Lights Publishing, 2000.
- Waskow, Arthur. “What is Eco-Kosher?” In *Down to Earth Judaism: Food, Money, Sex, and the Rest of Life*. New York: William Morrow & Co., 1995, 117–43.
- Waskow, Arthur. *The Seasons of Our Joy: A Modern Guide to the Jewish Holidays*. New York: Bantam, 1982; Boston: Beacon Press, 1990.
- 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).

Harry Hahne

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 (*Act* 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.

Harry Hahne

Further Reading

- Argall, Randal A. *1 Enoch and Sirach: A Comparative Literary and Conceptual Analysis of the Themes of Revelation, Creation and Judgment*. SBL Early Judaism and Its Literature. Atlanta: Scholars Press, 1995.
- Betz, H.D. "On the Problem of the Religious-Historical Understanding of Apocalypticism." *Journal of Theology and the Church* 6 (1969), 146–59.

Cohen, Jeremy. "Be Fertile and Increase, Fill the Earth and Master It": *The Ancient and Medieval Career of a Biblical Text*. Ithaca: Cornell University, 1989.

Collins, John J. *Jewish Wisdom in the Hellenistic Age*. Louisville, KY: Westminster, 1997, 196–221.

Collins, John J. *Seers, Sybils and Sages in Hellenistic-Roman Judaism*. Leiden: E.J. Brill, 1997, 317–38.

Davies, W.D. *The Gospel and the Land: Early Christianity and Jewish Territorial Doctrine*. Berkeley: University of California, 1974.

Hahne, Harry Alan. *The Corruption and Redemption of Creation: The Natural World in Romans 8:19–22 and Jewish Apocalyptic Literature*. Sheffield: Sheffield Academic Press, 2004.

Murphy, Roland E. "Wisdom and Creation." *Journal of Biblical Literature* 104 (1985), 3–11.

Stone, Michael E. *Features of the Eschatology of IV Ezra*. Harvard Semitic Studies, no. 35. Frank Moore Cross, ed. Atlanta: Scholars Press, 1989.

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 iudicio* (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.

J. David Bleich

Further Reading

Bleich, J. David. *Contemporary Halachic Problems*, vol. 3. New York: Ktav Publishing/Yeshiva University Press, 1989.

Rosner, Fred. *Biomedical Ethics and Jewish Law*. Hoboken, NJ: Ktav Publishing House, 2001.

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

Further Reading

Bleich, J. David. *Contemporary Halakhic Problems*, vol. III. New York: Ktav Publishing House, Inc., 1989. Chapter nine offers an extended discussion of animal suffering in Jewish law.

Diamond, Eliezer. "How Much is Too Much? Conventional versus Personal Definitions of Pollutions in Rabbinic Sources". In Hava Tirosh-Samuelson, ed. *Judaism and Ecology: Created World and Revealed Word*.

Cambridge, MA: Center for the Study of World Religions, Harvard Divinity School, 2002, 61–80.

Freundal, Barry. "Judaism's Environmental Laws." In Ellen Bernstein, ed. *Ecology and the Jewish Spirit*. Woodstock, VT: Jewish Lights Publishing, 1998, 214–24.

Gerstenfeld, Manfred. *Judaism, Environmentalism and the Environment: Mapping and Analysis*. Jerusalem: Reuben Mass, Ltd., 1998, chapter three.

Rakover, Nahum. "Ecology in Judaism." *Encyclopedia Judaica Decennial Book 1973–1982*. Jerusalem: Keter Publishing, 1982, 227–9.

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.

Akiva Wolff

Further Reading

B’Or HaTorah, Science, Art & Modern Life in the Light of the Torah 12 (2001) (contains several relevant articles on genetic engineering).

Comstock, Gary L. *Vexing Nature? On the Ethical Case Against Agricultural Biotechnology*. Dordrecht, The Netherlands: Kluwer Academic Publishers, 2000.

Druker, Steven M. *Are Genetically Engineered Foods in Accord with Jewish Law?* Fairfield, Iowa: Alliance for Bio-Integrity, 1997.

Wolff, Akiva. *Jewish Perspectives on Genetic Engineering*. Jerusalem: Jewish Environmental Perspective, Jerusalem Center for Public Affairs, 2001.

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.

Marion Grau

Further Reading

Ucko, Hans, ed. *The Jubilee Challenge, Utopia or Possibility? Jewish and Christian Insights*. Geneva: WCC Publications, 1997.

United States Catholic Conference. *A Jubilee Call for Debt Forgiveness: A Statement by the Administrative Board of the United States Catholic Conference*. Washington, D.C., 1999.

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 pantheism 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 disenchanting 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.

Hava Tirosh-Samuels

Further Reading

- Aubrey, Rose, ed. *Judaism and Ecology*. London: Cassell Publishers, 1992.
- Ben-David, Orit. "Tiyul (Hike) as an Act of Consecration of Space." In Eyal Ben Ari and Yoram Bilu, eds. *Grasping Land: Space and Place in Contemporary Israeli Discourse and Experience*. Albany: State University of New York Press, 1997, 129–45.
- Bernstein, Ellen, ed. *Ecology and the Jewish Spirit: Where Nature and the Sacred Meet*. Woodstock, VT: Jewish Lights Publishing, 1998.
- Biers-Ariel, Matt, Deborah Newborn and Michael Fox Smart. *Spirit in Nature: Teaching Judaism and Ecology on the Trail*. New York: Behrman House, 2000.
- Cohen, Jeremy. "Be Fertile and Increase, Fill the Earth and Master It": *The Ancient and Medieval Carrier of a Biblical Text*. Ithaca NY: Cornell University Press, 1989.
- Eisenberg, Evan. *The Ecology of Eden*. New York: Alfred A. Knopf, 1998.
- Elon Ari, Naomi Mara Hyman and Arthur Waskow, eds. *Trees, Earth and Torah: A Tu B'Shevat Anthology*. Philadelphia: Jewish Publication Society, 1999.
- Felix, Yehuda. *Nature and Man in the Bible: Chapters in Biblical Ecology*. New York: The Soncino Press, 1981.
- Frank, Daniel H. and Oliver Leaman, eds. *History of Jewish Philosophy*. London and New York: Routledge, 1997.
- Frank Daniel H. and Oliver Leaman, eds. *The Cambridge Companion to Medieval Jewish Philosophy*. Cambridge: Cambridge University Press, 2003.
- Gerstenfeld, Manfred. *Judaism, Environmentalism and the Environment: Mapping and Analysis*. Jerusalem: Jerusalem Institute for Israel Studies and Rubin Mass, 1998.
- Helfand, Jonathan. "The Earth is the Lord's: Judaism and Environmental Ethics." In *Religion and Environmental Crisis*. Athens, GA and London: The University of Georgia Press, 1986, 38–52.
- Heschel, Abraham Joshua. *God in Search of Man: A Philosophy of Judaism*. Philadelphia: Jewish Publication Society, 1956.
- Heschel, Abraham Joshua. *The Sabbath: The Meaning for Modern Man*. New York: Farrar, Straus and Giroux, 1991 [1951].
- Heschel, Abraham Joshua. *Man is Not Alone*. New York: Farrar, Straus, and Young, 1951.
- Isaacs, Ronald H. *The Jewish Sourcebook on the Environment and Ecology*. Northvale, NJ and Jerusalem: Jason Aronson, 1998.
- Kay, Jeanne. "Concepts of Nature in the Hebrew Bible." *Environmental Ethics* 10 (1988): 309–27.
- Lamm, Norman. "Ecology in Jewish Law and Theology." In *Faith and Doubt: Studies in Traditional Jewish Thought*. New York: Ktav, 1972.
- Levy, Ze'ev and Nadav Levy, *Ethics, Emotions and Animals: On the Moral Status of Animals* (in Hebrew). Tel Aviv: Sifriat Poalim Publishing House and Haifa: University of Haifa, 2002.
- Longergan, Stephen C. and David B. Brooks. *Watershed: The Role of Fresh Water in the Israeli-Palestinian Conflict*. Ottawa: International Development Research Center, 1994.
- Matt, Daniel C. *God & the Big Bang: Discovering Harmony Between Science and Spirituality*. Woodstock VT: Jewish Lights, 1998.
- Neusner, Jacob. *Genesis Rabbah: The Judaic Commentary to the Book of Genesis: A New American Translation*. Atlanta: Scholars Press, 1985.
- Neusner, Jacob, trans. and ed. *Genesis and Judaism: The Perspective of Genesis Rabbah: An Analytical Anthology*. Atlanta: Scholars Press, 1985.
- Novak, David. *Natural Law in Judaism*. Cambridge: Cambridge University Press, 1998.

- Ravven, Heidi M. and Lenn E. Goodman, eds. *Jewish Themes in Spinoza's Philosophy*. Albany: State University of New York Press, 2002.
- Samuelson, Norbert M. *Judaism and the Doctrine of Creation*. Cambridge UK: Cambridge University Press, 1994.
- Schwartz, Richard H. *Judaism and Global Survival*. New York: Atara Publishing, 1987.
- Schwartzchild, Steven S. "The Unnatural Jew." *Environmental Ethics* 6 (1984): 347–62. Reprinted in *Judaism and Environmental Ethics: A Reader*. Martin D. Yaffe, ed. Lanham, MD: Lexington Books, 2001.
- Sirat, Colette. *A History of Jewish Philosophy in the Middle Ages*. Cambridge UK: Cambridge University Press, 1995.
- Swetlitz, Marc, ed. *Judaism and Ecology: 1970–1986 Sourcebook of Readings*. Wyncote PA: Shomrei Adamah, 1990.
- Tirosh-Samuelson, Hava, ed. *Judaism and Ecology: Created World and Revealed Word*. Cambridge, MA: Harvard University Press, 2002.
- Tirosh-Samuelson, Hava. "Nature in the Sources of Judaism." *Daedalus: Journal of the American Academy of Arts and Sciences* 130:4 (2001), 99–124.
- Waskow, Arthur. *Torah of the Earth: Exploring 4000 Years of Ecology in Jewish Thought*, 2 vols. Burlington VT: Jewish Lights, 2000.
- Waskow, Arthur. *Down-to-Earth Judaism: Food, Money, Sex and the Rest of Life*. New York: William Morrow and Company, 1995.
- Wyschogrod, Michael. "Judaism and the Sanctification of Nature." *The Melton Journal* Spring (1991), 5–7. Reprinted in Martin D. Yaffe, ed. *Judaism and Environmental Ethics: A Reader*. Lanham, MD: Lexington Books, 2001, 289–96.
- Yaffe, Martin D., ed. *Judaism and Environmental Ethics: A Reader*. Lanham, MD: Lexington Books, 2001.
- See also: Creation Myths of the Ancient World; Creation Story in the Hebrew Bible; Deep Ecology; Eco-kabbalah; Eden and Other Gardens; Eden's Ecology; Ehrenfeld, David; Gordon, Aharon David; Gush Emunim; Hasidism and Nature Mysticism; Hebrew Bible; Israel and Environmentalism; Jewish Environmentalism in North America; Jewish Intertestamental Literature; Jewish Law and Animal Experimentation; Jewish Law and Environmental Protection; Jewish Law and Genetic Engineering; Judaism; Judaism and Sustainability; Judaism and the Population Crisis; Kabbalah and Eco-theology; Maimonides; Naess, Arne; National Religious Partnership for the Environment; Paganism – A Jewish Perspective; Paganism and Judaism; Redwood Rabbis; Spinoza, Baruch; Tikkun Olam – a Jewish Imperative; Vegetarianism and Judaism; Vegetarianism and Rabbi Abraham Isaac Kook; Waskow, Rabbi Arthur.

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.

Manfred Gerstenfeld

Further Reading

Gerstenfeld, Manfred. *Judaism, Environmentalism and the Environment*. Jerusalem: Jerusalem Institute for Israel Studies/Rubin Mass, 1998.

World Commission on Environment and Development. *Our Common Future*. Oxford: Oxford University Press, 1987.

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

Further Reading

- Schwartz, Richard H. *Judaism and Global Survival*. New York: Lantern, 2002.
- Shapiro, David S. “Be Fruitful and Multiply.” In Fred Rosner and J. David Bleich, eds. *Jewish Bioethics*. New York: Sanhedrin Press, 1979.
- United Jewish Communities. *National Jewish Population Survey 2000–2001*. Released in 2003.
- 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

Further Reading

Hanegraaff, Wouter J. *New Age Religion and Western Culture: Esotericism in the Mirror of Secular Thought*. Leiden: E.J. Brill, 1996.

Noll, Richard. *The Aryan Christ: The Secret Life of Carl Jung*. New York: Random House, 1997.

Noll, Richard. *The Jung Cult: Origins of a Charismatic Movement*. Princeton: Princeton University Press, 1994.

Richards, Robert. *The Romantic Conception of Life: Science and Philosophy in the Age of Goethe*. Chicago: University of Chicago Press, 2002.

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. [. . .]here 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.

William G. Doty

Further Reading

- Casey, Caroline. *Making the Gods Work for You*. New York: Three Rivers Press, 1998.
- Charet, F.X. “Understanding Jung: Recent Biographies and Scholarship.” *Journal of Analytical Psychology* 45 (2000), 195–219.
- Charet, F.X. *Spiritualism and the Foundations of C.G. Jung’s Psychology*. Albany: State University of New York Press, 1993.
- Ellenberger, Henri F. *The Discovery of the Unconscious: The History and Evolution of Dynamic Psychiatry*. New York: Basic, 1970.
- Gottlieb, Roger S. “Spiritual Deep Ecology and the Left: An Attempt at Reconciliation.” In Roger S. Gottlieb, ed. *This Sacred Earth: Religion, Nature, Environment*. New York: Routledge, 1996, 516–31.
- Heisig, James. “Jung and Theology: A Bibliographical Essay.” *Spring* (1973), 204–55.
- Jung, C.G. “The Function of Religious Symbols.” In William McGuire, ed. R.F. Hull, tr. *The Symbolic Life: Miscellaneous Writings. Collected Works* 18.560–77. Princeton, NJ: Princeton University Press, 1977.
- Jung, C.G. “On Spiritualistic Phenomena.” In William McGuire, ed. R. F. Hull, tr. *The Symbolic Life: Miscellaneous Writings. Collected Works* 18.697–756. Princeton, NJ: Princeton University Press, 1977.
- Jung, C.G. “Religion and Psychology: A Reply to Martin Buber.” In William McGuire, ed. R.F. Hull, tr. *The Symbolic Life: Miscellaneous Writings. Collected Works* 18.1499–1513. Princeton, NJ: Princeton University Press, 1977.
- Jung, C.G. *Memories, Dreams, Reflections*. Aniela Jaffé, recorder and ed. Richard and Clara Winston, trs. New York: Vintage-Random House, 1973 (1961).
- Jung, C.G. “Transformation Symbolism in the Mass.” In Michael Fordham and Herbert Read, eds. *Psychology and Religion: West and East. Collected Works* 11.296–448. Princeton, NJ: Princeton University Press, 1970.
- Jung, C.G. “Synchronicity: An Acausal Connecting Principle.” In Michael Fordham and Herbert Read, eds. *The Structure and Dynamic of the Psyche. Collected Works* 8.816–997. Princeton, NJ: Princeton University Press, 1970.
- Jung, C.G. “On the Nature of the Psyche.” In Michael Fordham and Herbert Read, eds. *The Structure and*

- Dynamic of the Psyche. Collected Works* 8.343–442. Princeton, NJ: Princeton University Press, 1970.
- Jung, C.G. "Letter to Père Lachat." In Michael Fordham and Herbert Read, eds. *Psychology and Religion: West and East. Collected Works* 11.1532–57. Princeton, NJ: Princeton University Press, 1970.
- Jung, C.G. *Answer to Job*. In Michael Fordham and Herbert Read, eds. *Psychology and Religion: West and East. Collected Works* 11.593–758 (also printed earlier as a single volume). Princeton, NJ: Princeton University Press, 1970.
- Jung, C.G. *Aion: Researches into the Phenomenology of the Self. Collected Works* 9/II (particularly, "Christ, A Symbol of the Self"; "Background to the Psychology of Christian Alchemical Symbolism"). Michael Fordham and Herbert Read, eds. Princeton, NJ: Princeton University Press, 1969.
- Jung, C.G. *Alchemical Studies. Collected Works* 13. Adler Gerhard and Herbert Read, eds. Princeton, NJ: Princeton University Press, 1968.
- Jung, C.G. "Alchemical Symbolism in the History of Religion." In William McGuire, ed. R.F. Hull, tr. *Psychology and Alchemy. Collected Works* 12.516–54. Princeton, NJ: Princeton University Press, 1968.
- Jung, C.G. "Religious Ideas in Alchemy." In William McGuire, ed. R.F. Hull, tr. *Psychology and Alchemy. Collected Works* 12.516–54. Princeton, NJ: Princeton University Press, 1968.
- Jung, C.G. *Modern Man in Search of a Soul*. W.S. Dell and Cary F. Baynes, trs. New York: Harcourt, Brace and World, 1933.
- Moore, Robert L. and Daniel J. Meckel, eds. *Jung and Christianity in Dialogue: Faith, Feminism, and Hermeneutics*. New York: Paulist Press, 1990.
- Noel, Daniel C. "Jung's Anti-Modern Art of the Mandala." In William G. Doty, ed. *Picturing Cultural Values in Postmodern America*. Tuscaloosa: University of Alabama Press, 1995, 69–88.
- Noll, Richard. *The Jung Cult: Origins of a Charismatic Movement*. Princeton, NJ: Princeton University Press, 1994.
- Sabini, Meredith, ed. *The Earth Has a Soul: The Nature Writings of C.G. Jung*. Berkeley: North Atlantic, 2001.
- Shamdasani, Sonu. "Memories, Dream, Omissions." *Spring* 57 (1995), 115–37.
- Shamdasani, Sonu. *Cult Fictions: C.G. Jung and the Founding of Analytical Psychology*. New York: Routledge, 1993.
- Stein, Murray, ed. *Jung on Christianity*. Princeton, NJ: Princeton University Press, 1999.
- Stein, Murray. "C.G. Jung, Psychologist and Theologian." In Robert L. Moore and Daniel J. Meckel, eds. *Jung and Christianity in Dialogue: Faith, Feminism, and Hermeneutics*. New York: Paulist Press, 1990, 3–20.
- Tacey, David. *Jung and the New Age*. Philadelphia: Brunner-Routledge-Taylor & Francis, 2001.
- [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.



