Introduction

The sciences of evolution, ecology and environment are ushering in a new understanding of the time, place and responsibilities of human beings within nature. The story of the 15 billion year evolution of the universe gives a awesome sense of connection through the other animals, plants, micro-organisms, complex molecules, carbon, silicon, helium and hydrogen right back to the the zero-event of the big bang. Ecologists have heightened our consciousness as to the the place of human life within the contexts of multiple interdependent ecosystems. Environmental science is demonstrating the deep and perhaps irreversible impact of human economic culture on the planetary biosphere, which nourishes the amazing diversity of species with whom we make our home. These three inter-related sciences are together compelling a fundamental rethinking of our worldview, that is, our location in the time and space of the cosmos, and our existential orientation and moral obligations within it. Put simply, the anthropocentric humanism of the European enlightenment mentality is beginning to clash profoundly with the findings of contemporary holistic sciences. This clash is far greater than those between fundamentalists and secularists or socialists and capitalists, for fundamentalists, secularists, socialists and capitalists all share the

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1 Forthcoming in the Handbook of Religion and Ecology edited by Roger Gottlieb (Oxford University Press 2006)
same view of the primacy of humans within the scheme of things. Evolution, however, tells us that humans share the same genetic roots as other animals; ecology tells us that human life depends on plants, trees, bacteria in a whole host of interlocking ecosystems; environmental science makes it abundantly clear why we owe ethical obligations to the non-human world. All this flies in the face of religious views that regard a single god as the focal point human life, and equally of the European, secular, and patriarchal humanism that expelled such a god from the center of the universe, only to replace him with ‘man.’ In traditional Christian and modern Enlightenment views, human life is radically incommensurable with animal and plant life, not deeply related to it; human creativity depends on the strength of our mind or soul to transcend nature, not the weakness of our bodies that are inscribed within it; and only putative gods and living humans are owed ethical obligations or endowed with inalienable rights. This anthropocentric worldview, whether conceived in religious or secular terms, we now know to be untrue; that is, it does not correspond to the reality of the physical universe as understood by science. Rather, it has enabled the formulation of an unsustainable industrial, economic culture that threatens the very basis for life itself.

This chapter analyzes the ways in which the religious and philosophical thinking of Daoism intersects more fruitfully than monotheistic religion or liberal secular humanism with the sciences of evolution, ecology and environment. It demonstrates the possibility for a radically alternative worldview that can help human beings symbolize their time, place and obligations in a way that accords more closely with science and can help nurture a sustainable future.

Nature as Evolution

Daoism, it is often said, is the least understood major world religion. Indeed it is only recently that the English-speaking world has had any conception of Daoism beyond the live-and-let-be world of the *Tao of Pooh* or the force-filled magic and cryptic sagacity of Yoda in the *Star Wars* series. The reasons for this general misunderstanding are historically complex and have only recently begun to be decoded (see Kirkland
2004). However, the largest part of this misunderstanding has revolved around construing Daoism as an individualistic philosophy or a way of life that centers on harmony with nature. Although it is perfectly possible to read this view from certain Daoist texts, notably the classical philosophy of *Laozi* or *Zhuangzi*, this notion of harmony with nature has by and large not been the focal point of real Daoists throughout Chinese history. Rather, Daoism has historically taken the form of an evolving series of religious movements that have had a wide variety of religious aims and an equally wide variety of methods to achieve those aims. Such aims have included the liberation of the souls of ancestors from underworld prisons so as to attain a post-mortem life of luxury in a richly-textured paradise. They have included the refashioning of the subtle energies of the body so as to give birth to an embryo of pure spirit that can transcend the finitude of the human condition. Their methods have included soot-covered rituals of repentance for the forgiveness of sins, yogic meditations involving the breath, saliva and semen, and elaborate visions of star-dwelling deities who descend to inhabit the spleen and liver. Perhaps such variety is commonplace across many traditions, but unlike many religionists, Daoists have rarely espoused a single normative reference point such as a holy book or holy person to serve as the universal reference point for the faithful. Like Hinduism, Daoism is a rich, subtle, diverse and complex web of movements; unlike the missionary religions of Islam, Buddhism or Christianity, Daoism has not developed ways of containing that subtlety within a single universal framework such as the five pillars of Islam, the four noble truths, or the apostles’ creed.

Given the historical reality of the Daoism’s growth and evolution over the centuries, it is difficult to speak of a classical, authentic or original period of Daoist history. Nor was there a singular event such as the Buddha’s attainment of nirvana or the revelation of the Qur’an, from which the complex reality of the tradition flowed. Rather, there have been several of these foundational moments, each of which has generated its own movement, its own dynamics and religious contours. The reason this is important for the study of religion and ecology is that the historical process of Daoism’s growth is more closely related to the concept of evolution, than to the notion of
creation. The Biblical concept of divine creation suggests that the world is the product of a divine agency. This creation is originated with a singular creative act or ‘big bang’ and continues through the mysterious workings of divine providence so that the history of humankind is bound up with the history of the divine activity. The stories of the bible reveal human history to be also the history of God’s actions towards his chosen people. The inter-related biblical concepts of divine creation, providence and salvation history thus produce a worldview in which the existential decisions and moral actions of human beings towards each other and within the horizons of eternity are significant precisely because they are actions, that is, the creative products of human will and rationality. Human actions are to be judged in terms of their goodness, that is to say, the degree to which they accord with the will of the creator as expressed in the divine act of creation and in the numerous acts of self-revelation throughout human history.

In contrast to the biblical notion of human and divine agency founded in an original and singular act of creation, Daoist historical self-understanding is construed in terms of the concept of the Way. The Way is not the product of a divine creative act, nor is it a divine agent. Rather, the Way is the emergent process of creativity by which the cosmos becomes what it becomes. The cosmological premise of one of the earliest Daoist texts, the *Way and Its Power* (Daode jing) is that the natural world is not a collection of interacting objects set in motion by a divine being but rather a dynamic system of vital processes whose basic character is that of self-transformation. The universe was not created by any external creative act, but rather subsists as a complex of “ways” that are wholly spontaneous or self-generating. The *Way and Its Power* (ch. 25) summarizes this view rather cryptically in the phrase *Dao fa zi ran*, which may be translated as “ways take as their model their own capacity for self-generation.” The principle that this Daoist maxim enshrines, therefore, is the capacity of life to shape itself independent of any external impetus or teleology. Things simply come into being of their own accord; they are not enacted by divine fiat according to some mythic metanarrative or with any external purpose. Nor are they the consequence of some all-encompassing karmic logic of cause and effect. What is ul-
timately significant for Daoists, therefore, is not the agent (does God exist? who am I?), nor the value of the product (is the universe good? did I do a good deed?), but the mode of agency: how do I do? The Daoist canon, compiled in 1445 of some 1487 texts, may legitimately viewed as a storehouse or repository of Daoist ‘ways’ to answer to this question. From the cryptic wisdom of the Way and Its Power (“Do nothing and nothing is not done”) to the complex methods, recipes, formulae and incantations recorded in Daoist scriptures, Daoists are preoccupied with the ways that we do and do not. I want to suggest that the views of agency and creativity espoused by Daoists can accord well with contemporary scientific notions of evolution and can be appropriated to construct a worldview that will be beneficial for life on earth in the 21st century.

In the modern scientific account of cosmic and biological evolution, the explosion of the big bang gives rise to enormous hydrogen fusion (stars) that produce more complex atoms (helium) and increasingly complex atoms, such as lithium, carbon and silicon that eventually accumulate in the form of planets. Carbon, hydrogen and oxygen atoms combine to form carbon-based molecular life, and these molecules combine into ever more complex molecular forms such as lipids and proteins and eventually the highly complex DNA-based animal life. This emergence of organic complexity also has a Daoist parallel in the sparse cosmogonies found in Daode jing ch. 42.

Dao gives birth to one
One gives birth to two
Two gives birth to three
Three gives birth to ten thousand things

What is instructive about this Daoist cosmogony is the use of the Chinese term sheng which means “generate” or “give birth to.” This cosmogony is different from the Neo-Platonic account of creation, which sees differentiation as the fundamental cosmogonic process. In that account, the multiplicity and diversity of the universe arises out of the splitting up or differentiation of some primordial unity. The Daoist account, however, is quite different. One does not divide into two, nor two into four. Rather the one becomes, as it were, pregnant with itself and gives birth to two; two becomes pregnant with itself and gives birth to three. In this way we may understand
the process of Dao, the “ways” of our universe as a sort of recursive, fractal-like complexity in which life takes up itself into itself and emerges into a yet more complex form. The result of this ongoing creative process is the ten thousand, or myriad, things, the complex imbrication of life-processes that together constitute the self-organizing collectivity of life.

The linear aspect of the Daoist worldview, however, does not lend itself to modern notions of progress or religious notions of eschatological crisis. Daoists have not historically viewed themselves as inscribed in an overarching linear temporality within which they feel compelled to make progress towards some future horizon. Rather they have generally favored a more complex view that regards progress and return as complements of each other. This view derives chiefly from the theoretical work of Chinese alchemists who sought an elixir of immortality from the decoction or refinement of cinnabar, a bright red ore comprised of mercury sulfide, back to a state of original purity. In this view, progress was made by returning the ingredients to a primordial state. By heating the cinnabar repeatedly in a crucible, ever purer forms of mercury were extracted. The mercury was ingested and was thought to preserve the body in a transformed state beyond death, even though it also killed the person who took it. The body was thus preserved and transformed in a process that can be interpreted as both progress and return. When this alchemical language was internalized into the language of Daoist biospiritual meditation, progress along the spiritual path was also seen as the recovery of a primordial state of energy. This state was symbolized as an embryo of immortality, something both primordial and transcendental, that was generated within the body and eventually born into the world through the crown of the head.

This alchemical view of nature, therefore, whether understood in terms of the physical world or the inner spiritual life of the adept seems irreducibly complex. When analyzed from one perspective it seems as though Daoist spiritual practice is concerned above all with the return to simplicity, yet Daoism developed more and more complex forms of practice designed to achieve this. The ideal state is achieved
through embodying the complex transformative power of nature rather than denying it.

**Nature as Spontaneity**

The autopoietic, self-generating character of nature provides the key component of the locative self-understanding of the Daoist. Daoists do not view themselves as inscribed within a single mythic framework of sin and salvation or creation and redemption but rather recognize the multiplicity of transformations within the universe and their place within them. The consequence of this view is an explicitly pluralist theology that recognizes a multiplicity of gods each associated with specific religious functions and geographic spaces. Gods are associated with nature: with mountains, villages, streams, seas, organs of the body and stars in the sky. The Daoist religious movement known as the Way of Highest Clarity, for instance, comprises numerous methods for correlating the gods of the stars with the organs of the body though meditative visualizations undertaken at cosmologically auspicious moments of the calendar. It is the co-ordination and correlation of these numerous dimensions of existence that facilitates the transformation of the adept. Transformation comes not from being located within the mythology of creation and salvation associated with a particular deity, but from the alignment of the energies of the body with the energies of the cosmos. When body and cosmos are co-ordinated, transformation spontaneously and naturally occurs.

Although gods have their own mythologies associated with them, there was never a successful attempt to weave together the stories of all the gods into a singular transcendental metanarrative of creation and redemption. This is true even within the mythology of the god Laozi, the alleged author of the *Daode jing* and regarded as the personification of the Dao. According to the *Scripture of the Transformations of Laozi (Laozi bianhua jing)*, which is perhaps the closest Daoist text to the mythic metanarratives of West or South Asian religions, the overall creativity of the cosmos is understood as the function of the creative powers of the god Laozi. Yet even within this mythological framework, what is central to the character of the deity—and thus
to the cosmos that he inspires—is fact that he transforms himself and appears in various guises as a teacher throughout the history of the world. The text does not understand the god’s principal mode of relationship with the world as a singular act of creation or *genesis* but one of continuous creative transformation (Kohn 1993: 71). This suggests that what is primordial in the Daoist conception of the universe is diversity. Diversity is explained not by a god who creates and names specifically different things but by assuming as fundamental the process of transformation within the universe, namely the Dao or Way. All the things that exist within nature exist not because each was separately created (as in the Genesis story) but because nature transformed differently. This process of change is symbolized mythologically in the person of Laozi, who transforms into a variety of guises so as to give instruction to confused human beings in various ways corresponding to various locations and historical periods.

The repeated manifestations of Laozi throughout history suggests important similarities and differences between aspects of the Daoist understanding of evolution and contemporary evolutionary science. If we understand evolution as the non-teleological emergence of a self-organizing complex of life processes, there is a startling overlap with the Daoist conception of the natural self-organizing spontaneity (*ziran*) of the universe. In Daoist terms, nature is natural because it is self-generating, not because it is a ‘creation’ that follows divinely-ordained ‘natural laws.’

Once we realize that cosmos is not fulfilling natural laws that aim towards some final goal set in place by some transcendent creator, this has important ramifications for our view of ethics, and, in particular, human intention and agency. In the Daoist view, value does not consist in the achievement of some teleological goal or conformity to some transcendental ideal. Rather, the value of a thing consists in the process of transformation that is inherent in its own process of being. Accordingly, the core value espoused by Daoists, namely, spontaneity or the capacity for autonomous self-transformation (*ziran*) derives directly from the Daoist understanding of nature. Nature is both a description of the universe and a value to be espoused by humankind. There is no fact/value distinction, one of the principal hallmark of the modern
worldview (see Neville 1998). In the terms of the *Daode jing* this spontaneity is actualized through adherence to an ethic not of action, but of ‘non-action.’ By practicing an ethic of non-action, Daoists value the capacity for self-transformation that is inherent within things and generally do not seek to exert influence through external creative acts. In the terms of the religious movements that have flourished for thousands of years of Chinese history, this ethic of non-action was realized through ritual movements that sought to bring harmony from within rather than impose it from without. Such ritual movements, whether the individual actions of monks and nuns or the communitarian celebrations presided over by Daoist priests function as transactions within an economy of cosmic power according to which the various dimensions of existence are creatively harmonized through their mutual co-ordination and correlation.

**Nature as Balance**

The Daoist view of nature and spontaneity that is outlined above did not develop out of a scientific evolutionary cosmology but rather in concert with medical theories about the body. In fact, the body remains one of the principal lenses through which Daoists interpret the world. Although the approaches of traditional Chinese medicine and contemporary medical science are in many ways radically opposed to each other, both share an important point of agreement in the concept of homeostasis, the ability of the body to maintain an overall physiological equilibrium. The difference lies in understanding how this homeostasis is maintained. The Chinese view rests on an understanding of the flow of Qi energy through the various meridians associated with the organs of the body. Chinese medicine views pathologies as disruptions in the flow of Qi, and doctors of Chinese medicine intervene in the body only insofar as to restore the normal flow of energy. The various techniques employed, from diet to acupuncture, all seek to restore a healthy balance to the energy flow of the body. This view is consistent with the cosmological principle explained above, that the various processes of the cosmos inherently possess the capacity for harmonious self-transformation and that the correct mode of action is the type of action
that seeks to co-ordinate and enable the spontaneous creative capacities of these various processes, rather than force them to conform to some external norm.

The health of the body is assured when the state of homeostasis obtains among the Qi flows associated with the various organs. It is worth considering in some detail the Chinese view of energy and organs because it is the basis for Daoist views of nature and harmony. Within the body, there are two kinds of organs or energy systems: yin systems and yang systems. According to the foundational medical text, the *Simple Questions on the Yellow Emperor’s Internal Classic (Huangdi nei jing su wen)*, the function of the yin systems is to store or collect the “essential Qi,” defined by as “structuring potential” (Porkert 1974: 179-80). It is the function of the complementary yang systems to “transmit or transform things” (Unschuld 1985: 286). Thus the body contains two basic physiological dynamics. The yin systems store the potential energy to maintain the dynamic structuring of the body, and the yang systems transmit this energy.

The circulation of energy throughout the body, is thus brought about through a continuous interplay of positive and negative forces, comparable to an electrical circuit operating on a positive and negative charge. In the system of traditional Chinese medicine the basis for this circulation of energy is pattern of yin and yang. Since the *Book of Changes (Yijing)* this pattern of yin and yang has held to be a cosmological pattern, the pattern of potential and actualization in each phase of a cosmic matrix (dao). The treatise on yin and yang in the Suwen stresses the cosmic significance of these categories:

The Yellow Emperor spoke: [The two categories] yin and yang are the underlying principle of heaven and earth; they are the web that holds all ten thousand things secure; they are father and mother to all transformations and alterations; they are the source and beginning of all creating and killing; they are the palace of spirit brilliance.

In order to treat illnesses one must penetrate to their source.

Heaven arose out of the accumulation of yang [influences]; the earth arose out of the accumulation of yin [influences]. Yin is tranquility, yang is agitation; yang creates, yin stimulates development; yang kills, yin stores. Yang transforms influences, yin completes form.
Trans. Unschuld 1985: 283

It is important to remember that yin and yang are not forces or substances but modes or aspects of the processes of Qi. The nature of yang-Qi (expiration) is to transform, whereas the nature of yin-Qi (inspiration) is to receive and store form.

Nature, then, is unitary in that it is comprised ultimately of one energy–matter, Qi. It has a binary characteristic, however, in that it terms of its positive and a negative charges. This duality leads energy to flow in a circuit. When it flows in a circuit it achieves a state of balance or homeostasis. This simple pattern, readily understood by analogy to energy, Daoists take to be the fundamental pattern of nature. Everything can be explained in terms of positive and negative forces which produce a circular flow and tend towards a systemic balance. Viewing the body, and by extension nature, as a dynamic system that tends towards an overall equilibrium is a further point of agreement between classical Daoist philosophy and contemporary systems thinking.

This holistic, systemic view of the body and the cosmos leads Daoists to view nature in terms of the correlations between its various dimensions and not in terms of the sequential cause and effect that is a characteristic of Indian theories of karma and classical scientific views of logic. This emphasis on correlation and synchronicity makes Daoism seem pre-modern or unscientific, because the emergence of modern science depended precisely on analyzing nature in terms of the sequential logic of cause and effect. A scheme for mapping the correspondences of yin, yang, the five directions, and other aspects of nature is detailed in Figure 1.
Figure 1: Yin, Yang and the Five Phases

Figure 1 shows how the Chinese cultural imagination came to depict the achievement of balance in terms of time, space and the body. The achievement of balance through the harmony of yin and yang occurs through the constant circulation of energy. This principle is same at the micro and macro levels, and the various dimensions within which this circulation occurs function interdependently with each other.

Such schemes for conceptualizing nature should be regarded not as ‘premodern’ or ‘unscientific’ but as early forms of systems thinking, which scientists have begun to espouse as fruitful for considering certain aspects of biology. As Stephen Jay Gould has written:

... [T]he principles of physics and chemistry are not sufficient to explain complex biological objects because new properties emerge as a result of organization and interaction. These properties can only be understood by the direct study of whole, living systems in their normal state. (Quoted in Barlow 1991: 103)
Though Chinese schemes for conceptualizing nature in terms of synchronous correspondences would not pass the test of science, scientists do now see the value of looking at nature in terms of organic systems, as well as breaking nature down into analytical sequences.

What distinguishes Daoists from most modern scientists, however, is their desire to derive values from the facts of nature. Just as Daoists view nature as spontaneous and therefore value spontaneity, so also Daoists view balance and systemic equilibrium as a virtue. In this Daoist worldview, balance or harmony in fact can be regarded as a supreme virtue, not in the sense of some abstract ideal of goodness or justice, but rather as the natural process of balancing out of the diversity of forces so as to attain an equilibrium that proves beneficial for the whole. This value encourages a type of systems thinking that recognizes irreducible diversity and dissuades thinking in the dualistic terms of good versus evil. This is not to suggest that Daoists are amoral. Rather it is to suggest that Daoists view morality in medical terms: goodness consists of the optimal health of a system comprised of various interdependent subsystems. This medical concept of virtue can certainly be useful in constructing an ecological ethics, one that recognizes that humans cannot act for their own good without considering the overall health of the ecosystems in which they are embedded.

Nature as Fluid

The reason why Daoists and practitioners of traditional Chinese medicine espouse a holistic view of the relationship between the body and the cosmos is that their view of the body is more porous than we might expect. This concept can be understood in terms of Qi which, in the early medical texts, was viewed not simply as the system of energy within the body but more generally as a type of ‘influence’ or ‘wind’, that is, a kind of fluid that transmits power (Unschuld 1985: 67–73). Human health, moreover, is maintained not simply through the homeostasis within the body, but by maintaining an equilibrium between the body and its environment. Chinese medical texts thus pay great attention to the nine orifices of the body, for it is through these ori-
fices that the balance between the energies within the body and those without must be maintained.

The most basic procedure for maintaining this harmony is breathing. Thus many Daoist meditative techniques pay close attention to regulating breath, that is the passage of Qi as air or breath from outside to inside our bodies and back again. Each time we exchange a breath we are exchanging aspects of our physical environment and our internal physiology. Since breath is the basis of life, we can define life in the basic Daoist sense as the continuous exchange of energy between environment and body. When this exchange ceases, then life ceases. Livia Kohn recounts the story of the Daoist Master Yinshi, born in the 1870s, who famously cured himself of tuberculosis and went on to expound the virtues of proper breathing. In his autobiography he writes:

> Breathing is one of the most essential necessities of human life, even more so than food and drink. Ordinary people are quite familiar with the idea that food and drink are important to maintain life, that they will starve if left without it for a while. But they hardly ever turn around to think about the importance of breathing and that air is more important to life than anything else. (Quoted in Kohn 1993: 136)

This focus on breath as the fluid medium between body and environment lends itself very well to an ecological sense of the body, one that sees our understanding of life and self inextricably linked with the process of life in our surrounding environment.

Daoist texts, moreover, dwell not only on breath but on saliva, semen, menstrual blood and food as elements in the process of biospiritual transformation. All these may be understood as ingredients in the constant fluid interchange between the body and its environment. Even gymnastic exercises are to be conducted with a sense of awareness as to one’s surroundings. Daoist gymnastic guides typically instruct the adept to face in certain directions or perform exercises at certain times of the day (see Kohn 1993: 145). These suggest that it is not simply the exercise in and of itself which is beneficial, but rather the way in which the exercise connects practitioners to their surroundings.
The Daoist view of the porous body can thus be regarded as an ecological view because it tends to mitigate against the perception of the self as an autonomous, isolated mind within a physical container. Rather the effect of Daoist practices is to nurture a sense of self as thoroughly translucent to one’s environment. This translucency or porosity of self is even symbolized physically in Daoist hagiographies. The biography of the Daoist perfected person Zhou Ziyang, for instance, relates how his practice of Daoist arts led eventually to a luminous and radiant physical condition in which one could see through his skin to his internal organs (see Porkert 1979 for a complete translation). The Daoist practice that he followed seemed to result in a less opaque, more transparent body. What this concept indicates is not simply the transformation of his body in an amazing way, but the thinning of the membrane between interior and exterior.

The idealization of a increasingly diaphanous and porous body can be interpreted in contemporary terms as an ecological sense of self. My argument here is that this ecological sense is grounded in the Chinese view of nature as a fluid process rather than a material substance. In fact, matter or ‘stuff’ is not the basis of the Daoist view of nature. Rather, its basis lies in water.

The symbolic affinity between water and early Chinese philosophy has been well demonstrated by Sarah Allan (1997). Allan argues that water “which provides life, gurgles up unbidden from the earth and moves of its own accord, becomes perfectly level and clears itself of sediment when still, takes the shape of any container, penetrates the tiniest opening, yields to pressure but wears down the hardest stone, becomes hard as ice and disperses as steam was the model for philosophical ideas about the nature of the cosmos” (1997: 4). Allan’s work is based on the concept of a “root metaphor” developed by Lakoff and Johnson in Metaphors We Live By (1980). Allan argues persuasively that early Chinese philosophy’s root metaphors or pre-logical conceptual schemes were developed principally from images of nature (1997: 13). In contrast to the Western philosophical emphasis on nature as matter or elements, Chinese philosophy has favored a more fluid view.
In her book, Allan concentrates on understanding the cultural meanings of the terms she is dealing with, treating them, in Lakoff and Johnson’s terms, as metaphors. *Shui*, the Chinese term for water, for instance, has a wider semantic range than the English term. It denotes fluid, flowing, and river as well as water. The Chinese character for water depicts a flowing stream. This idea “streaming” is captured in a range of early Chinese philosophical texts all documented in detail by Allan. Perhaps the most famous example of the use of water as a metaphor can be found in chapter 22 of the *Way and Its Power*:

Highest good is like water. Because water excels in benefiting the myriad creatures without contending with them and settles where none would like to be, it comes close to the way. (Trans. Addis and Lombardo 1993).

Here water is also employed as a metaphor for goodness. Good is defined as being like water in the sense that water benefits creatures without contending with them and in that it chooses the lowest place. To be good thus means to be of benefit to others and to be humble. All this is straightforward. But it is helpful to consider this symbolic use of water more closely. In this sentence water has two relevant properties. The first is that it benefits the myriad creatures. The second is that is always sinks to the bottom. Of these two properties, the first is uniquely the property of water whereas the second is the property of any liquid. The unique property of water is that it benefits the myriad creatures (*wanwu*) without contending with them—without causing them any harm. The Chinese term *wanwu* is rather unusual in that it includes humans, animals and plants in a single biological category. The most important ecological connection between these three life-forms is that they are all dependent upon the earth’s water cycle. To be alive, to be one of the myriad creatures, is only achievable through water. Thus in Daoist and ecological terms, life is a water-based proposition. Whereas any form of liquid could be used to express the concept of “settling where none would like to be,” only water “excels in benefiting the myriad creatures.” Thus the symbolic use of water in this text here is based in its natural, biological value for human beings. In the passage above it is water’s ability to sustain water-based life that makes it ultimately significant. It expresses a biological dependence that transcends culture and embeds religious meaning within biological life.
Daoism, as a religious tradition, locates this natural fluidity in the mystical aspect of the Dao or Way. *The Way and Its Power* (*Daode jing*) speaks of the Dao not just as the watercourse, or the irrigation channels of cosmic vitality, but as their mysterious ever-full source:

> The Dao is empty [empties], yet using it it does not need to be refilled.

> A deep spring (*yuan*)—it seems like the ancestor of the myriad living things (*Daode jing* ch. 4; quoted in Allan 1997: 76)

The irrepressible flood of life that constitutes the world is a source of mystery. Life’s liquid vitality must originate in some watery abyss, some deep well that “does not need to be refilled.” For Daoists this unfathomable mystery is fundamentally fluid in the mystical, symbolic sense of being ungraspable by human reasoning and in the biological sense of being the wellspring of water-based life.

**Daoism and Nature in Contemporary China**

From the initial historical research that has already taken place we know that what we would today call environmental ethics was a small but certain concern of the Daoist religious movement known as the Way of the Celestial Masters. A recent analysis of the ethical code entitled the *180 Precepts of Lord Lao*, an ethical code adopted and transmitted by the Way of the Celestial Masters has revealed that environmental protection was an intrinsic part of the ethical framework by which leaders of this tradition sought to abide. The code contains specific injunctions against burning vegetation, felling trees, digging holes in the ground, drying up wetlands, hunting, polluting wells, bathing in rivers, disturbing wildlife and creating artificial lakes (Schipper 2001: 81-2).

To understand the historical context in which this code was adopted we must place ourselves in Sichuan province in the West of China about 2,000 years ago. This area of China was a key economic engine with large merchant towns, extensive exploitation of the land, a high population density and commerce with nomadic central Asian tribes. According to Kristofer Schipper, “neither classical nor medieval Daoism developed in primitive surroundings, but in places of highly developed culture” (2001:...
83). However, although the way of the celestial masters thrived in this richly developed area, the leaders created their 24 parish centres (zhī) almost exclusively in mountain areas or natural reservations. One area in the plain that did receive religious sanction, however, was the Dujiangyan irrigation project.

Dujiangyan is located just outside present-day Chengdu, the capital of Sichuan Province. To the east begins the mountain area where many Daoist sites are located, and which leads towards the western edge of the Tibetan plateau. To the west lie the rich plains of the central Sichuan. The Dujiangyan irrigation project was begun in 267 BCE and completed in 256. It was designed as a water conservancy project to regulate the flow of the Minjiang river so as to prevent flooding downstream in times of heavy rainfall and to provide a constant flow of water for irrigation. The Dujiangyan irrigation project separates the Minjiang river into three main channels: One provides irrigation to 30,000 separate irrigation channels downstream; the second receives surplus water in times of flooding; the third provides water for the city of Dujiangyan. The project is significant from a water engineering perspective because it is the world’s oldest irrigation project in use today that is not built around central dam. It celebrated its 2,260th birthday on April 4, 2004. The water irrigation facility and nearby Daoist mountain, Qingcheng shan were placed on the UNESCO World Heritage List in 2000.

The irrigation project provides context for understanding the environmental precepts that were adopted by the Daoist Celestial Masters. Their concern for water, wetlands and the earth was not simply a theoretical or metaphysical concern but was an economic and ecological concern. This concern was I think quite complex. On the one hand the wealth of Sichuan depended on the ability of engineering projects like Dujiangyan to regulate the flow of water in the environment. This is concordant with the classical Chinese ideal of the role of humans as the harmonizers of heaven and earth. Dujiangyan perhaps can be considered a concrete implementation of this ideal. Through environmental engineering humans can never tame or domesticate nature, but they can find a way of harnessing its power so as to provide health and wellbeing to human society. The religious sanction of environmental engineering can be seen in
the fact that a Daoist temple was established at Dujiangyan in honor of Li Bing, its chief architect. On the other hand the fact that the Celestial Masters deliberately established their centers in mountain areas and not in the fertile plains suggests that this type of social-environmental-engineering must be balanced by a deference and respectful appreciation for nature that can be experienced in mountains because they are the places where this type of engineering cannot take place. They are in effect nature preserves, sanctuaries from engineering complexes such as Dujiangyan. Although such complexes may be considered necessary for human development, they are not, it seems, sufficient. By interpreting Qingcheng shan and Dujiangyan (natural mountain and environmental engineering) as part of a single complex religious-environmental complex, we can say that the celestial masters were attuned to the complexity of the symbolic and environmental value of water.

Such complexity is revealed in the well-documented environmental crisis of present-day China. The aspect of this crisis that most directly impinges on Daoists in contemporary China is the phenomenon of eco-tourism. When Mt. Qingcheng received its UNESCO world heritage designation, signs in English and Chinese proudly proclaimed to thousands of tourists Daoism's affinity with the way of nature. In December 2003, the Chinese government committed 10 billion yuan over five years to make Dujiangyan the number one eco-tourism attraction in China. By 2004 some 24 million yuan had been spent on environmental protection that has seen some two thousand egrets return to the top of Mount Qingcheng attracted by 99 Machilus trees some reportedly 1000 years old. The rapid development of this area as a tourist destination brings awareness of environmental issues but also potential harm. A recent plan to construct a new dam 23 metres tall and 1,200 metres wide across the river just upstream of the Dujiangyan project has attracted widespread criticism because of its implications for the cultural and environmental heritage of the area. The dam would be part of the Zipingpu hydroelectric project which aims to help reduce China's dependence on coal-fired electricity and to supply clean energy to fuel local economic development, one part of which is eco-tourism. Based on to discussions with local government officials in 2004, it now seems that this project is stalled.
The complex problems of religious and ecological tourism are reflect the broader pattern of environmental problems facing China in the 21st century. Government officials recognize, however, that traditional Chinese views of nature may have a positive role to play in China’s transition to an ecologically sustainable economy. Pan Yue, the deputy director of China’s State Environmental Protection Agency (SEPA) gave a recent speech in which he called for a “recycling” economy—one not predicated on exhausting the finite resources of the environment. Such an economy, he claimed, would be consonant with the “law of nature” which he connected in his statement to Daoist notions of flow and circulation (Pan 2003). In so doing he recognized and articulated the validity and relevance of the Daoist worldview, one which regards nature as spontaneous, balanced and fluid. According to this worldview, humans benefit from aligning themselves with the flow of the Dao, the irrigation-flow of liquid vitality, and harm themselves and their world by blocking it. This view can be of benefit in the construction of an ecological ethic that respects the view of life that has emerged in the sciences of evolution, ecology and environment.

List of Works Cited


**General Bibliography of Daoism and Ecology**


