Jainism and Ecology

Nonviolence in the Web of Life

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The Nature of Nature: Jain Perspectives on the Natural World

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In surveying the writings on environmental ethics published over the last quarter century, certain similarities may be seen in discussions that have arisen in the process of examining the validity of supporting an anthropocentric worldview and ideas about the nature of reality found in Jain texts written many centuries ago. The questions raised in Jainism about the natural world are not informed by the same concerns as those of twentieth-century environmentalists regarding life on this earth, which, they have observed, is being severely impacted by the ever-increasing rate of development and industrialization. Such activity pollutes the earth, water, and air to such a degree that the survival of many life-forms is in doubt. Jain *ācāryas* were concerned about the pollution of the soul by *karma*, which is understood as a type of extremely subtle matter that is attracted to and bound with the soul whenever actions are informed by passions (*kaṣāyas*). This type of pollution causes the soul to undergo transformations that give rise to *mithyātva*, or false views of reality, and causes various types of improper conduct. Engaging in conduct that minimizes volitional actions that cause harm (*hiṃsā*) and pain or suffering (*vedanā*) to other living beings also minimizes one's own suffering. Such actions result in the binding of wholesome varieties (*puṇya prakṛtis*) of karmic matter that produce feelings of bodily pleasure (*sātā-vedanīya karma*) and those *karmas* that lead to rebirth as a human (*manuṣya*) or a heavenly being (*deva*). Conversely, harmful actions cause one to bind un-

wholesome varieties of *karmas* (*pāpa prakṛtis*), including *karma* that produces pain (*asātā-vedanīya karma*) and those *karmas* that lead to rebirth as an animal (*tiryañca*) or hell being (*nāraki*). Understanding what in the universe is living, how living beings may be harmed, and in what manner suffering or pain is experienced by them are important in Jainism for pragmatic reasons. Therefore, it is not surprising to find detailed discussions on these subjects in ancient Jain textual sources. Here, I would like to examine certain questions that have been raised by environmentalists in light of passages from these early texts on the nature of nature, in other words, on the nature of earth, water, air, and fire, and of plants and animals.

Let us begin with the questions raised by Richard Sylvan (Routley) in his essay entitled "Is There a Need for a New, an Environmental, Ethic?" published in 1973.[1] He notes that in an attempt to move beyond the "dominant tradition" in Western ethical views regarding a person's relationship with nature, in which "nature is the dominion of man and he is free to deal with it as he pleases (since—at least on the Stoic-Augustine view—it exists only for his sake)," toward an environmental ethic,[2] a "modified dominance position" has been formulated in which "one should be able to do what he wishes providing (1) that he does not harm others and (2) that he is not likely to harm himself irreparably."[3] He observes that there are certain problems with this position, namely, "what counts as harm or interference" and who constitutes "others." As he notes, it makes a great deal of difference whether "others" is interpreted as "other humans" or "other sentient beings" and whether "future others" are included in either of these categories.

In support of his position on the rights of animals, Peter Singer provides one interpretation of "others" by quoting from the writings of Jeremy Bentham at the close of the eighteenth century.[4]

> The day *may* come when the rest of the animal creation may acquire those rights which never could have been withholden from them but by the hand of tyranny. . . . It may one day come to be recognized that the number of the legs, the villosity of the skin, or the termination of the *os sacrum*, are reasons equally insufficient for abandoning a sensitive being to the same fate. What else is it that should trace the insuperable line? Is it the faculty of reason, or perhaps the faculty of discourse? . . . But suppose they were otherwise, what would it avail? The question is not, Can they reason? nor Can they *talk*? but, *Can they suffer*?[5]

Singer concludes that

> If a being suffers, there can be no moral justification for refusing to take that suffering into consideration. No matter what the nature of the being, the principle of equality requires that its suffering be counted equally with the like suffering—in so far as rough comparisons can be made—of any other being. If a being is not capable of suffering, or of experiencing enjoyment or happiness, there is nothing to be taken into account. This is why the limit of sentience (using the term as a convenient, if not strictly accurate, shorthand for the capacity to suffer or experience enjoyment or happiness) is the only defensible boundary of concern for the interests of others. To mark this boundary by some characteristic like intelligence or rationality would be to mark it in an arbitrary way.[6]

The efforts of these environmentalists have been aimed at expanding our realm of concern from that of harm to humans (anthropocentrism) to one that includes harm to animals (biocentrism). They have justified their position on the basis that some animals have awareness or an ability to experience pleasure and pain even though they may not be capable of complex reasoning. In commenting on Singer's essay, J. Baird Callicott notes that "the minimum consideration one asks of others is not to be harmed by them," in other words, not "to be hurt, to be caused to suffer." He observes that in using sentience—"the capacity to experience pleasure and pain"—as a guideline and defining sentient beings—those who are "responsive to or conscious of sense impressions" or those who are "aware"[7]—as the "moral base class" or "criteria for moral standing," one should include all vertebrates at the very least.[8] In his opinion, this would exclude plants and "nonliving parts of ecosystems . . . such as the soil, water, and air."[9]

Moral consideration could be extended to include "entities and systems of entities heretofore unimagined (such as the biosphere itself)," if one were to adopt the view of Kenneth E. Goodpaster that "being alive" should be the basis for determining moral consideration rather than sentience or "the capacity to suffer,"[10] "since nonsentient living things may also intelligibly be said to have interests, and if so, they may be directly benefited or harmed—even though harming them may not hurt them, may not cause them consciously to suffer."[11] A separate (but related) question from establishing a "criterion of moral

considerability" is the "criterion of moral significance," whether, for example, "trees deserve more or less consideration than dogs, or dogs than human persons."[12] Paul W. Taylor has expanded the definition of harm to the environment beyond the criterion of sentience by stating that "all living things are 'teleological centers of life.' An organism's *telos* (Greek for 'end, goal') is to reach a state of maturity and to reproduce. Our actions can interdict the fulfillment of an organism's *telos*, and to do just that is to harm it."[13]

Systems or holistic ecologists have proposed "ecosystem-centered ethical systems" (ecocentrism) to address ecological concerns that relate to nature when viewed as a community or ecosystem—for example, the biotic community composed of plants and animals, soils and waters. Proponents of these theories believe that biocentric criteria are inadequate for justifying that moral consideration be given to an ecosystem (provided that one accepts that such exists), in part because it includes entities that do not meet any of the above conditions since, in their view, earth, water, and air are not living. For this reason, Holmes Rolston III has proposed a system of values whereby "natural wholes, such as species and ecosystems, possess an intrinsic value derived from the baseline intrinsic value of living organisms and thus enjoy only derivative moral considerability."[14] For example, water or air would be given moral consideration because plants, animals, and humans are dependent on them for sustaining life.

From a Jain perspective, a justification for the preservation of the environment need not be based on earth, water, and air having only derivative value in their support of life. Rather, along with fire, they should be accorded moral consideration in their own right. Each of these individual elements can form the physical (*audārika*) body for a soul (*jīva*), which may be distinguished from all other existents by the quality (*guṇa*) of consciousness or awareness (*caitanya*).[15] A soul, so embodied, is a living being that is aware and that experiences pleasure and pain through its single sense of touch. Taking earth-bodied beings as an example, there are descriptions in Jain texts of the different types of earth-bodies that are formed, the minimum and maximum sizes of earth-bodies, the maximum length of time that a soul may be embodied, in birth after birth, in an earth-body before taking birth as another life-form, and the possible destinies in the life to come for a soul so embodied. In addition, there are also discussions about how

one-sensed beings interact with other living beings and experience the world around them.[16]

Before beginning our investigation into the details of the lives of these beings, we should first understand the range of possible birth states according to Jain sources. There are four main destinies (*gatis*) for souls: as human beings (*manuṣyas*), heavenly beings (*devas*), hell beings (*nārakis*), and animals and plants (*tiryañca*). The latter, which incorporates all life-forms not included in the former three categories, is subdivided according to the number of senses or modalities of experiencing the world. In addition to those one-sensed beings mentioned above, all types of plants or vegetation (*vanaspati*) are in this category, including the *nigoda*, a minute form of vegetable life that is characterized by innumerable souls sharing a common body which, in turn, is embodied in other forms of life, including the bodies of human beings.[17] Two-sensed beings, having touch and taste, include worms, leeches, mollusks, weevils, and so on. Three-sensed beings, with the sense of touch, taste, and smell, include ants, fleas, termites, centipedes, and the like; those with four senses (additionally, sight) include wasps, flies, gnats, mosquitoes, butterflies, moths, scorpions. Five-sensed beings, those having the ability also to hear, include aquatic animals (e.g., fish, tortoise, crocodile), winged or aerial animals (birds), and terrestrials, including quadrupeds (e.g., horses, cows, bulls, elephants, lions) and reptiles (*parisarpa*).[18]

In discussing those beings whose bodies are the individual elements, we also must make a distinction between four technical terms found in Jain texts.[19] Here, we are only talking about those beings that currently have a physical body (*audārika śarīra*) that is earth (*pṛthivīkāyika*), or water (*āpkāyika*), or fire (*tejokāyika*), or air (*vāyukāyika*). We are not talking about "earth" (*pṛthivī*), and so forth, that is not presently serving as a body for a soul and therefore is devoid of consciousness (*acetanā*). Nor are we discussing an "earth body" (*pṛthivīkāya*), that which in the recent past has served as the earth body for a soul but which has been recently abandoned by it, like the body of a person who has died. It does not include a soul currently in the process of transmigration that, upon its arrival at the locus of rebirth, will begin to grasp earth in order to form an earth-body (*pṛthivījīva*).[20] The latter three are excluded because the "earth" (*pṛthivī*) and an "earth body" (*pṛthivīkāya*) are nonliving material existents (*ajīva*

pudgala) since they lack a soul, while a soul that is to become earth-bodied after transmigration (*pṛthivījīva*) is living, but at that moment lacks a physical body (*audārika śarīra*) of any sort.[21]

One-sensed beings should not be viewed as primitive forms of life whose souls are in the initial stages of a progressive linear evolutionary development into two-sensed life-forms, and so forth. Jains maintain that some of the infinite number of uncreated eternal souls that inhabit the occupied universe (*loka-ākāśa*) have been embodied since beginningless time as *nigoda*s, the least developed of living beings. Certain of these souls have left the *nigoda* state and are currently embodied in other forms of life. And among those that have taken birth as humans, some have attained permanent release from the cycle of birth and death (*mokṣa*). However, there is no certainty that a soul will ever leave the *nigoda* state of embodiment for, unlike all other forms of life, the time that a soul may be repeatedly embodied as a *nigoda* is unending (*ananta*). Nor must the transition from a one-sensed being to other forms of life be gradual or linear. It is possible, for example, for a soul that has only been embodied as a *nigoda* to be born in its next life as a human. And according to Svetāmbara accounts, it is possible for this soul to attain *mokṣa* in its first and only embodiment as a human.[22] Therefore, a soul that has attained *mokṣa* may never have been embodied as a two-sensed, three-sensed, four-sensed, or five-sensed animal. Conversely, humans may be born as one-sensed beings in their next birth.[23] Given the laws of *karma*, it is quite possible that a soul currently embodied as a one-sensed being has been embodied as a human some time in the past, and this soul may now be experiencing the effects of *karma* from actions undertaken as a human.

But in what sense are these one-sensed beings understood to be living and to be experiencing the effects of *karma*? Birth as a one-sensed being is attained by the fruition (*udaya*) of those *karma*s that, at the time of death of its current physical body, cause the transition of the soul to its next place of birth[24] where the soul begins to form a new physical body through the fruition of the *nāma karma* that forms a body with one sense (*ekendriya śarīra-nāma karma*). If the soul is to be earth-bodied, a specific set of subvarieties (*uttara-prakṛti*s) of *nāma karma*s comes into fruition simultaneously and causes the formation of a separate body (*prateyka śarīra nāma karma*) by attracting particles of earth, transforming them, and binding them together to form a body of a specific size and shape.[25] Until the time of death, certain of these *nāma karma*s will continue to rise, causing the continuous influx of matter to maintain the body.[26]

Like other beings who have not attained omniscience (*kevala-jñāna*), once in each life all one-sensed beings must bind *āyu* (longevity) *karma*, which establishes the maximum length of life and determines whether one's next birth will be as a human, animal, heavenly being, or hell being. In this regard, differences among the various types of one-sensed beings have been noted. The maximum length of life for an earth-bodied being is different, for example, from that of a water-bodied being.[27] And there are differences in the subvarieties of *āyu karma* that the various categories of one-sensed beings may bind. Although it is possible for the soul of a plant, earth-bodied being, or water-bodied being to bind human (*manuṣya*) *āyu* and thus be reborn as a human in its next life, a fire-bodied being or air-bodied being can only bind the *āyu karma* that causes rebirth as an animal or a plant (*tiryañca āyu*).[28] I have found no explanation in the commentaries for such distinctions; however, these notions could possibly be related to the greater amount of *hiṃsā* that air- and fire-bodied beings are capable of causing, especially in cooperation with each other.

Along with various forms of vegetable life, earth-bodied, water-bodied, fire-bodied, and air-bodied beings all develop four life-forces, or vitalities (*prāṇa*s), from the rise of *āyu* and *nāma karma*s: the vitality of the strength or energy of the body (*kāyabala prāṇa*); the vitality of respiration (*ucchvāsaniśvāsa prāṇa*); the vitality of life span (*āyuḥ prāṇa*); and the vitality of the sense of touch (*sparśanendriya prāṇa*). However, they are unable to develop other vitalities, such as the sense of taste and the ability of speech (or the ability to make sounds) of two-sensed beings, or the additional vitality of the sense of smell of three-sensed beings, or the sense of sight of four-sensed beings, or the sense of hearing of five-sensed beings, or the sense of rationality of five-sensed rational beings (*pañcendriya saṃjñī*s).[29] In the case of one-sensed beings, these four vitalities of energy, respiration, life span, and touch cannot be detected by a person through sense perception. Therefore, one of the chief mendicant disciples (*gaṇadhara*s) of Mahāvīra, the twenty-fourth Tīrthaṅkara, asks him: "We know and observe the inhalation and exhalation, the breathing in and breathing out, of those living beings who are two-sensed, three-sensed, four-sensed, and five-sensed, but we do not know or observe this in the case of one-sensed beings, from earth-

bodied beings through *vanaspati*. Do beings that are one-sensed also inhale and exhale, breathe in and breathe out?" Mahāvīra replies, "Oh Gautama, these living beings with one sense also inhale and exhale, breathe in and breathe out."[30]

Jain texts mention four instincts (*saṃjñās*) that are present even in one-sensed beings. Craving for food (*āhāra-saṃjñā*) is the most primary of these instincts. Other instincts include fear (*bhaya-saṃjñā*), the desire for reproduction (*maithuna-saṃjñā*), and the desire to accumulate things for future use (*parigraha-saṃjñā*).[31] Gautama inquires of Mahāvīra, "Do earth-bodied beings desire nourishment (*āhāra*)?" Mahāvīra says, "Yes, they desire nourishment. At all times and without interruption the desire for food arises in them. It is transformed repeatedly in various ways by the organ of touch in the form of pleasant and unpleasant feelings."[32] In the case of a one-sensed being, which lacks a mouth, nourishment consists of matter that is assimilated through the surface of the entire body. Such intake is considered involuntary, in contrast with the voluntary consumption of "food by morsel" by two-sensed beings with a mouth, which accept or reject food based on the sense of taste.

It is clear from other passages in these texts that one-sensed beings interact with the world around them. With respect to such activities, Gautama asks, "Do all earth bodies have similar activities (*samakiriyā* = Sanskrit, *samakriyā*)?" Mahāvīra answers, "Yes, they all have similar activities." "Why so?" "All earth bodies are with deceit (*māyā*) and wrong outlook (*mithyātva*). So they have five activities, which are those arising out of endeavour (*ārambhikā kriyā*), etc., till those arising out of perverted faith (*mithyādarśaṇapratyayā kriyā*) through the sense of touch."[33] It is said that merely by breathing, earth-bodied, water-bodied, air-bodied, and fire-bodied beings, as well as plants, commit three, four, or five types of actions, while an air-bodied being, stirring part of a tree or causing it to fall down, also commits three, four, or all five actions.[34] Since they are subject to the various passions (*kaṣāyas*) of anger (*krodha*), pride (*māna*), deceit (*māyā*), and greed (*lobha*) produced by the rise of *mohanīya karma*,[35] their actions are volitional. Therefore, like those humans that have not attained omniscience and perfect conduct and are thus still subject to these four passions, activities of all one-sensed beings cause the influx and binding of new karmic matter that may be experienced in its current life and in lives to come.

And it is clearly stated that one-sensed beings experience suffering through the sense of touch. Gautama inquires of Mahāvīra, "Do all earth-bodied beings have an equal feeling of suffering (*samaveyaṇā* = Sanskrit, *samavedanā*)?" Answer: "Yes, they have an equal feeling of suffering." Why? "All earth-bodied beings are devoid of a conscious mind (*asaṃjñī*) and so they experience pleasure and pain (*vedanā*) in an indeterminate way or with the absence of positive knowledge (*aṇidāe*)."[36] In a note on this verse, K. C. Lalwani states:

> The indeterminateness of pain is signified by the word *aṇidāe*. This is so because of wrong outlook and absence of reasoning, for which, like one under the spell of a drug or drink, they do not know what they are suffering from, and how much is their suffering. They accept their suffering as *fait accompli* and are used to it. The same applies to the other one-sensed beings.[37]

In the *Bhagavatī Sūtra* it is said that an earth-bodied being experiences pain (*vedaṇā*) "as great as that of an old decrepit man whom a young strong man gives a blow on the head."[38]

Thus, according to Jain sources, whenever matter in the form of earth, water, air, or fire is embodying a soul, it constitutes a living being, which breathes, nourishes its body, and sustains life in its body. Like other beings, a one-sensed being performs actions and will experience the karmic effects of these actions. And it feels pleasure and pain through the sense of touch. As mentioned in the opening lectures of the *Ācārāṅga Sūtra*, even though hurting one-sensed earth beings may not be readily apparent through observation, a person can hurt them and cause them to suffer by cutting, striking, or killing them.[39]

Returning to the discussions of twentieth-century environmentalists, if one were to use the material in Jain texts to interpret the statement that "one should be able to do what he wishes providing (1) that he does not harm others and (2) that he is not likely to harm himself irreparably,"[40] and define "other" or "moral base class" (following Callicott's observations) as those with sentience ("the capacity to experience pleasure and pain") or those who are "aware,"[41] one would include not only nonrational five-sensed animals (*pañcendriya asaṃjñīs*), but also life-forms with just one sense. In discussing the concept of moral rights or those beings that deserve moral consideration, Joel Feinberg has stated that "a being without interests is a being that is incapable of being harmed or benefited, having no good or

'sake' of its own," and that "interests" logically supposes desires or "wants" or "aims."[42] It is clear from the above passages that in the Jain worldview one-sensed beings can be harmed. They have the capacity to experience pleasure and pain, and they are aware because they have a *jīva*, or soul, whose defining characteristic is awareness. They also have "desires" because they experience the effects of *mohanīya karma*s, which generate passions (*kaṣāya*s) of attraction (*rāga*) and aversion (*dveṣa*). Because of other *karma*s, they are subject to the instincts (*saṃjñā*s) of fear (*bhaya-saṃjñā*) and the desire for food (*āhāra-saṃjñā*), for reproduction (*maithuna-saṃjñā*), and for the accumulation of things for future use (*parigraha-saṃjñā*).[43] Kenneth Goodpaster has expressed similar ideas regarding plants:

> There is no absurdity in imagining the representation of the needs of a tree for sun and water in the face of a proposal to cut it down or pave its immediate radius for a parking lot. . . . In the face of their obvious tendencies to maintain and heal themselves, it is very difficult to reject the idea of interests on the part of trees (and plants generally) in remaining alive.[44]

In the context of Jain sources, this would include earth-bodied, water-bodied, fire-bodied, and air-bodied beings because they also need to nourish their bodies in order to stay alive.

There is also some similarity between Taylor's definition of living beings as "teleological centers of life," whose goal "is to reach a state of maturity and to reproduce,"[45] and harm as interference with the fulfillment of an organism's *telos* and the Jain definition of *hiṃsā* as harm to the life forces, or *prāṇa*s, including the life force of longevity (*āyu*).[46] In contrast with a speciesist view where "the interests of others matter only if they happen to be members of his own species," Jain *ācārya*s have maintained that "All beings are fond of life, like pleasure, hate pain, shun destruction, like life, long to live. To all life is dear."[47] "All breathing, existing, living, sentient creatures should not be slain, nor treated with violence, nor abused, nor tormented, nor driven away."[48]

In examining the validity of an anthropocentric worldview, the question has been raised by Paul Taylor: "In what sense are humans alleged to be superior to other animals?"[49] According to the teachings of Jainism, humans are different from all other beings because they

have a capacity that all others lack: the ability to attain omniscience (*kevalajñāna*) and permanent release from the beginningless cycle of death and rebirth (*mokṣa*).[50] Jains believe that five-sensed rational animals can attain true spiritual insight (*samyak-darśana*), the first step toward *mokṣa*. It is said that animals who have attained this insight can observe restraint with respect to killing, and so forth, and even refuse food at the approach of death. Thus, they are able to follow a mode of conduct equivalent to that of a person who has accepted the lay vows (*aṇuvrata*s). However, an animal is incapable of attaining more advanced states of spiritual purity that are a prerequisite for *mokṣa*.[51] Only a human being has the ability to undertake the physical and mental austerities necessary for removing all *ghātiyā* (destructive) *karma*s, which prevent a person from realizing omniscience (*kevalajñāna*) and perfect conduct, from experiencing the true nature of the soul, and from attaining release from the cycle of death and rebirth.

In Jainism, the spiritual well-being of a person is tied to the physical well-being of all forms of life. This is reflected in the vows of restraint (*vrata*s) that a Jain may formally take to refrain from harmful actions (*ahiṃsā*), from telling lies (*satya*), from stealing (*asteya*), from inappropriate sexual activity (*brahmacarya*), and from possessiveness (*aparigraha*). By observing these vows, a person tries to refrain from actions that cause harm to other beings. For a person who has accepted the lay vows (*aṇuvrata*s), this means not harming beings with two, three, four, and five senses. This consideration for the welfare of animals among Jains is demonstrated by their emphasis on vegetarianism, their preference for those occupations that minimize harm to living beings, and by the establishment of special refuges for animals, called *pinjrapole*s. Although the efforts of these institutions are focused primarily on protecting domestic herd animals, such as goats, sheep, and cattle, other sick or injured animals may be brought to these refuges for shelter and medical treatment. Animals that are of no economic importance also are cared for here. There is often a sanctuary for birds, where food and water is provided out of the reach of predators.[52] Practices at the *pinjrapole*s, where a being is allowed to live out the life span with which it was born and to die a natural death, are in accordance with a definition of *ahiṃsā* that includes noninterference with a being's life force (*āyu prāṇa*).[53] The emphasis here is

on providing an environment of protection for the preservation of life, rather than ending the pain and suffering of injured or sick animals through premature termination of life by euthanasia.

The acceptance of the mendicant vows (*mahāvratas*), which are indicative of even higher states of spiritual purity, entails more restrictions on one's actions, because the vow of *ahiṃsā* encompasses one-sensed beings as well. Through circumscribed actions mendicants avoid harming plant life by not walking on greenery or touching a living plant; air-bodied beings by not fanning themselves; fire-bodied beings by not kindling or extinguishing fire; water-bodied beings by not swimming, wading, using water for bathing, or drinking water that has not been properly boiled; and earth-bodied beings by not digging in the earth.[54] As noted by Padmanabh S. Jaini:

> Perhaps every culture teaches its children to behave with regard for the well-being of other persons and of domestic animals. The normal socialization process, however, provides little or no basis for extending this consideration to the single-sensed creatures. Hence the Jaina mendicant must put forth a tremendous effort of mindfulness, consciously establishing a totally new pattern of behavior for which his prior training has in no way prepared him. Undertaking *ahiṃsā* and the other great vows forces him to become constantly aware of his every action, always on guard against the possibility of committing an infraction.[55]

This interconnection between spiritual well-being and physical well-being is demonstrated in the practice of asking forgiveness for past transgressions (*ālocanā*) from all living beings.

> I want to make *pratikramaṇa* for injury on the path of my movement, in coming and in going, in treading on living things, in treading on seeds, in treading on green plants, in treading on dew, on beetles, on mould, on moist earth, and on cobwebs; whatever living organisms with one or two or three or four or five senses have been injured by me or knocked over or crushed or squashed or touched or mangled or hurt or affrighted or removed from one place to another or deprived of life—may all that evil have been done in vain [*micchāmi dukkaḍaṃ*].[56]

> I ask pardon of all living creatures, may all of them pardon me, may I have friendship with all beings and enmity with none.[57]

Such concerns for the well-being of even the most minute life-forms, accompanied by voluntary restraints on the accumulation of possessions and limiting the consumption of finite natural resources, accords well with a responsible environmental ethic. In the words of Harold Coward:

> To harm any aspect of nature—be it air, water, plants, or animals—is tantamount to harming oneself. Thus there is a clear and unambiguous environmental ethic within Indian thought. The fact that such an ethic has not protected South Asia from the environmental problems of modern industry and agriculture suggests that it has not been sufficiently understood and applied.[58]

However, limitations are encountered in using Jain sources to examine some of the more difficult problems in environmental ethics. One is how to establish a "criterion of moral significance," which

> aims at governing *comparative* judgments of moral "weight" in cases of conflict. Whether a tree, say, deserves any moral consideration [i.e., the criterion of moral considerability] is a question that must be kept separate from the question of whether trees deserve more or less consideration than dogs, or dogs than human persons. We should not expect that the criterion for having "moral standing" at all will be the same as the criterion for adjudicating competing claims to priority among beings that merit that standing.[59]

Could a measure such as "like suffering" be used as a standard? In justifying his position on sentience as a guideline for determining the interests of others, Singer has stated, "No matter what the nature of the being, the principle of equality requires that its suffering be counted equally with the like suffering—in so far as comparisons can be made—of any other being."[60] According to Jain sources, is there a difference between suffering experienced in an "indeterminate" manner and that experienced by beings with the mental capacity to reason, to reflect on the past, and think about the future? Instructive in this regard is a passage about hell beings in the *Bhagavatī Sūtra* in which Gautama asks Mahāvīra, "Do all infernal beings suffer an equal pain?" Answer: "This is not necessarily so." Why? "The infernal beings are of two types. They are those with consciousness (*saṃjñī*) and those without consciousness (*asaṃjñī*). Those who have consciousness have great pain, and those who are without consciousness have little pain."[61] According to this statement, beings with "like suffering" would be divided into two groups: 1) five-sensed rational beings, in-

cluding both animals and humans; and 2) one-sensed to five-sensed nonrational beings. Therefore, if one were to use this division as a guideline for a priority of moral significance, then humans and animals would rank first, with other beings ranked equally below this. However, the way in which pain is understood to be experienced by rational and nonrational beings apparently was not the criterion used for defining conduct appropriate for householders or mendicants. Rather, the dividing line between refraining from harming two-sensed beings on the part of laypeople and one-sensed beings on the part of mendicants probably reflects practical limitations on the degree to which such restraints could be practiced on a daily basis by members of these two communities.

Jains have considered a similar question in trying to define the amount of *hiṃsā* that one accrues from harm done to other living beings. In discussing why it is important for Jains to understand the number of vitalities (*prāṇa*s) that different types of living beings have, J. L. Jaini states, "the degree of sin would depend upon the number of vitalities and their comparative strength, to which injury is caused. The knowledge of the varying number of vitalities possessed by souls in their various conditions of life enables one to judge the extent of injury he is likely to cause in his actions."[62] By this definition, there would be a hierarchy of *hiṃsā*, or a sliding scale of spiritual harm, with progressively less harm to one's soul from causing injury to a five-sensed rational animal, a five-sensed nonrational animal, and so forth. The least problematic would be injury to a one-sensed being. While this idea does not directly translate into "more or less significance," the karmic consequences from harming a five-sensed rational being and a one-sensed being are not considered to be equal.

It is unclear to me how ideas expressed in Jain texts might be used in support of holistic views of environmental ethics. Although ideas expressed in these texts justify an extension of the "circle of moral considerability," this is done from an individualistic perspective. These sources focus "concern on particular items, whether they be persons, animals, living things, or natural items." However, if one

> introduces a holistic element . . [then] whole ecosystems, the biosphere, and even the universe as a whole are morally considerable and the particular individuals which constitute them are themselves only insignificantly, if at all, considerable. . . . These large systems exhibit sufficient organization and integration to count as alive, as having a good of their own or, less controversially, as possessing intrinsic value.[63]

I can see no evidence in Jain texts for the devaluation of individuals within a given class, be it humans or one-sensed beings, in favor of the group or species, especially considering the Jain conception of the soul. Although souls share certain common characteristics, such as consciousness, the soul of each being is a separate entity, with its own unique accumulation of karmic matter. It retains its own identity and isolation even in *mokṣa* and does return to or become part of a cosmic soul. Nor can I see strong evidence in support of organization or integration of larger systems, such as ecosystems or the universe or viewing these entities as living, unless one considers the shape of a "cosmic man," which is sometimes poetically used to depict the boundaries of the occupied universe (*loka-ākāśa*). However, a stronger case could be made for a part/whole human/universe correspondence based on material found in early brahmanical texts, such as the Puruṣa-sūkta hymn.

I am also at a loss as to how to explain environmental harm in the context of still another category of beings: subtle (*sūkṣma*) one-sensed beings. All of the discussions up to now have been about beings with bodies (*śarīra*s) that are "gross" (*bādara* or *sthūla*). Such bodies are called *ghāta śarīra*s because they are composed of matter that can be obstructed by or harmed by other matter and that can itself obstruct or harm other objects. All beings with two or more senses have bodies composed of gross matter. However, in the case of one-sensed beings, depending on the specific subvariety of *nāma karma* that comes into fruition at the time of its "birth" when the body begins to form, the external body (*audārika śarīra*) may be composed of either gross matter or "subtle" or "fine" (*sūkṣma*) matter. A body composed of fine matter is nonobstructive (*aghāta*) because it neither obstructs nor is obstructed by other objects. According to the *Gommaṭasāra*: "A fine body can pass through any kind of matter. . . . They are indestructible or non-obstructive because nothing can kill them and they can kill nothing. They die a natural death at the exhaustion of their age (*āyu*) karma."[64] "Gross bodies need support but fine bodies need no support and exist everywhere (in the occupied universe) with nothing intervening between them."[65] Although this category of beings is mentioned in the Svetāmbara and Digambara texts

gross v. fine bodies

that discuss the soul and *karma*, to the best of my knowledge, there is no separate discussion of them in the texts devoted to the conduct of mendicants. They must experience pain because they are subject to the rise of *asātā vedanīya karma*. But apparently the premature rise of this *karma* (*udīraṇā*) cannot be caused by external factors, as is the case with gross-bodied beings. If one understands that these beings cannot be harmed by others, then to what extent can one equate pollution of the environment with harm to one-sensed beings in the form of earth, water, fire, and air? It would seem that even within Jainism there are limits to harm. But it would be safe to say that except for these very subtle forms of life, the environment in the form of one-sensed beings can be harmed by the actions of humans. What we understand as "earth" is that which can be detected via the senses of touch, smell, taste, and sight. Such matter is classified as gross matter in Jainism, and whenever this matter is currently embodying a soul, it constitutes a gross one-sensed being that can be harmed by the actions of others.

Texts that discuss the nature of reality and what is appropriate conduct for mendicants provide strong evidence for expanding our circle of moral consideration to include earth, water, and air in their own right. However, one should not expect these same texts to provide guidance in deciding what should be done about environmental harm caused in the course of living a householder's life.[66] Instead, one should look to stories in Jain narrative literature, such as the *Ādipurāṇa* of Jinasena.[67] Here, it is said that long ago in Bharata-kṣetra, living conditions were such that people were supplied with food and other necessities of life by wish-fulfilling trees (*kalpa-vṛkṣas*).[68] From an environmental perspective, this was an ideal state of affairs because there was no agriculture to affect the natural wild species of plants and there was no damage to the earth, water, and air from the manufacturing of goods for human consumption. However, unlike certain other locations in the universe that are not subject to cyclical time, there came a point in the descending cycle of time (*avasarpiṇī*) when this was no longer the case. During the time of Ṛṣabha, the first Tīrthaṅkara of our *avasarpiṇī*, conditions were such that food and the other necessities of life were no longer plentiful, and social problems arose as people competed with each other for dwindling resources. As king, Ṛṣabha could have done nothing, since it was inevitable that things would only get worse over time as the descending cycle continued. However, this is not the course of action that he took. Instead, he taught the people agriculture and crafts so they could provide themselves with the things that previously had been acquired with no effort, even though all of these activities, by their very nature, must have been harmful to one-sensed beings. He achieved social stability by establishing the occupational social divisions (*varṇas*) of Kṣatriyas, Vaiśyas, and Śūdras. It was one of his sons, King Bharata, who established the Brahmin *varṇa* after Ṛsabha had renounced the world. Bharata decided which individuals should be included in this new *varṇa* on the basis of conduct. His selection was made by observing those who, when faced with a choice of the direction in which to walk toward him, chose the path of lesser harm by not trampling on the grass.

Throughout history Jains have been faced with making choices in their daily lives as they decide the extent to which they should follow the guidelines laid out for them by Jain *ācāryas* in texts detailing conduct appropriate for the lay community.[69] In commenting on the list of fifteen trades forbidden to Jains as outlined in the Śvetāmbara *śrāvakācāra* texts, R. Williams has said:

> The eternal dilemma of Jainism in laying down an ethos for the layman has been well put by Āśādhara. The lay estate . . . cannot exist without activity and there can be no activity without the taking of life; in its grosser form this is to be avoided sedulously but the implicit part of it is hard to avoid. . . . [A]t least the keeping of animals and contact with any destructive implements are to be eschewed.[70]

However, in these same texts, one is reminded of the compromises of a household life, which is equated with life in a slaughterhouse (*sūna*). Pounding, grinding, cooking, cleaning, and sweeping all impede the path to *mokṣa* because they cause the destruction of living beings.[71] Over the centuries, Jains have decided whether to formally accept any or all of the *aṇuvratas* and to what degree they would curtail their activities. What limits on the acquisition of property and possessions might a person voluntarily abide by? To what extent might a person accept a vow to limit travel (*dig-vrata*) for a specified period of time since,

> Like a heated iron sphere the layman will inevitably, as a result of *pramāda*, bring about the destruction of living creatures everywhere, whether he is walking, or eating, or sleeping, or working. The more his

movements are restricted, the fewer *trasa-jīvas* [those that are capable of moving from one place to another, beginning with two-sensed beings] and *sthāvara-jīvas* [those that cannot move on their own, all one-sensed beings] will perish.[72]

In this context, the question is what trade-offs would a person make between the purification of the soul, on the one hand, and unrestricted activity on the other?

Today, there are practical considerations that need to be addressed when one contemplates putting into practice an environmental ethic that accords moral standing to what in Jainism are one-sensed beings. If one accepts earth, water, fire, and air in this category, then some way needs to be found to balance their well-being with that of humans. For those who have not renounced the household life, a definition of well-being would, in general, include a certain degree of physical comfort that is afforded by having access to electricity, running water, mechanized transportation, adequate health care, shelter, and clothing. These comforts are not possible without development and industrialization, which causes harm to the earth, water, and air. As Harold Coward has observed, "Seeing earth, air, and water as beings in different forms, as Jaina *karma* theory does, provides an ethic that rejects the ruthless exploitation of natural resources that modern industrial development practices and the environmental pollution (including disasters like Bhopal) that result." However, "the Jaina conception of *karma* theory may be too radical, in spite of its logical consistency, to be taken seriously by ~~modern~~ India."[73]

Nonetheless, Jains who accept as authoritative the nature of reality as described in their ancient texts, who are still conforming to the standards of conduct laid down in centuries past—be it vegetarianism or not eating after dark—must not ignore the reality of the harm that is being done today to the earth, water, and air in the cities in which they live from mechanized transportation and forms of production that scarcely could have been imagined by the *ācāryas* in centuries past. As passages in Jain narrative literature and *śrāvakācāra* texts illustrate, when faced with alternatives, avoiding harm to one-sensed beings whenever possible, to whatever degree possible, is still the ideal to strive for, even on the part of householders. A Jain, therefore, would not support the following statement: "while technically they [plants and other barely living beings] may be morally considerable, practically they may fall well below the human 'threshold' of moral sensitivity. Thus we may forever be unable actually to take the interests of all the living things that our actions affect into account as we make our day-to-day practical decisions."[74] As long as there are Jain monks and nuns in sufficient numbers as there are in India today, who have taken vows not to harm one-sensed beings, Jain laypeople, who have traditionally supported them with great devotion, will undoubtedly remain aware of one-sensed beings and will conduct themselves in such a way as will be acceptable to the mendicant community. In so doing, they will try to minimize the use of and violence toward one-sensed beings.

In earlier times, the question has been raised regarding what could be done to offset the spiritual harm caused to one-sensed beings by the activities involved in leading a household life. According to Āśādhara, impediments to spiritual well-being caused by harm done to one-sensed beings could be eliminated by almsgiving to ascetics.[75] In modern times, when it is not practical to avoid harm to the earth, water, and air, what actions could be undertaken to compensate for harm done to the environment from the way in which we live today? This question should be pondered with a view toward Jain perspectives on the nature of nature and the one-sensed beings that constitute the environment of the earth on which we live.