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**"The Great Virtue of Heaven and Earth 天地之大德:"
Deep Ecology in the *Yijing* 易經**

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The *Yijing* 易經 (Scripture of Change) is one of the foundational documents of Chinese culture: one of the "Five Scriptures" 五經 of the earliest Chinese religious canon, and the subject of innumerable commentaries over the past two thousand years throughout East Asia. Since its first Latin translation in 1738 it has become an object of fascination by Western culture, especially since James Legge's 1899 English translation and Richard Wilhelm's 1924 German version (translated into English in 1950, with a famous foreword by C. G. Jung). Amidst the current revival of religion in the People's Republic of China there is considerable renewed interest in the *Yijing*. The text and the divination system at its core are based on the premise that human beings and the natural world share a common nature that makes possible the meaningful correspondence of human interests and natural patterns, human creativity and the natural creative process of change. Such commonality or consanguinity is also the premise underlying the contemporary theory of "deep ecology." This paper presents a close reading of the *Yijing* that brings to light these correspondences, focusing primarily on the "Ten Wings" 十翼 or appendices as interpreted by the Cheng-Zhu school of Song-dynasty Confucianism.

The term "deep ecology" was coined in 1973 by the Norwegian philosopher, Arne Naess (1912-2009).¹ Deep ecology is both an environmental philosophy and a political movement. By "deep" Naess meant to distinguish it from "shallow ecology," or ecology understood simply as

¹ Arne Naess, "The Shallow and the Deep, Long-Range Ecology Movement: A Summary," *Inquiry* (Oslo) 16 (1973), 95-100; reprinted in George Sessions, ed., *Deep Ecology for the Twenty-first Century* (Boston: Shambhala, 1995), 151-155.

environmental science and the conservation movement. Deep ecology, according to most of its proponents, is fundamentally *biocentric* or *ecocentric*: it claims that all living things have equal rights to live and flourish.² The fundamental ethical value is the "Self-realization" of every species, where "Self" (capitalized) is understood in the broadest sense, transcending the discrete boundaries of the individual "self." It is thus opposed, both philosophically and politically, to *anthropocentric* perspectives, which measure the worth of a species or a portion of the natural environment according to its value for human beings. The goal of the "conservation of resources" movement, strictly speaking, is therefore to be classified as anthropocentric and "shallow" because it aims to protect "resources" for human purposes. Similarly, one could argue that the Jewish and Christian "stewardship" model of environmental ethics is neither ecocentric nor biocentric but rather *theocentric*, since it conceives human responsibility to the environment as a function of our responsibility to its creator; we are to "till and keep" (preserve) the natural environment as stewards or caretakers for its true "owner" or master, God. On the other hand, under the stewardship model humans and nature are equally God's creatures, so from this perspective it could be said to have deep ecological significance.

There is a huge body of literature on deep ecology, including critiques from various perspectives.³ Perhaps the most common critique is that biocentrism and ecocentrism take insufficient account of the role of human beings. What I want to do here, in part, is to "redeem" deep ecology by expanding its moral compass. I will do this by characterizing deep ecology as a philosophical orientation in which "depth" refers to the effort to identify the common nature underlying all things, including both human beings and the rest of the natural world.⁴ I will demonstrate that the *Yijing* also embodies this orientation on several levels. However, the

² See, for example, David Landis Barnhill and Roger S. Gottlieb, "Introduction," in Landis and Gottlieb, eds., *Deep Ecology and World Religions New Essays on Sacred Grounds* (Albany: SUNY Press, 2001), 6.

³ A good bibliography through 1997 can be found on the website of the International Society for Environmental Ethics (ISEE): <http://iseethics.files.wordpress.com/2011/03/deep-ecology-johanned-dingler.pdf>

⁴ This aspect of deep ecology can be considered a return to the original problem addressed by Western philosophy: the Pre-Socratic philosophers' search for the singular *physis* (nature) of all things. See G.S. Kirk, J.E. Raven, and M. Schofield, *The Presocratic Philosophers: A Critical History with a Selection of Texts*, 2nd ed. (Cambridge: Cambridge University Press, 1983).

worldview of the *Yijing*, especially as it is has been interpreted by Confucian philosophers, cannot be accurately characterized as either biocentric or ecocentric, if by those terms we mean that human values have no special meaning or significance. Rather, the worldview we find in the *Yijing* is best characterized by Tu Weiming's 杜維明 term, *anthropocosmic*, which implies a balance between the human and the "cosmic" (or natural). This term preserves the indisputable human or humanistic thrust of Confucian thought and practice, but not to the extent of anthropocentrism and not to the exclusion of human interests, as implied by "ecocentrism" or "biocentrism."⁵ I will argue that the common nature shared by humanity and the natural world, according to the *Yijing*, is inherent creativity, and more specifically moral creativity, which can be fully realized only by human beings. Thus what Naess calls "Self-realization" requires an understanding of how nature works, and understanding the morality inherent in human nature deepens our "ecological wisdom."⁶

I will focus on the philosophically richest part of the *Yijing*: the *Xici zhuan* 繫辭傳 (Commentary on the Appended Phrases) appendix, also known as the "Great Treatise" 大傳 (*Dazhuan*), which dates from the late Zhou 周 to early Han 漢 dynasties.⁷ First, however, I will discuss some general features of the *Yi* 易 and their ecological implications, beginning with a brief summary of the structure and history of the text itself.

The core of the *Yijing* is a divination system based on sixty-four hexagrams (*gua* 卦) or six-line diagrams, where each line may be either solid , symbolizing *yang* 陽, or broken 

⁵ See Tu Weiming, *Centrality and Commonality: An Essay on Confucian Religiousness* (Albany: SUNY Press, 1989), 78, 102-107, and *idem.*, "The Continuity of Being: Chinese Visions of Nature," in J. Baird Callicott and Roger T. Ames, *Nature in Asian Traditions of Thought* (Albany: SUNY Press, 1989), 67-78. Mary Evelyn Tucker also notes this difference in "Deep Ecology and Confucianism," in Landis and Barnhill, *op. cit.*, 129.

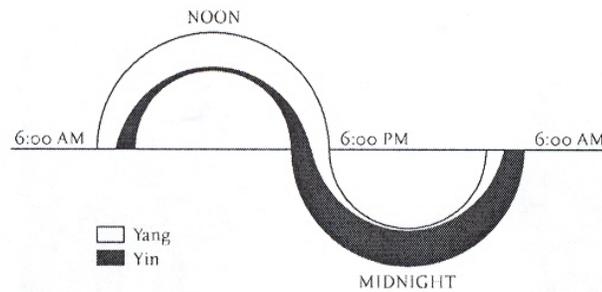
⁶ "Ecological wisdom" is one of the guiding principles of the Green Politics movement. See, e.g., the "Ten Key Values of the Green Party" of the United States: <http://www.gp.org/tenkey.shtml>.

⁷ Richard J. Smith, *Fathoming the Cosmos and Ordering the World: The Yijing (I-Ching, or Classic of Changes) and Its Evolution in China* (Charlottesville: University of Virginia Press, 2008), 8. See also Bent Nielsen, *A Companion to Yi Jing Numerology and Cosmology* (London: RoutledgeCurzon, 2003), 258; Michael Nylan, *The Five "Confucian" Classics* (New Haven: Yale University Press, 2001), 220; and Gerald William Swanson, *The Great Treatise: Commentary Tradition to the "Book of Changes"* (Ph.D. diss., University of Washington, 1974), 10.

☯, symbolizing *yin* 陰. Thus the hexagram representing pure *yang*, or the peak of *yang* in a process of cyclical alternation, is ☰, which is given the name Qian 乾 and symbolizes Heaven 天. The hexagram representing pure *yin*, or the peak of *yin* in a process of cyclical alternation, is ☷, which is given the name Kun 坤 and symbolizes Earth 地. The other sixty-two hexagrams are all the other possible combinations of *yang* and *yin* lines. Each one has a name and is conceived to represent a particular configuration of *yin* and *yang* in terms of both natural processes and human or social situations. The hexagrams are traditionally attributed to the mythic sage Fuxi 伏羲. Some examples of hexagram names are Juvenile Ignorance 蒙(#4), Closeness 比 (#8), Obstruction 否 (#12), Return 復 (#24), Reciprocity 咸 (#31), Release 解 (#40), and Abundance 豐 (#55).⁸

The hexagrams are understood to be temporal configurations of *yin* and *yang* on two levels. First, each hexagram itself is said to describe a temporal frame, starting from the bottom of the hexagram and ending at the top. Thus each hexagram represents a process, not a static condition. Second, the *yin* or *yang* nature of each line is part of a temporal process of cyclical alternation. *Yin* and *yang* are not substances themselves; rather they are *modes* of the constant transformation of *qi*, the "psycho-physical stuff" of which all things are composed; they are modalities of change. *Yin* describes *qi* in its dark, cold, sinking, condensing phase; *yang* describes the light, warm, rising, expanding phase. Therefore each line is *yin* or *yang* only temporarily: when its *yin* or *yang* activity reaches a maximum, it changes direction, so to speak, and begins to act in the opposite mode. This can be represented by the following sine curve representing the fluctuation of *yin* and *yang* in a day:

⁸ I am using the hexagram names as translated by Richard John Lynn, *The Classic of Changes: A New Translation of the I Ching as Interpreted by Wang Bi* (NY: Columbia University Press, 1994). The hexagrams are also conceived as combinations of two component three-line "trigrams" (also called *gua*). The eight trigrams (*ba gua* 八卦) and their symbolic meanings are Qian 乾 (Heaven) ☰, Dui 兌 (Lake) ☱, Li 離 (Fire) ☲, Zhen 震 (Thunder) ☳, Sun 巽 (Wind) ☴, Kan 坎 (Water) ☵, Gen 艮 (Mountain) ☶, and Kun 坤 (Earth) ☷ (these are not Lynn's translations). Each trigram also has an almost infinite number of further correlations, similar to the correlative cosmology of the Five Phases (*wuxing*). Like Qian and Kun, the other six trigrams, when doubled, comprise hexagrams with the same name as the trigram.



The constantly changing nature of the *yin* and *yang* lines means that each hexagram too is inherently changing. A hexagram yielded by the divination method represents an inherently dynamic, changing situation as well as its direction of change, like a vector (a force with both magnitude and direction). The particular configuration of that dynamism points to another hexagram, which can be interpreted as the *potential* future state that the present state is tending towards. This is the aspect of *Yijing* divination that is often considered "fortune-telling."

Accompanying each hexagram in the *Yijing* is a short oracular text, composed of ancient oracular formulas such as "auspicious" (*ji* 吉) and "inauspicious" (*xiong* 凶), and phrases resembling proverbs, such as "It is beneficial to cross the great water (*li she da quan* 利涉大川)." ⁹ There is a similar short text for each of the 384 (6 x 64) lines. The hexagram texts are attributed to the first king of the Zhou 周 dynasty (1045-256 BCE), King Wen 文王; and the line texts are attributed to King Wen's son, the Duke of Zhou 周公. This much of the *Yijing* is usually called by the earlier name *Zhou Yi* 周易, or "Changes of Zhou," and is dated by modern scholars to about the 9th century BCE (except for the hexagrams themselves, which may be considerably older). ¹⁰

The rest of what we know as the *Yijing* consists of a number of "appendices" traditionally called the "Ten Wings" (*shiyi* 十翼), although there are actually only seven of them (three are

⁹ This is found in nine hexagrams, plus one other in negative form. For an early analysis of the hexagram texts in English see Arthur Waley, "The Book of Changes," *Bulletin of the Museum of Far Eastern Antiquities*, 5 (1933), 121-142.

¹⁰ See, for example, Lynn, *The Classic of Changes*, 2.

each divided into two parts that are counted separately). Some are commentaries on the hexagrams and their component trigrams, while others, including the *Xici*, were originally independent philosophical treatises on the theory of change underlying the hexagrams and the divination system. The Ten Wings were attributed to Confucius 孔子 (551-479 BCE), although this has been questioned since at least the Song 宋 dynasty (960-1279 CE). Two of them are dated by historians to roughly the time of Confucius, but the others were probably written as late as the first century of the Han dynasty (206 BCE - 220 CE).¹¹

The word "change" 易 in the title of the *Yijing* has three levels of meaning.¹² The simplest one refers to the process of constructing a hexagram by means of yarrow or milfoil (*achillea millefolium*) stalks and interpreting the oracle. The method involves three steps to derive each line of a hexagram, each step consisting of four operations of counting off stalks. Each of these steps is called a "change." Thus the *Xici* 繫辭 appendix says, "Therefore four operations completes a change (*yi*); eighteen changes (*bian*) completes a hexagram. 是故四營而成易, 十有八變而成卦"¹³ Secondly, as described above, each hexagram line is inherently

¹¹ The two earlier ones are the *Tuan zhuan* 彖傳 (Commentary on the hexagram texts) and *Xiang zhuan* 象傳 (Commentary on the trigram and line "images," i.e. their correlative symbolism). See Lynn, *op. cit.*, 3.

¹² These are different from the three meanings of *yi* given in the *Yiwei Qian zuo du* (Aprocryphal treatise on the *Yi*: Penetrating the measure of Qian), which are ease (*yi* 易), change (*bianyi* 變易), and constancy (*buyi* 不易) (*Yiwei Qian zuo du* 易緯乾鑿度 [Yijing jicheng 易經集成 ed., vol. 157], 1a). See also Hellmut Wilhelm, *Change: Eight Lectures on the I Ching* (Princeton: Princeton University Press, 1960), 15-16. Nylan is mistaken in claiming that the three meanings of *yi* are contained in the *Xici zhuan* (Nylan, *op. cit.*, 230).

¹³ *Yijing*, *Xici* A.9.6, in Zhu Xi 朱熹 (1130-1200), *Zhouyi benyi* 周易本義 (Original meaning of the *Zhou Yi*) (Taipei: Hualian 台北: 華聯, 1978), 3:11a. All translations are mine unless specified otherwise. My citations follow Zhu Xi's ordering of the text, with subsections according to the divisions of his commentary. Zhu Xi followed Cheng Yi's 程頤 (1033-1107) slight rearrangement of the *Xici* text, so some of the numbering differs from the standard versions based on Wang Bi's 王弼 commentary, such as the *Zhouyi zhengyi* 周易正義 (Correct meaning of the *Zhouyi*) compiled, with subcommentary, by Kong Yingda 孔穎達 in the Tang 唐 dynasty, and the Harvard-Yenching *Concordance to Yi Ching* 哈佛燕京周易引得.

Note that *bian* and *yi* are used synonymously here. *Bianyi* is the colloquial word for change. The method preserved in the *Xici* is fragmentary and was "reconstructed" by Zhu Xi in his *Yixue qimeng* 易學

dynamic, and thus each hexagram is a picture of a changing situation. When a single line transforms into its opposite (*yin*-broken to *yang*-solid or vice versa), or a hexagram changes into any other (depending on which of its lines are changing lines), that is also called a "change" (usually *bian*). And finally, "change" (usually *yi*) refers to the cosmic processes of change and transformation, as in "the Way of Change" (*yi dao* 易道).¹⁴ Another important instance of this usage is a line from the *Xici* that will be further discussed below: "In change there is the Supreme Polarity" (*yi you taiji* 易有太極) -- i.e., the *yin-yang* principle.¹⁵

I prefer to translate "*Yijing*" as "Scripture of Change," emphasizing this last meaning of *yi*. The more common translations, "Classic of Changes" or "Book of Changes," emphasize the first two meanings. However, "classic" and "book" also obscure the fact that the *Yi*, at least since Confucius' time, has been considered a sacred text, so "scripture" is really the appropriate word.¹⁶

What ecological insights can we infer from these general features of the *Yijing*? First is the obvious point that change (*bian* or *yi*) and transformation (*hua* 化) are primary characteristics of the natural world. Change is inherent in things and does not require external causation, like the Newtonian billiard-ball model in physics. Cheng Yi 程頤 said, "Once there is *qi* there is natural generativity (*ziran sheng*) 氣則自然生."¹⁷ Each line and each trigram and hexagram is a snapshot of a continuous process of change and transformation, based on the *yin-yang* principle of bipolarity. There is no need for a transcendent god or principle to wind up

啟蒙 (Introduction to the Study of the *Yi*). See Joseph A. Adler, trans., *Introduction to the Study of the Classic of Change*, by Chu Hsi (Provo: Global Scholarly Publications, 2002).

¹⁴ Zhu Xi, *Introduction to the Study of the Classic of Change*, 20. "Change" (*yi*) in this and the previous phrase could also be interpreted as "Scripture of Change," e.g. "the way of the *Changes*."

¹⁵ *Yijing*, *Xici* A.11.5.

¹⁶ Referring to the ancient *wu jing* 五經 as "Five Classics" preserves the bias of 19th-century Protestant missionaries and translators who were unwilling to consider anything other than Christianity as a real religion. The "Five Classics" were therefore put in the same category as the classic literature of ancient Greece and Rome. Note also that *jing* was the word chosen to translate *sūtra* from Sanskrit.

¹⁷ *Henan Chengshi Yishu* 河南程氏遺書, *juan* 15, in *Er Cheng ji* 二程集 (Beijing: Zhonghua shuju, 1981), 148.

the cosmic clock -- or to create it, for that matter. The ultimate ordering principle, which emerges *from* things and does not exist apart from them, is change/transformation/creativity.¹⁸ This is why scholars have long analyzed traditional Chinese thought in terms of "process philosophy."¹⁹

Second, that inherent change/transformation/creativity is "powered," so to speak, by the inherent *bipolarity* of all things and the inherent bipolarity of the very "stuff" (*qi* 氣) that constitutes all things. The *yin-yang* principle of bipolarity is the ultimate ordering principle of *qi*. Change is ordered, not chaotic; it therefore is potentially intelligible by the rational human mind, although in many cases we may need "spiritual" assistance in ascertaining that order. This is where the *Yi* as a divination system comes into play. But even "spiritual things" (*shen wu* 神物)²⁰ like the hexagrams, yarrow stalks, and gods are part of the natural/moral order, at least from the perspective of Song Confucians like Zhu Xi. In this way of thinking there is no such thing as "supernatural," strictly speaking.²¹ Thus we can find spiritual meaning in the natural world and its cosmological history, as contemporary thinkers such as Thomas Berry have suggested.²²

Finally, the fact that the *Yijing* is considered both a reflection of the fundamental principle underlying the natural world and a guide to human behavior implies that human moral values are implicit in the natural world. This is why the *Yi* is more closely associated with

¹⁸ This is an example of what David L. Hall and Roger T. Ames call "aesthetic order," in *Thinking Through Confucius* (Albany: SUNY Press, 1987), 11-25, 131-138.

¹⁹ See, for example, the special issue of the *Journal of Chinese Philosophy* devoted to Alfred North Whitehead (the founder of process philosophy) and Chinese thought: vol. 6 (1979), no. 3.

²⁰ *Yijing*, *Xici* A.11.3, A.11.8; *Zhouyi benyi* 3:14a, 15a.

²¹ See Kidder Smith, Jr., Peter K. Bol, Joseph A. Adler, and Don J. Wyatt, *Sung Dynasty Uses of the I Ching* (Princeton: Princeton University Press, 1990), chs. 6-7; my portions of this book are also available in Chinese: 艾周思, "Zhu Xi yu bushi" 朱熹与卜筮 (Zhu Xi and Divination), in Tian Hao 田浩 (Hoyt Tillman), ed., *Songdai Sixiang Shilun* 宋代思想史论 (Essays on Song Intellectual History) (Beijing: Chinese Academy of Social Sciences, 2003), 304-348. See also Joseph A. Adler, "Divination and Sacrifice in Song Neo-Confucianism," in Jeffrey L. Richey, ed., *Teaching Confucianism* (NY: Oxford University Press, 2008), 55-82.

²² See, e.g. Thomas Berry, *The Great Work: Our Way into the Future* (New York: Bell Tower, 1999). Berry did not consider himself a deep ecologist (he called himself a "geologian"), but as I have defined the category I believe it fits him.

Confucianism than with Daoism or Buddhism, although scholars identified with all those traditions have used it and have written commentaries on it. The non-duality of natural principle and moral principle has been a fundamental assumption in Confucian thought since before Confucius himself. It is implicit in the doctrine of the "Mandate of Heaven" (*tian ming* 天命), insofar as this doctrine implies that heaven, which is at least partly equivalent to the natural world, has a moral will.²³ Thus the same natural patterns and principles -- what the Neo-Confucians later called *li* 理 (principle or order) -- operate in both the natural sphere and the human sphere. Or, to put it another way, human beings are natural beings, and human moral values are reflections of patterns seen in nature -- contrary to the early Daoist argument that Confucian moral categories are artificial and unnatural (e.g. *Laozi* 老子 18 and 19).

We are now ready to examine the *Xici* appendix of the *Yijing*. I will structure the discussion under four topics: (1) the non-duality of natural and moral principle, (2) the relationship of humans with the natural world, (3) the concept of *taiji* 太極 (supreme polarity) as the ultimate principle of creativity, and (4) the spirituality of nature.

Natural and moral principle

The non-duality or parallel of natural principle (*tianli* 天理) and moral principle (*daoli* 道理)²⁴ is expressed throughout the *Xici zhuan*, but especially in its earlier sections. The very first lines are as follows:

Heaven is high and honorable, earth is low and base; thus the positions of Qian and Kun are determined. The high and low being set out, the honored and lowly are positioned (A.1.1). 天尊地卑，乾坤定矣。卑高以陳，貴賤位矣。²⁵

²³ The philosopher Xunzi 荀子 (Xun Qing 荀卿, 3rd century BCE) went further than any other Confucian in identifying heaven with the natural world, and in fact denying that it had a moral will (in effect denying the Mandate of Heaven). But my view is that heaven for most Confucians was partly personalistic and partly or mostly impersonal and natural.

²⁴ These are my interpretations of these terms; they are not used consistently in these senses by the Song Confucians. Often, in their usage, the terms are synonymous.

²⁵ *Zhouyi benyi*, 3:1a.

Here the spatial relationship of heaven (high) and earth (low) are the template for the *social* hierarchy implied by "honored and lowly" (*gui jian*). Thus social hierarchy is natural, as indeed it was universally assumed to be in ancient times (not only in China, and perhaps not only in ancient times).

The creation of the *Yi* by Fuxi, King Wen, and the Duke of Zhou is attributed to their ability to see these common patterns underlying the natural and human spheres. For example:

In ancient times, when Baoxi [= Fuxi] ruled the world, he looked up and contemplated the images in heaven; he looked down and contemplated the patterns on earth. He contemplated the markings of the birds and beasts and their adaptations to the various regions. From near at hand he abstracted images from his own body; from afar he abstracted from things. In this way he first created the Eight Trigrams, to spread the power of spiritual clarity and to classify the dispositions of the myriad things (B.2.1). 古者包羲氏之王天下也，仰則觀象於天，俯則觀法於地，觀鳥獸之文，與地之宜，近取諸身，遠取諸物，於是始作八卦，以通神明之德，以類萬物之情。²⁶

The rest of section B.2 of the *Xici* describes how, after Fuxi died, the mythical Yellow Emperor 黃帝, Yao 堯, and Shun 舜 all created various aspects of culture (plows, markets, boats, carts, mortars and pestles, bows and arrows, houses, coffins, and written records) by modeling them after specific hexagrams. Similarly,

The sages were able to enact statutes and rituals by seeing the activities of all under heaven and observing how they come together and (inter)penetrate (A.8.2).

聖人有以見天下之動，而觀其會通，以行其典禮。²⁷

The centrality of *yin-yang* alternation to both natural and moral principle is stressed in the following important passage:

²⁶ *Ibid.* 3:18a. "To spread the power of spiritual clarity" (*tong shenming zhi de* 通神明之德) means that Fuxi made available to ordinary people the accomplishment of his own mind's spiritual clarity. "Spiritual clarity" could also refer to the spiritual power of the oracle. The phrase is also found in *Xici* B.6.1.

²⁷ *Ibid.* 3:7b.

The alternation of *yin* and *yang* is called the Way (*dao*). One who carries it out is good. What completes it is the nature (*xing*) (A.5.1-2). 一陰一陽之謂道，繼之者善也，成之者性也。²⁸

Thus the natural pattern of *yin-yang* alternation is fulfilled in human moral action. Furthermore, the hexagrams' dynamic structure has direct moral implications:

The lines and images are active within [the hexagrams]; good fortune and misfortune are seen without. Meritorious undertakings are revealed in the changes; the dispositions of the sages are revealed in the texts (B.1.9). 爻象動乎內，吉凶見乎外，功業見乎變，聖人之情見乎辭。²⁹

Another passage of the *Xici* implies the parallel between natural and social patterns a bit less explicitly:

"A calling crane is in the shadows; its young answers it. I have a fine goblet; I will share it with you."³⁰ The Master [Confucius] said: "The noble man might stay in his chambers, but if the words he speaks are about goodness, even those from more than a thousand *li* away will respond with approval to him (A.8.5)."

「鳴鶴在陰，其子和之，我有好爵，吾與爾靡之。」子曰：「君子居其室，出其言，善則千里之外應之」。³¹

While this passage is clearly part of a lost *Yijing* commentary attributed to Confucius, and that is probably the reason it was included in the *Xici*, it also implies that the natural resonance between an adult and young crane is paralleled by the reciprocity (*shu* 恕) between two friends.

In the *Xici* it is clear that the ability to see the moral implications of natural patterns is what distinguishes a "sage" (*shengren* 聖人) from ordinary people. Sagehood in the Confucian tradition since Mencius 孟子 has been the symbol of the religious goal that all human beings have the potential to achieve, given the proper social and cultural support. We can conclude, then,

²⁸ *Ibid.* 3:5a.

²⁹ *Ibid.* 3:17b.

³⁰ This quotes the second line text of hexagram 61, Inner Trust (Zhong Fu 中孚).

³¹ *Zhouyi benyi* 3:7b; trans. Lynn, *op. cit.*, 57-58.

that human wisdom (sagacity) and fulfillment require an understanding of the non-dualism of the natural world and humanity.

Relationship of humanity and nature

In Zhu Xi's commentary on *Xici* A.5.2, "One who carries it out is good. What completes it is the nature" 繼之者善也, 成之者性也 (quoted above), he says:

The Way is contained in *yin* and acts in *yang*. "Carries it out" refers to its expression (*fa*). "Good" means the accomplishment of transforming and nourishing (*hua yu*); this is the matter of *yang*. "Completes" refers to what it contains. "Nature" means what things receive. This says that when things arise they have a nature, and each contains this Way. This is the matter of *yin*. The writings of Masters Zhou and Cheng speak of this thoroughly. 道具於陰而行乎陽. 繼言其發也. 善謂化育之功; 陽之事也. 成言其具也. 性謂物之所受. 言物生則有性, 而各具是道也; 陰之事也. 周子程子之言備矣.³²

By defining "good" as "transforming and nourishing," Zhu Xi is alluding here to section 22 of the *Zhongyong* 中庸 (Centrality and Commonality), which says:

Only those who are absolutely authentic (*cheng* 誠) can fully develop their nature. If they can fully develop their nature, they can then fully develop the nature of others. If they can fully develop the nature of others, they can then fully develop the nature of things. If they can fully develop the nature of things, they can then assist in the transforming and nourishing process [*hua yu* 化育] of Heaven and Earth. If they can assist in the transforming and nourishing process of Heaven and Earth, they can thus form a triad with Heaven and Earth. 唯天下至誠, 為能盡其性; 能盡其性, 則能盡人之性; 能盡人之性, 則能盡物之性; 能盡物之性, 則可以贊天地之化育; 可以贊天地之化育, 則可以與天地參矣.³³

³² *Zhouyi benyi* 3:5a-b. The references at the end are to Zhou Dunyi 周敦頤 (1017-1073) and the brothers Cheng Hao 程顥 (1032-1086) and Cheng Yi 程頤 (1033-1107).

³³ Trans. Wing-tsit Chan, *A Source Book in Chinese Philosophy* (Princeton: Princeton University

This passage from the *Zhongyong* is perhaps the most explicit early Confucian support for a deep ecological perspective. In addition to its implication that humanity and the natural world are intimately linked,³⁴ it suggests that the nature they share is transformative and nourishing, and that humans have a crucial role to play in bringing that nature to fruition.

The term "transforming and nourishing" does not occur in the *Yijing*, but we do find several important references to the similar term *sheng* 生, or "birth, life, growth." For example:

Life and growth (*sheng sheng* 生生, or "production and reproduction") is the meaning of "change" (*yi*) (A.5.6). 生生之謂易.³⁵

As for Qian (hexagram 1), in stillness it is focused; in activity it is direct. This is how it is greatly life-giving (*da sheng*). As for Kun (hexagram 2), in stillness it is condensed; in activity it is diffuse. This is how it is broadly life-giving (*guang sheng*) (A.6.2). 夫乾, 其靜也專, 其動也直, 是以大生焉。夫坤, 其靜也翕, 其動也辟, 是以廣生焉。³⁶

The great virtue of heaven and earth is called life (*sheng*) (B.1.10). 天地之大德曰生。³⁷

Perhaps we can sum up these ideas with the notion of "flourishing." The flourishing of life is the principle of change, and the principle of change is the fundamental nature of the natural world, which includes the human sphere. The *Zhongyong* says that the capacity to assist the natural world in this process is a characteristic of one who is "perfectly authentic" (*zhi cheng* 至誠) -- in

Press, 1963), 107-108, with "authentic" substituted for "sincere" in the first sentence and "triad" substituted for "trinity" in the last. The date of the *Zhongyong* is uncertain, but is probably within a century before or after the *Xici*. See Xinzhong Yao, "Preface," in Andrew Plaks, *Ta Hsiieh and Chung Yung* (London: Penguin, 2003), viii-ix.

³⁴ Another famous expression of this idea is Cheng Hao's statement, "The humane person regards all things in heaven and earth as one body; there is nothing that is not himself" 仁者, 以天地萬物為一體, 莫非己也。 *Henan Chengshi Yishu* 2A (*Er Cheng ji* 15); cf. Chan, *Source Book*, 530.

³⁵ *Zhouyi benyi* 3:6a.

³⁶ *Ibid.* 3:6b.

³⁷ *Ibid.* 3:8a.

other words, a sage.³⁸ As Thomas Berry describes the virtue of "being authentic" in the *Zhongyong*:

It is the virtue that reaches deep within the *Urgrund* of personal existence to an ultimate power capable of transforming the human community and the entire universe. This power is correlative with the heavenly and natural powers and, with these, originates, sustains, and transforms the universe itself.³⁹

Although the word *cheng* 誠 (being authentic) does not appear in the *Xici*,⁴⁰ it is worth explaining how Zhu Xi understood it, since it is indirectly implicated (through his allusion to *Zhongyong* 22) in his interpretation of the *Yijing*'s claims regarding the nature shared by humanity and the rest of the cosmos. As I have commented elsewhere on Zhu's interpretation of *cheng*:

Zhu Xi, in his commentary on the *Tongshu* 通書 [by Zhou Dunyi 周敦頤] defines *cheng* as "being perfectly actualized (*zhishi* 至實),"⁴¹ or "actualized principle / order" (*shili* 實理).⁴² *Cheng* in this sense is the actualization in moral activity (or function, *yong* 用) of the true nature (*xing* 性) or fundamental substance (*benti* 本體) of a thing. Only human beings can fail to be *cheng* -- a rock is a rock, but not every human is humane (*ren* 仁).⁴³ As Tu [Weiming] puts

³⁸ It is the Song Neo-Confucian thinker Zhou Dunyi who most explicitly makes this claim, in the first sections of his *Tongshu* (Penetrating the Scripture of Change): "Being a sage is nothing more than being authentic" 聖誠而已矣 (in Zhang Boxing 張伯行, comp., *Zhou Lianxi xiansheng quanji* 周濂溪先生全集 [Complete collection of Zhou Dunyi's works], in *Zhengyi tang quanshu* 正義堂全書 [Library of Zhengyi Hall, 1708], *Baibu congshu jicheng* 百部叢書集成 edition, vols. 218-219, hereafter cited as *Zhou Lianxi ji* 周濂溪集), 5:9a.

³⁹ Thomas Berry, "Individualism and Holism in Chinese Tradition: The Religious Cultural Context," in Tu Weiming and Mary Evelyn Tucker, eds., *Confucian Spirituality*, vol. 1 (NY: Crossroad, 2003), 47.

⁴⁰ It does appear twice in the *Wenyan* 文言 (Remarks on the text) appendix, under lines 2 and 3 of the Qian hexagram.

⁴¹ *Zhou Lianxi ji*, 5:2b.

⁴² *Ibid.*, 5:9b, 5:11b, etc.

⁴³ In the Mencian tradition of Confucianism, which by the Song dynasty had become normative,

it in reference to human beings, "*Cheng* as a state of being signifies the ultimate reality of human nature and, as a process of becoming, the necessary way of actualizing that reality in concrete, ordinary human affairs."⁴⁴ It is manifested in a human being when one is truly being or actively manifesting what one truly is by nature; when one is a morally-actualized agent.⁴⁵

What the *Xici* and the *Zhongyong* imply is that human beings share the dynamic, transformative, creative principle underlying the natural world. Human beings, who unlike other species ordinarily fail to fully realize their natures (for reasons not given in these texts but thoroughly explored by the Song Confucians), have the responsibility to do so by following the Way, which involves actualizing the potential of their transformative, nourishing natures. They can do this by practicing humaneness (*ren* 仁):

Therefore the Way of the superior person (*junzi* 君子) is indeed rare. It is manifested in humaneness and contained in its function. It arouses the myriad things, yet they do not share the worries of the sage. Its fullness of virtue and Great Work are perfect indeed! (*Xici* A.5.4). 故君子之道鮮矣。顯諸仁，藏諸用，鼓萬物而不與聖人同憂，盛德大業至矣哉。

Zhu comments:

It is manifested from within outwards. Humaneness means the achievement of creative transformation, the expression of virtue. 顯自內而外也。仁調造化之功，德之發也。⁴⁶

Another passage of the *Xici* also alludes to humanity's relationship with nature:

humanity or humaneness (*ren*) is the hallmark of human nature (*xing*); human nature is the principle (*li*) of being human, and is thus continuous with the natural/moral order (*tianli/daoli* 天理/道理).

⁴⁴ Tu Wei-ming, *Centrality and Commonality: An Essay on Confucian Religiousness* (Albany: SUNY Press, 1989), 80.

⁴⁵ Joseph A. Adler, "Response and Responsibility: Chou Tun-i and Neo-Confucian Resources for Environmental Ethics," in *Confucianism and Ecology: The Interrelation of Heaven, Earth, and Humans*, ed. Mary Evelyn Tucker and John Berthrong (Cambridge: Harvard University Center for the Study of World Religions), 132, with Wade-Giles romanization changed to *pinyin*.

⁴⁶ *Zhouyi benyi* 3:5b.

[The sage] is just like heaven and earth; therefore he does not oppose them.⁴⁷ His knowledge comprehends the myriad things and his Way helps all under heaven; therefore he does not transgress. He acts according to present circumstances and is not carried away. He rejoices in heaven and understands its decrees; therefore he does not worry.⁴⁸ He is content in his land and sincere about being humane; therefore he is able to love (A.4.3). 與天地相似, 故不違。知周乎萬物, 而道濟天下, 故不過。旁行而不流, 樂天知命, 故不憂。安土敦乎仁, 故能愛。⁴⁹

Zhu Xi comments:

This is the matter of the sage "fulfilling the natures" [of things].⁵⁰ The Way of heaven and earth is simply to understand being humane.... Being content wherever he is and always being humane, he is therefore able to never forget his mind [intention] to help things and to humanely benefit them. 此聖人盡性之事。天地之道知仁而已.... 隨處皆安而无一息之不仁, 故能不忘其濟物之心而仁益篤。⁵¹

⁴⁷ Although I am not focusing on Wang Bi's 王弼 (226-249) interpretation of the *Yi*, his commentary here offers some supporting points. On this sentence he comments, "His virtue is united with Heaven and earth, thus he is 'just like' them" 德合天地。故曰相似 (*Zhouyi Wang-Han zhu* 周易王韓注, Sibubeiyaoyao 四部備要 ed., 7:3a).

⁴⁸ Wang Bi says, "He accords with the transformations of Heaven, thus 'he rejoices'" 順天之化故樂也 (*ibid.*).

⁴⁹ *Zhouyi benyi* 3:4b. Here Wang Bi says, "Being content in one's land and sincere about being humane is the disposition (*qing*) of the myriad things. When things accord with their natures the merit of being humane is abundant" 安土敦仁者萬物之情也。物順其情則仁功贍矣 (*ibid.*).

⁵⁰ Alluding to the *Shuogua* 說卦 (Discussing the Trigrams) appendix, section 1, which describes Fuxi's process of creating the *Yi*: "Mysteriously aided by spiritual clarity he produced the stalks.... Observing the changes of *yin* and *yang* he established the *gua* [trigrams and/or hexagrams].... Harmoniously according with the Way and virtue he ordered them into ideas. He exhausted their principles, fulfilled their natures, and thereby attained [heaven's] decree (*qiongli jinxing yi zhi yu ming*)" 幽贊神明而生蓍。... 觀變於陰陽, 而立卦; 發揮於剛柔, 而生爻; 和順於道德, 而理於義; 窮理盡性, 以至於命 (*Zhouyi benyi* 4:1a). In Zhu Xi's comment on this he specifies that "natures" (*xing* 性) refers to "the natures of people and things" 人物之性 (*ibid.* 4:1b).

⁵¹ *Zhouyi benyi* 3:4b-5a.

The *Xici* passage continues:

He encompasses the transformations of heaven and earth and does not transgress.

He completes all things without omission (A.4.4). 範圍天地之化而不過, 曲成萬物而不遺, 通乎晝夜之道而知, 故神無方而易無體.⁵²

Zhu comments:

This is the matter of the sage "attaining [heaven's] decree."⁵³ ... The transformations of heaven and earth are inexhaustible, and the sage treats them as his own boundaries. He permits nothing to transgress the Way of the Mean, and so is called one who "completes all things." 此聖人至命之事... 天地之化无窮, 而聖人為之範圍. 不使過於中道, 所謂裁成者也.⁵⁴

These passages are obviously similar to the *Zhongyong*'s description of the sage "assisting the transforming and nourishing processes of Heaven and earth 贊天地之化育." Zhu Xi goes further in claiming that this is a matter of the sage identifying with all things and "fulfilling their natures 盡性." This is the special role occupied by human beings in the cosmos, supporting the idea that what we have here is an "anthropocosmic" perspective, not simply ecocentric or biocentric. As the *Xici* further says,

Heaven and earth set out the positions [of things]; the sage actualizes their potential (B.12.4). 天地設位, 聖人成能.⁵⁵

Thomas Berry echoes this idea:

First, we must understand that the universe is a communion of subjects, not a collection of objects. This implies that we recover our primordial intimacy with the entire natural world. We belong here. Our home is here. The excitement and fulfillment of our lives is here. However we think of eternity, it can only be

⁵² *Ibid.*, 3:5a.

⁵³ See note 48.

⁵⁴ *Ibid.*, 3:5a.

⁵⁵ *Ibid.*, 3:27b. Similarly, the *Liji* 禮記 (Record of Ritual) says, "Humans are the mind/heart of Heaven and earth" 人者天地之心也 (*Li yun* 禮運 chapter, section 20).

another aspect of the present. The urgency of this psychic identity with the larger universe about us can hardly be exaggerated. We are fulfilled in our communion with the larger community to which we belong. It is our role to articulate a dimension of the universe.⁵⁶

The specific dimension of the universe that human beings, and only human beings, can articulate is the moral dimension. Again, what we might call "Confucian deep ecology" is not ecocentric or biocentric, and is certainly not anthropocentric; it is anthropocosmic.

A more specific reference to ecology is found in the story of Fuxi's creation of the *Yi*, quoted above; specifically: "He contemplated the markings of the birds and beasts and their adaptations to the various regions" 觀鳥獸之文，與地之宜 (B.2.1). Since this is one of the patterns that Fuxi incorporated into the divination system, the implication is that fitting into one's ecological niche is a principle that human beings should follow. This, of course, is a specific case of the general emphasis on *relationality* in traditional Chinese thought: the identity of a thing is defined and constituted by its relationships.⁵⁷

Taiji 太極 (Supreme Polarity) and interpenetration⁵⁸

⁵⁶ Thomas Berry, "The Universe Story: Its Religious Significance," in Roger S. Gottlieb, ed., *Liberating Faith: Religious Voices for Justice, Peace, and Ecological Wisdom* (Lanham, MD: Rowman & Littlefield, 2003), 570.

⁵⁷ Joseph Needham described this in an oft-quoted passage: "Things behaved in particular ways not necessarily because of prior actions or impulses of other things, but because their position in the ever-moving cyclical universe was such that they were endowed with intrinsic natures which made that behaviour inevitable for them. If they did not behave in those particular ways they would lose their relational positions in the whole (which made them what they were), and turn into something other than themselves. They were thus parts in existential dependence upon the whole world-organism" (Joseph Needham, *Science and Civilisation in China*, vol. 2: *History of Scientific Thought* [Cambridge University Press, 1956], 281. This pattern is reflected in the Confucian notion that one is defined by one's social relationships, and by the Mahayana Buddhist concept of "emptiness of own-being" (*svabhāva śūnyatā*, or *zixing kong* 自性空), which means that things lack independent, autonomous natures because their natures are fundamentally *interdependent*.

⁵⁸ I first proposed "Supreme Polarity" as a translation of *taiji* in Wm Theodore de Bary and Irene Bloom, eds., *Sources of Chinese Tradition*, 2nd ed., vol. 1 (NY: Columbia University Press, 1999), 672. See also Joseph A. Adler, "Zhu Xi's Spiritual Practice as the Basis of his Central Philosophical Concepts," *Dao: A Journal of Comparative Philosophy*, vol 7, no. 1 (2008), 57-79; and *idem.*, "On Translating *Taiji*," in David Jones and He Jinli, eds., *Zhu Xi Now* (Albany: SUNY Press, in press).

One of the most influential passages of the *Xici* for the Neo-Confucian revival of the Song dynasty was A.11.5:

In change there is Supreme Polarity (*taiji*). This generates (*sheng*) the Two Modes; the Two Modes generate the Four Images; the Four Images generate the Eight Trigrams. The Eight Trigrams determine good fortune and misfortune; good fortune and misfortune generate the Great Work (*daye*). 易有太極，是生兩儀，兩儀生四象，四象生八卦，八卦定吉凶，吉凶生大業。⁵⁹

I have been referring throughout this paper to Neo-Confucian interpretations of the *Yijing*, and I have frequently mentioned the "principle" (*li* 理) of creativity. *Li* and *qi* 氣, of course, were the central terms in the Cheng-Zhu 程朱 school of Neo-Confucianism. However, in focusing on *taiji* now it is important to note that the discourse of *li* was the innovation of the Cheng brothers in the 11th century and was adopted by Zhu Xi in the 12th. Zhu Xi also incorporated the writings of the Cheng brothers' uncle, Zhou Dunyi 周敦頤, into his synthesis, and it was Zhou who was most strongly associated with the concept of *taiji*. But Zhou did not discuss *taiji* in terms of *li*, as Zhu Xi later did. Zhou was not very influential during his lifetime, even on his nephews; yet Zhu Xi made Zhou's *Taijitu shuo* 太極圖說 (Discussion of the Taiji Diagram) the foundation of Neo-Confucian cosmology. Zhou Dunyi and Zhu Xi, in their different ways, were the most important and influential interpreters of *taiji* after the composition of the *Xici* itself.

The equation of *taiji* with *li* was a central aspect of Zhu Xi's synthesis.⁶⁰ For Zhu and his followers, *taiji* was the "ultimate" or foundational principle, which more specifically was the principle of *yin-yang* bipolarity. Hence *taiji* in that context really means "supreme polarity," or

⁵⁹ *Zhouyi benyi* 3:14a. The Two Modes are the *yin* (broken) and *yang* (solid) lines; the Four Images are the four combinations of two lines each. The Great Work, or Great Endeavor, traditionally referred to statecraft. To the Neo-Confucians it meant the work of becoming a sage.

⁶⁰ This idea came from Zhu's teacher Li Tong 李侗 (1093-1163). See Shu Jingnan 束景南, *Zhu Xi nianpu changbian* 朱熹年譜長編 (Shanghai: Donghua shifan daxue chuban she, 2001), 266; and A. C. Graham, *Two Chinese Philosophers: Ch'eng Ming-tao and Ch'eng Yi-ch'uan* (London: Lund Humphries, 1958), 163.

"ultimate polarity," not "Supreme (or Great) Ultimate," as it is usually translated.⁶¹ However, before the 12th century, *taiji* was almost certainly interpreted in reference to *qi*, not *li*. That is, for both the author of the *Xici* passage quoted above and for Zhou Dunyi, *taiji* was most likely the energetic potential of *qi* to divide into the *yin* and *yang* modes -- the incipient bipolarity of undifferentiated *qi*, not the abstract principle of that bipolarity.⁶²

With that important qualification established, it is fair to say that, whether interpreted in terms of *li* or *qi*, *taiji* in the *Xici* is the generativity or creativity inherent in all things. That is, *taiji* is either that creativity itself (*qi*) or the principle of that creativity (*li*). Cheng Chung-ying 成中英 argued this point quite persuasively in his 1979 article, "Categories of Creativity in Whitehead and Neo-Confucianism."⁶³ Cheng says, for example, that *taiji* in the *Yijing* is "a rhythmic movement of alternative polarities. It involves novelty and is revealed in the concretion of things and affairs."⁶⁴ And the fundamental *qi*-substance is "the fluid state of becoming... the indeterminate unlimited material-in-becoming" with "intrinsic dynamics of alternation and interpenetration."⁶⁵

The idea of "interpenetration" is only hinted at in the *Xici*, but it is developed more fully in Zhou Dunyi's two major works, the *Taijitu shuo* (Discussion of the Taiji Diagram) and the *Tongshu* 通書 (Penetrating the Scripture of Change), both of which are based in part on the *Yijing*. Earlier we quoted this line from the *Xici*:

The sages were able to enact statutes and rituals by seeing activities of all under heaven and observing how they come together and (inter)penetrate (A.8.2). 聖人有以見天下之動，而觀其會通，以行其典禮。⁶⁶

⁶¹ Cf. note 57 and my forthcoming book, *Reconstructing the Confucian Dao: Zhu Xi's Appropriation of Zhou Dunyi*.

⁶² See Graham, *op. cit.*, 162-165.

⁶³ *Journal of Chinese Philosophy*, vol. 6, no. 3 (1979): 251-274. Reprinted in Chung-ying Cheng, *New Dimensions of Confucian and Neo-Confucian Philosophy* (Albany: SUNY Press, 1991).

⁶⁴ *New Dimensions*, 545.

⁶⁵ *Ibid.*, 548.

⁶⁶ *Zhouyi benyi*, 3:7b.

Similarly,

The *Yi* is without thought and without action. Silent and inactive, when stimulated it then penetrates all situations under heaven (A.10.4) 易無思也，無為也，寂然不動，感而遂通天下之故。⁶⁷

Although the referent in the latter passage is the *Yi* itself in its "spiritual" mode as an oracle, Zhu Xi comments on it,

The mystery of the human mind/heart, in its stillness and activity, is also like this 人心之妙，其動靜亦如此。⁶⁸

Thus the human mind/heart, even in its completely still phase (according to Zhu Xi), could be fully responsive. Spontaneous, moral responsiveness to both natural and social relations -- especially the latter -- was a signature characteristic of the sagely mind as understood by the Song Confucians.⁶⁹ Zhou Dunyi gave this idea of interpenetration a cosmological basis in his philosophical cosmogony, the opening section of the *Taijitu shuo*:

Non-polar (*wuji*) and yet Supreme Polarity (*taiji*)! The Supreme Polarity in activity generates *yang*; yet at the limit of activity it is still. In stillness it generates *yin*; yet at the limit of stillness it is also active. Activity and stillness alternate; each is the basis of the other. In distinguishing *yin* and *yang*, the Two Modes are thereby established. 無極而太極。太極動而生陽；動極而靜，靜而生陰。靜極復動。一動一靜，互為其根。分陰分陽，兩儀立焉。⁷⁰

And in his *Tongshu* he says:

Activity as the absence of stillness and stillness as the absence of activity characterize things (*wu*). Activity that is not [empirically] active and stillness that

⁶⁷ *Zhouyi benyi*, 3:12b.

⁶⁸ *Ibid.*, 3:13a.

⁶⁹ See Joseph A. Adler, "Response and Responsibility: Chou Tun-i and Neo-Confucian Resources for Environmental Ethics," in Mary Evelyn Tucker and John Berthrong, eds., *Confucianism and Ecology: The Interrelation of Heaven, Earth, and Humans* (Cambridge: Harvard University Center for the Study of World Religions): 123-149.

⁷⁰ *Zhou Lianxi ji*, ch. 1.

is not [empirically] still characterize spirit (*shen*). Being active and yet not active, still and yet not still, does not mean that [spirit] is neither active nor still (section 16). 動而無靜，靜而無動，物也。動而無動，靜而無靜，神也。動而無動，靜而無靜，非不動不靜也。⁷¹

Zhu Xi comments:

There is stillness within activity, and activity within stillness. 動中有靜，靜中有動。⁷²

"Being active and yet not active, still and yet not still, does not mean that [spirit] is neither active nor still" refers to the metaphysical order (*xing'er shang zhi li*). This pattern (*li* 理) is spiritual and unfathomable. When it is active, it is simultaneously still. Therefore [Zhou] says "no activity." When it is still, it is simultaneously active. Therefore [Zhou] says "no stillness." Within stillness there is activity, and within activity there is stillness. When still it is capable of activity, and when active it is capable of stillness. Within *yang* there is *yin*, and within *yin* there is *yang*. The permutations are inexhaustible. 「動而無動，靜而無靜，非不動不靜」此言形而上之理。理則神而莫測。方其動時未嘗不靜。故曰「無動」。方其靜時未嘗不動；故曰「無靜」。動中有靜，靜中有動；靜而能動，動而能靜；陽中有陰，陰中有陽。錯綜無窮也。⁷³

In *Tongshu* 16 Zhou continues:

For while things (*wu*) do not [inter-]penetrate (*tong*) [i.e. they are limited by their physical forms], spirit (*shen*) subtly [penetrates] the myriad things. The *yin* of water is based in *yang*; the *yang* of fire is based in *yin*. The Five Phases are *yin* and *yang*. *Yin* and *yang* are the Supreme Polarity. The Four Seasons revolve; the myriad things end and begin [again]. How undifferentiated! How extensive! And how endless! 物則不通，神妙萬物。水陰根陽，火陽根陰。五行陰陽，陰陽太

⁷¹ *Ibid.*, 5:33b.

⁷² *Ibid.*, from Zhu's published commentary on the *Tongshu*.

⁷³ *Ibid.*, 5:35a.

極。四時運行，萬物終始。混兮闢兮！其無窮兮！⁷⁴

That is, the *nature* of activity includes stillness and vice versa. In other comments on the *Taijitu shuo* Zhu says:

The original ground of the *yang* produced by activity is stillness. With stillness there must also be activity. This is what [Cheng Yi] meant by the "non-duality of activity and stillness." 「動而生陽」其初本是靜。靜之上須動矣。所謂「動靜無端」。⁷⁵

Within the stillness of *yin* is the basis of *yang* itself; within the activity of *yang* is the basis of *yin* itself. This is because activity necessarily comes from stillness, which is based in *yin*; and stillness necessarily comes from activity, which is based in *yang*. 陰靜之中自有陽之根。陽動自有陰之根。動之所以必靜者根乎陰故也；靜之所以必動者根乎陽故也。⁷⁶

The material of water is *yin*, yet its nature is based in *yang*. The material of fire is *yang*, yet its nature is based in *yin*. 水質陰而性本陽。火質陽而性本陰。⁷⁷

Thus Zhou Dunyi and Zhu Xi understand *taiji* not only as creativity but also as the capacity of *qi* to transcend empirical boundaries. Just as activity includes stillness and vice versa, things embody one another. This notion of interpenetration was fully developed first in Huayan 華嚴 Buddhism in its doctrine of the "non-obstruction of phenomena" (*shi shi wu-ai* 事事無礙), and later in Neo-Confucianism.⁷⁸ This is the basis for Cheng Chung-ying's claim that

Taiji is nothing other than the permanent union of the moving forces of *yin-yang*....

Yin-yang movements are immanent in *taiji* and are immanent in each other.⁷⁹

What is the ecological implication of this interpenetration? It goes directly to the basic

⁷⁴ *Ibid.*, 5:33b-34a.

⁷⁵ *Ibid.*, 1:7b. Cf. *Zhuzi yulei* (*Zhu Xi's Classified Conversations*), 1:1a.

⁷⁶ *Ibid.*, 1:8a.

⁷⁷ *Ibid.*, 1:12a.

⁷⁸ I discuss this much more fully in *Reconstructing the Confucian Dao*, chapter 3.

⁷⁹ Cheng, *op. cit.*, 551.

premise of deep ecology: the common nature shared by human beings and the natural world. If we interpret the *taiji* of the *Xici* as Zhou Dunyi interpreted it, we understand it as the fundamental cosmogonic force that is fully present in every thing, accounting for the inherent creativity of *qi*. Furthermore, that immanent creative impulse renders each and every thing fully present and open to every other thing, in fact containing every other thing. This "holographic" cosmology is suggested by the next few lines of Zhou Dunyi's *Taijitu shuo*:

The alternation and combination of *yang* and *yin* generate water, fire, wood, metal, and earth. With these five [phases of] *qi* harmoniously arranged, the Four Seasons proceed through them. The Five Phases are the unitary *yin* and *yang*; *yin* and *yang* are the unitary Supreme Polarity; the Supreme Polarity is fundamentally Non-polar. [Yet] in the generation of the Five Phases, each one has its nature (*xing*). 陽變陰合，而生水火木金土。五氣順布，四時行焉。五行一陰陽也，陰陽一太極也，太極本無極也。五行之生也，各一其性。

The truth of Non-polarity and the essence of the Two [Modes] and Five [Phases] mysteriously combine and coalesce. "The Way of Qian becomes the male; the Way of Kun becomes the female;" the two *qi* stimulate each other, transforming and generating the myriad things. The myriad things generate and regenerate (*sheng sheng* 生生), alternating and transforming without end. 無極之真，二五之精，妙合而凝。「乾道成男，坤道成女。」二氣交感，化生萬物，萬物生生而變化無窮焉。⁸⁰

Taiji, then, is a universal creative force that unfolds or evolves into a bipolar state of creative tension, which in turn further differentiates into the multiplicity of the phenomenal world, each particular entity of which is said to contain in full the original creative principle. Whether *taiji* is understood as the force itself or its principle, this interpretation means that every individual thing in the world *fully* embodies the ultimate creative power or principle. This is analogous to saying that God, in the Abrahamic traditions (Judaism, Christianity, and Islam), is fully embodied in each and every thing -- a claim that goes well beyond at least the conventional

⁸⁰ Zhou Lianxi ji, ch. 1, quoting *Xici* A.1.4.

theologies of those traditions.

The spirituality of nature

Thomas Berry has written eloquently about the spiritual character of "the universe story," the ongoing *scientific* account of the origins and "continuing emergence" of the universe. For example:

[O]ur present Earth is not Earth as it always was and always will be. It is Earth at a highly developed phase in its continuing emergence. We need to see the sequence of earthly transformations as so many movements in a musical composition. In music, the earlier notes are gone when the later notes are played, but the musical phrase, indeed the entire symphony, needs to be heard simultaneously. We do not fully understand the opening notes until the later notes are heard. Each new theme alters the meaning of the earlier themes and the entire composition. The opening theme resonates throughout all the later parts of the piece.⁸¹

This scientific universe story, he says,

is our sacred story. It is our way of dealing with the ultimate mystery whence all things come into being. It is much more than an account of matter and its random emergence into the visible world about us, because the emergent process, as indicated by the geneticist Theodosius Dobzhansky (1900-1975), is neither random nor determined but creative, just as in the human order creativity is neither a rational, deductive process nor an irrational wandering of the undisciplined mind but the emergence of beauty as mysteriously as the blossoming of a field of daisies out of the dark Earth.⁸²

And when we refer to the Earth as a "living planet" -- by analogy only, since the Earth cannot reproduce itself -- we are referring to the quality shared by the Earth and living organisms;

⁸¹ "The Gaia Hypothesis: Its Religious Implications," in Thomas Berry, *The Sacred Universe: Earth, Spirituality, and Religion in the Twenty-first Century* (NY: Columbia University Press, 2009), 107-108.

⁸² *Ibid.*, 110.

namely the "subjective presence of one form to another as other. In this experience, the identity of each is enhanced, not diminished."⁸³ In other words, "we must understand that the universe is a communion of subjects, not a collection of objects."⁸⁴

It is not purely coincidental that Berry's profound ecological insights should resonate in several ways with the *Yijing*, because he was well-versed in the history of Chinese religious thought. The continuing emergence and creativity he speaks of is foreshadowed by the notions of change, transformation, and "life and growth" (*sheng sheng*) in the *Xici*, discussed above. Cheng Yi referred to the latter as "limitless life and growth" (生生不窮), "ceaseless life and growth" (生生不息), and "the mind of Heaven and Earth to produce things" (天地生物之心也).⁸⁵ The *Xici* also speaks of the spirituality of nature:

The Master [Confucius] said, "One who understands the Way of change and transformation understands the action of the spiritual (*shen*)" (A.9.10). 子曰：「知變化之道者，其知神之所為乎！」⁸⁶

To exhaust the spirit [in things] and understand transformation is the flourishing of virtue (B.5.4). 窮神知化，德之盛也。⁸⁷

Shen is the finest, most penetrating form of the *qi* that constitutes all things. It is therefore both a cosmological phenomenon and a human capability. It is seen in uncanny or unexplained natural phenomena; it is seen in ghosts, spirits, and deities; it is seen in the yarrow (milfoil) stalks used in *Yijing* divination;⁸⁸ and it is seen in the mind/heart (*xin* 心) of the sage, which has

⁸³ *Ibid.*

⁸⁴ Thomas Berry, "The Universe Story: Its Religious Significance," in Roger S. Gottlieb, ed., *Liberating Faith: Religious Voices for Justice, Peace, and Ecological Wisdom* (Lanham, MD: Rowman & Littlefield, 2003), 570.

⁸⁵ For the first two terms see *Henan Chengshi Yishu* 15 (*Er Cheng ji* 148-149), and Chan, *Source Book*, 553. For the third see *Zhouyi Chengshi zhuan* (Cheng Yi's commentary on the *Yi*, hexagram 24) (*Er Cheng ji* 819).

⁸⁶ *Zhouyi benyi* 3:11b.

⁸⁷ *Ibid.*, 3:21a.

⁸⁸ *Xici* A.11.3; *Zhouyi benyi* 3:14a.

been purified of all "contamination" by grosser forms of *qi*. Zhou Dunyi, in his *Taijitu shuo*, says:

Only humans receive the finest and most numinous [*qi*]. Once formed, they are born; when spirit (*shen*) is manifested, they have intelligence. 惟人也得其秀而最靈。形既生矣，神發知矣。⁸⁹

Zhu Xi's senior disciple (and son-in-law) Huang Gan 黃榦 (1152-1221) echoes this in saying:

Humans are the most numinous (*ling* 靈) of the myriad things; they are not trees and rocks. Therefore their essence (*jing* 精) and their *qi* 氣 are full of spirit. 人為萬物之靈，非木石。故其精其氣莫不各有神焉。⁹⁰

As I have written elsewhere concerning the role of spirit in Neo-Confucian thought, which drew heavily upon the *Yijing*:

[T]he chief significance of spirit and spirituality in Neo-Confucianism is not a transcendence of the natural order but a continuity with it.... By actualizing the principle of being human -- that is, being "authentic" (*cheng* 誠) and "real" (*shi* 實) -- one can "assist in the transforming and nourishing process of Heaven and Earth" 贊天地之化育 and "form a trinity with Heaven and earth" 與天地參 (*Zhongyong* 22).⁹¹

Thus the cosmology of the *Yijing* makes possible an interpenetrating, mutually nourishing "communion of subjects" that constitutes the ultimate fulfillment and self-realization of both human beings and the natural world.

⁸⁹ Zhou Lianxi *ji*, 1:18a.

⁹⁰ *Xingli daquan shu* 性利達全書 (Great Compendium on Human Nature and Principle), 28:24a, p. 620.

⁹¹ Joseph A. Adler, "Varieties of Spiritual Experience: *Shen* in Neo-Confucian Discourse," in Tu Wei-ming and Mary Evelyn Tucker, eds., *Confucian Spirituality*, vol. 2 (NY: Crossroad, 2004), 141.