

環境的哲學觀 On a Environmental Philosophy

榎根 勇^a

KAYANE, Isamu

摘要

地球暖化顯示近代(modernity)非合理性的明確證據。近代將結束，近代哲學的支柱是笛卡兒(Rene' Descartes)的二元論，那是忽視人心對自然的效應，腦科學、認知科學、生命科學、火箭工學等，明示過去約十年的科學證實，笛卡兒的二元論有甚不合理處。後近代哲學是非二元論，爲了近代新哲學的說明，列舉 Ken Wilber 的萬物理論，Erin Laszlo 的 AKasic (資訊)場，清水博的偏在性生命，中田力的腦理論等要點。基於新哲學提出新環境哲學。爲了提案的新環境哲學應用的可能性採用 Wilber 的四象限架構，對中國雲南省麗江古城的環境問題實施現地調查，最後對不發生環境問題的後近代「次社會 system」的建構所必要的模式加以考察。

關鍵字：環境哲學、缺一不可的研究、麗江古城、中國

Abstract

Global warming is the decisive evidence indicating the irrationality of modernity. Modernity is drawing to a close. Cartesian dualism has been the philosophy for modernity, but it neglected the role of nature for creating human mind. New scientific findings during the past ten years or so in brain science, cognition science, life science, robotics etc. made clear that Cartesian dualism is difficult to accept. New philosophy for post-modernity is non-dualism. As examples of new philosophy, the essence of Ken Wilber's theory of everything, Ervin Laszlo's Akashic (information) field, Hiroshi Shimizu's omnipresent life, and Tsutomu Nakada's brain theory are explained. On the basis of the new philosophy, a new environmental philosophy for post-modernity is proposed. We made a field work on environmental problems in Lijiang, Yunnang Province, China by applying the Wilber's four quadrants framework in order to show the applicability of the proposed new environmental philosophy. Finally, morals necessary for building "the next social system" without environmental problems in post-modernity is discussed.

^a ICCS Fellow, Aichi University
Professor Emeritus, University of Tsukuba

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Introduction

“More than ever, we need a clearer vision of humanity’s capacity to think as well as to act, to confront reality not only as it is but as it should be if we are to survive this, the greatest turning point in history.” Above statement is quoted from the preface of a book by Murray Bookchin (2005). Earlier than this statement, he had mentioned in the introduction to 1991 edition of the same book that “The terrible psychological upheavals produced by the twentieth century have made us truly wary of social history, of ‘otherness’, of the dualities of separation from nonhuman nature.” However he had to confess in the 2005 edition of the same book that “We still do not know what form and features it will be in the year that lies ahead.” He writes: the manuscript of the first four chapters of this book was completed in 1972.

In 1980, I held anxiety about the future of humankind and earth common with Bookchin, and tried a westward journey round the world in 42 days. The main purpose was to visit three separated places in Asia, Europe and the United States, but I was eager for seeing the world “as it is” in this occasion. The conclusion of my journey was very simple that we have to rely on water and ecosystems. But I could not say (at this point in time) that my conclusion is the truth for everybody on our planet. My philosophical thinking on the environment started in order to consider “as it should be.” Still, in 1980, I didn’t realize that we were in the midst of transition from modernity to post-modernity. Through the COE-ICCS activities stated below, I recognized that my anxiety arose from the situation that modernity was drawing to a close. In 2007, I believe that global warming shows the decisive evidence of the end of modernity. If positive feedback begins to function in the not-so-far future, as Nishizawa (2000) cautions, the atmospheric CO₂ concentration may reach 3%, a level that would suffocate mankind. In the face of rising sea levels, altered precipitation, and other changes, mankind seeks to “adapt to global warming,” but there is no “adaptation” to death by suffocation. Recent news on awarding of the 2007 Nobel Prize in Peace to Albert Arnold Gore and IPCC indicate the commencement of the new age for every person on the planet.

COE-ICCS

After retiring from the University of Tsukuba at the age of 63 in 1996, I took a seven-year job at Aichi University, a university without any faculty related to science and technology, where I enjoyed teaching students not interested in natural sciences. They were majoring in modern Chinese studies, human geography, literature, law, and economics. I attained the age of 70, the retirement age of Aichi University, but in the same fiscal year of 2002, the 21st Century Center of Excellence (COE) Program started. The International Center for Chinese Studies (ICCS) proposed by Aichi University was selected by the Ministry of Education, Science, Sports, Culture and Technology as one of the COE programs just before my second retirement. The five-year’s COE-ICCS of Aichi University (2002-2006) had dual roles: teaching the Ph.D. students in Chinese studies, and promoting researches on modern China. Both of teaching and research must be ones at the world top level. Five research groups of methodology, of politics,

of economy, of culture, and of environment on modern China were organized, and I was appointed the COE Fellow (ICCS Fellow after 2007) to chair the environmental research group (ERG).

As the chair of ERG, I decided that the purpose of ERG is to systematize “Environmental KAIZEN (改善) Technology” (EKT) to reform the deteriorated environment in China and Asian developing countries. As you know, KAIZEN, a word to make things better in Japanese, is an important concept of Toyota Automobile Co. Within the scope of EKT, I included both of hard technology such as desulfurizers and water treatment plants, and soft technology such as law, institution, social capital etc. Reports of ERG can be seen on the web. We welcome you to visit our Home Page of Aichi University [愛知大学→ICCS→研究成果].

Five years have passed after I joined the COE-ICCS. During the five years, I have been thinking of environmental issues of China from the standpoint of philosophy and methodology. A report concerning my thinking was published from the ICCS office of Aichi University in Japanese as well as in Chinese (Kayane, 2006). At the commencement of COE-ICCS, I had gleaned statements how people think about “the value of nature.” I confirmed that they think nature is indispensable for human existence. One example of their thoughts is: “If nature deteriorates, humankind will also deteriorate.” However it seemed to me that such statements would be difficult to prove scientifically. I tried to support the above statement (common sense) from philosophical point of view. Then my conclusion now is that the urgent task of we humankind is to create a completely different type of science, and to construct next social system for human well-being based on the new science. Similar ideas can be found in other books and various mass media. Even in the United States, LOHAS (Lifestyles of health and sustainability) movement is gradually expanding its influence in the United States (<http://www.lohas.com>).

Unfortunately, the “common sense” that nature is indispensable for human existence has not yet gained power to change lifestyles of people in advanced industrial countries drastically. Such a critique have been often made that only a 20% of total population is consuming a 80% of energy in the world, from the side of developing countries. Even if people in the side of developed industrial countries understood seriousness of environmental problems, they will be hesitating to change their lifestyles drastically. They still want to receive benefits from the present socio-economic system supported by modern science and technology, to enjoy modern urban life by consuming more energy and matter than actually needed, expecting to a faint hope to overcome environmental problems by the progress in science and technology in future. At the same time, it seems to me that people in the side of developing countries are trying to catch up the life style and life level of advanced industrial countries by chasing the same road to modernization. Since it is principally difficult to predict future, we need to establish firm philosophical standpoint for the future action.

So far as I know, the main key concepts of Chinese environmental policy are sustainable development, harmonious society, eco-friendly society, and recycle economy. These four key concepts are not contradictory to the “common sense” in developed countries mentioned above. Chinese leaders are aiming at building a moderate and tolerable society in China by 2020. In Germany, one of main countries

of EU, Meyer-Abich (1984) published a book *Road to Harmony with Nature (Wege zum Frieden mit der Natur)*. He wrote in this book about a practical natural philosophy for environmental policy of the Social Democratic Party of Germany as indicated by the subtitle of this book. Meyer-Abich himself is a politician as well as a scholar with his experience in serving as the Minister of Environment in Hamburg City. In Japan, KYOUSEI (共生) is the most popular concept for environmental policy. English translation of KYOUSEI, its literal meaning is living together, is symbiosis but KYOUSEI was the word originally used in a Japanese sect of Buddhism. People in the advanced industrial countries as well as developing countries possess the same “common sense” but the directions they are heading are reverse.

I thought at the commencement of COE-ICCS that “What should we do as scientists is to change the ‘common sense’ into ‘confidence’ by creating a new knowledge, if not it be science.” Had “common sense” been changed to “confidence,” humans would continue to expand their desire, and to destroy the environment. Since the control of human desire is so difficult task that creation of new knowledge and construction of the next social system based on it would take a long time of some 100 years. We thought we would like to think environmental issues of China in the above context, expecting rise of creative activities by young Chinese in future stimulated by our COE-ICCS activities, because the population of China is huge, and China is the country where “Qi” (氣) was found and is popular among the people.

Methodology

We may say that during the pre-modernity the archaic consciousness was monism. Nature and humanity were not separated. People saw many gods in nature. Tree was god, mountain was god, and water was god. These gods were different from the God in Christianity and Islam. Ancient philosophy in India, and beliefs in Japanese SHINTO, native Americans, Australian aborigines, native Africans, Mayas in Yucatan, and native Japanese called AINU etc. could be classified as monism.

We are/were on a critical stage of paradigm shift from modernity to post-modernity. Toulmin (1990) wrote in his foresighted book that the palace of modernity, or modern thought, was supported by a pair of pillars, or two giants: one is the modern philosophy of Rene Descartes (1596-1650) and the other is the modern science of Isaac Newton (1642-1727). The famous aphorism by Descartes is “cogito ergo sum (I think therefore I am).” He thought separation of human spirit from body is indispensable to obtain the objective cognition with rationality and universality. The Cartesian dualism has been the philosophy for modernity. Newton described nature objectively by using mathematics. The natural world thus described by Newton is a deterministic, mechanized world. Adam Smith, a founder of modern economics, imitated Newtonian celestial mechanics in order to describe economic phenomena in which human activities participate. As humans are onlookers existing outside of science, nature is the onlooker existing outside of economics. Modern science and technology succeeded in bringing benefits and convenience to humans, however, in short, Cartesian-Newtonian view of dualism neglected “the value of nature.” Inevitably the concept of “value neutrality” in science and the notion to define the environmental disruption as “external diseconomy” in economics resulted. I thought first that the environmental problem is “the problem to think

what relationship between nature and humanity should be.” But later I recognized that above thinking is strongly influenced by Cartesian dualism. We need to rethink of dualism, which separated humanity from nature, and nature from humanity as well.

The essence of modernity could be summarized into the following two points: ① separation of nature (object) from humanity (subject), and value neutrality as its consequence, and ② neglect of the value of nature for mind, and environmental disruption as its consequences. The cause of environmental disruption recognized as external diseconomy in modern economics originates in the basic thought of modernity.

Two basic principles of modern science are: ① separation of subjects from objects in order to obtain objective recognition, and ② element reductionism to understand a complicated object by dividing it into simpler elements such as body to cell to molecule to atom to elementary particles, and finally to quantum. However, according to Heisenberg’s uncertainty principle, we cannot measure position and speed of a quantum simultaneously. Niels Bohr suggested that wave- and corpuscular- aspects of a particle are complementary. Final world-view based on quantum mechanics is one of probabilistic law, absolute chance, and indeterminism different from the previous view of mechanical determinism in modernity.

At the commencement of COE-ICCS, I had two choices in the way that I could approach China’s environmental issues. I could move from area studies to the study of modern China and then to China’s environmental problems, or I could move from philosophy to new environmental science and then to China’s environmental problems. I chose the second approach. The reason would be apparent if we review the history of environmental researches in the 20th century. Environmental researches in the 20th century were made as an extension of established disciplines of modern science such as environmental physics, environmental chemistry, environmental sociology, environmental geography etc. These disciplines were established within the framework of modernity. Earliest environmental researches were made to prosecute environmental disruptions caused by economic activities. A typical example is the Minamata disease in Kyushu, Japan caused by the organic mercury in the discharged waste from a factory into a nearby river from the factory. But prosecution only could not mitigate or solve the environmental disruption. Then a shift to researches to mitigate or to solve the environmental disruption technically occurred. They succeeded in solving some of local environmental problems. However in the 21st century, global warming became a deniable fact. We have no means but adaptation to globally warmed climate and natural disasters caused by it. The second approach should be causal and fundamental. I regard “new philosophy” as the foundation of the new study of the environment.

New Philosophy

Doubts on modernity and on dualism grew as the seriousness of environmental disruption increased. It is clear in 2007 that dualism is unreasonable. Dualism and determinism were already denied by the rise of quantum mechanics in the 20th century. From the end of the 20th century to the start of the 21st century, brain science, cognitive science, robotics, molecular biology, the life sciences etc. have shown

interconnectedness of body and mind, environment and mankind. These pairs are clearly inseparable. It is the “new philosophy” of non-dualism that seems to be the response.

This paper uses examples of the new philosophy from the research of 4 scholars: Ken Wilber, Ervin Laszlo, Hiroshi Shimizu, and Tsutomu Nakada. With exception of Wilber, the other 3 scholars are scientists and their hypotheses have much in common with mine.

(1) Wilber and the Theory of Everything

In *A Theory of Everything*, Wilber (2000) constructs an integrated vision of all creation, as presented in the four quadrants “I,” “It,” “We” and “Its.” Figure 1 is my own reworked version of Wilber’s 4 quadrants. The right-hand quadrants in the figure refer to the exterior world and the left-hand quadrants to the interior world. The top 2 quadrants deals with individuals and the bottom 2 refer to collectives, thus encompassing all creation.

He further thinks that each quadrant develops independently and spirally. We cannot deny the fact that each discipline in each quadrant has been developing more or less independently without considering the development in other quadrants. He shows the direction of the development through eight stages for each quadrant, but these eight stages can be grouped into more inclusive four levels: body→mind→soul→spirit. The arrow indicates the direction of evolution. Body and mind are in the scientifically recognized world, but soul and spirit are in the hypothetic world with dispute among scientists. I would like to accept Wilber’s framework in this paper. However, fundamental differences between my idea and the Wilber’s are in that Wilber put nature and environment in the lower-right quadrant but I understand nature and environment are related to all four quadrants.

(2) Laszlo’s Akashic Field

I would say that philosophy of Laszlo (1996, 2003, 2004), a physicist and philosopher, constitutes a scientific base for Wilber’s thought. Laszlo have been insisting on a new philosophy of non-dualism. His philosophy is, I think, his personal record of thinking based on quantum physics, started from a question that “Does the surprising form of coherence in nature point toward a previously unknown form and level of unity in nature” to reach a cognition that “Nature is all self-evolutionary system with a process of self-creation for its own purpose.” He presumes the existence of (not yet found) fifth field. The already found 4 fields are the field of gravity force, of electromagnetic force, of weak nuclear forces, and of strong nuclear forces. He named the fifth field as Akashic field or simply A-field. For the sake of easy comprehension, this paper will speak of the A-field as “information field.” Laszlo writes that all past information exists in this fifth field. He makes the conjecture that this is what links the cosmos. He calls his philosophy “evolutionary panpsychism”.

Laszlo writes, “Panpsychism is the philosophical position that claims that all of reality has a mental aspect: mind is a universal presence in the world. Qualifying ‘panpsychism’ with ‘evolutionary’ means that we do not claim that mind is present throughout reality in the same way, at the same level of development. We say that mind evolves, the same as matter.”

It is probable that his philosophy is necessary for constructing a post-modern society. Concerning the

interaction between humans and the environment, the following sentences from Laszlo's books are worth mentioning. "The living organism is extraordinary coherent: all its parts are multidimensionally, dynamically, and almost instantly correlated with all other parts. ...The organism is also coherent with the environment around it: what happens in the external milieu of the organism is reflected in some ways in its internal milieu. Thanks to this coherence, the organism can evolve in tune with its environment. ... The connection between genes and environment is demonstrated in laboratory experiments."

Mogi (2004), a Japanese brain scientist, who quested for qualia and finally attained imagination writes: "Probably we have to wait appearance of the greatest super genius far beyond the talent of Newton and Einstein in order to explain the existence of consciousness in conformity with the scientific view. We necessitate the appearance of a super person with superb intellectual power and tremendous courage. Science that took the throne of knowledge in modernity could supply an explanation principle narrowly limited to causality for now and here, but could explain neither the origin of our consciousness nor the existence base for imaginary world. The modernity since Descartes fell into difficulty in methodology, and is waiting for the end now."

Evolutionary panspsychism postulated by Laszlo is, as Laszlo himself acknowledged, still at a stage of fable, but it has a possibility to grow into a new science during the 21st century after a paradigm shift. When the Laszlo's fable developed into a new science, the "common sense" concerning the value of nature will be changed into "confidence", and pan-global movement to construct the next social system would start not only in developed countries but also in developing countries.

Paradigm shift occurs when riddles that can't be solved by the present paradigm of science accumulated. Then, community of scientists will be driven to search for effective means to solve them. Laszlo writes "In recent years, riddles of cosmology, of quantum physics, of biology, and of consciousness research have been accumulated."

From the standpoint of the relationship between nature and humanity, it may be said that the first paradigm shift was from monism to dualism in modernity. The second paradigm shift was the evolution of quantum physics, which formulated the quantum micro world with uncertainty by mathematics smartly, denying the Newtonian determinism. However, so far as philosophy is concerned, the new philosophy based on quantum mechanics did not appear until Laszlo, who tried to build an integral theory of everything. The third paradigm shift to the new science is going on.

(3) Shimizu and Omnipresent Life

Modern civilization has benefited immensely from the advance of science and technology, but as we enter the 21st century we are finally a common realization of the severe damage wrecked upon the living planet as the reverse side of human convenience. Shimizu (2003), a Japanese pharmacologist and life system scientist, started a field academy in 1997 because of his conviction that "Under the presupposition of individual diversity, order created by self-organized discipline will become the most important theme in the 21st century." He searched for an "expanded scientific and technical methodology" that will go beyond the present domain of present modern science. His objective is the creation of a new culture that will share

recognition of the inseparability of subjects and objects which makes possible “the contribution of localized life and contribution of omnipresent life in a reciprocal induction agreement.”

Shimizu refers to “omnipresent life” as “pure life, savior or global environment.” In his hypothesis these emerge because of cosmic life. He believes that humankind’s unbounded desire arises from the failure to recognize the reality that humans (localized life) are living in a place of pure life (omnipresent life). With the scientific method of separating subjects and objects, we remove our own contribution from the phenomena. Therefore, it is impossible to respond to the practical question, “What can I do so that I can live well?” According to Shimizu, living well is “to receive the unlimited contributions of omnipresent pure life, to expand, and to be connected.” “We live while we have coordinated involvement with the larger life of this world.” “The human spirit that has lost unlimited omnipresent life is ruined, loses life forces and degenerates. Exterior ruin is set in motion in the form of destruction of the environment, reflecting interior ruin and degeneration of the mind in the human being.”

Shimizu’s omnipresent life closely resembles Brahman of the Upanishads, Wilber’s “spirit”, and Laszlo’s “A-Field” (the information field). Of course, omnipresent life, like the “A-Field”, is a current hypothesis. Modernity has slighted what the eye can’t see: the spirit and the emotions. As a study of integration, the new study of the environment comes and goes, like waves of the ocean, floating between the separation of subjects and objects and the inseparability of the two. We must integrate our knowledge of the 4 quadrants.

I would like to quote again some of Laszlo’s words here. “Wholeness of a living thing and environment are entangled, as same as the particles born in the same quantum condition entangle. ...I speculate that interaction between a domain of nature and a domain of spirit is intermediated by an information field at the center of the cosmos. Essence of non-locality is a remote operation without any intermediation, because it does not consume energy, and transcends the restriction of time and space ever known. ...There reported in laboratories of psychology and super-psychology that the existence of transpersonal contact between humans is confirmed. ...Matter and spirit are different phases of a reality. We are getting information, though indirectly, from animals, from plants, and from everything in nature.”

Since the ideas of Laszlo and Shimizu include concepts such as universal life and cosmic information field not yet accepted by contemporary sciences, there are reasons to criticize it as a kind of occultism. But some of advanced physicists already made clear the existence of ZPF (zero point field) where all past information occurred in the world was recorded by coding with interference of waves (McTaggart, 2001).

One interesting fact to be mentioned is that Laszlo, Shimizu, and myself were all born in 1932, right after the evolution of quantum mechanics. We lived our lives as natural scientists though the disciplines we have taken were different. We knew the nuclear immolation of Hiroshima and Nagasaki. We could survive in the age of physics imperialism. We could make some scientific contributions to the respective disciplines. We perceived the danger of global capitalistic economy, felt uneasy the appearance of the information technology society, and have been thinking of the way to harmonize nature and humanity. But

our remaining days are not long. From now on, in order to create brighter future, we have to wait the appearance of creative young fellows in the world, especially in China.

(4) Nakada's Theory of the Brain

Nakada (2001; 2002; 2006), a Japanese brain scientist, was the prominent clinical medical doctor in analyzing MRI images in U.S.A. He is making research on the function of brain at Niigata University in Japan. He writes: "As the environment intervenes, the brain carries out automatic organizational functioning. Because of this, an 'information mass' is formed, creating the mind. The mind is created by the interaction of an individual and its environments. The brain is simultaneously both a living organism and a precision machine that manages information. Therefore, the brain exists as two types: the brain as a living organism that is acted upon by the intervention of its environment and the brain as an information processing structure. This duplicity must be clear for an understanding of cerebral functioning. The process of shaping element functions and their networks as Kohonen's map is a process of shaping the brain as a living organism. Therefore, the process is strongly influenced by genetic information. These are the factors that determine the so-called innate elements such as personality and ability. At the same time, the nonlinear aggregate of information stored up in Kohonen's map is developed by the brain as an information processing center. This is an innate process in which each individual is influenced by the environment into which it is set." (Nakada 2006)

In short, the new philosophy is non-dualism. Subjects and objects are coherent. Humans interact with its environment. When the environment is deteriorated, humans will also be deteriorated. In the age of post-modernity, we must respect the value of nature for human mind.

Integral studies

Scientific disciplines in the age of modernity developed more or less independently within each quadrant. I think that biased rapid development or corpulence of disciplines in the right-hand quadrants was the main cause of environmental disruption. Integral studies cover four quadrants. Integral studies would be core academic activities in the 21st century as stated by Wilber. The new environmental studies based on the new philosophy are one of integral studies. Other examples of integral studies are medical studies, and geographical studies including area studies.

Figure 2 shows my idea of four quadrants. Later in this paper I will show the reason why nature is related to four quadrants taking water in Lijiang, China as an example. Here the environment is defined everything surrounding <myself>. The environments in three quadrants are coherent with <myself>. Therefore the environment is related to all four quadrants. Recent researches revealed the importance of information in the physical world. According to von Baeyer (2003), in-formation is introduction of form, flow of relation, and communication of message. In addition, information is considered to be physical entity such as low-entropy energy. He stated, "It is not just our brain, all living creatures process large quantities of information in the same way. Information permeates the physical world and appears to be woven into the very fabric of the cosmos. We, humans, do not receive information through our 5 senses

alone; we are conscious that we inevitably share information with each other. As humans, our desire for information is *sine qua non*, just like food and sex.” As information’s smallest unit, BITS (binary digits) appear as “A or B.” However, QBITS (quantum bits) imitate quantum properties and are “A and B.” If A is selected B disappears and if B is selected A disappears. (Johnson 2004)

Information will be the most important subject in the 21st century in academic world as well as in daily life. It is possible that nature, environment and information are equivalent. We have to carefully watch the advance in information science in future. Water’s multi-quadrant character is expressed in Fig. 3. by my framework shown in Fig. 2. Detailed explanation will be made next.

Case Study in Lijiang, Yunnan Province, China

I visited Lijiang in Yunnan Province of China four times during 2005~2007. Lijiang is located in the subtropical highland of about 2400m high with annual precipitation of 954mm. General geology of the region is limestone where surface flow is scarce. The people of Naxi minority group were previously nomads wandering in the north. More than 1200 years ago they came down to Lijiang basin and settled firstly near the Jade Water Spring, the holy and most important spring for the Naxi, at the foot of Jade Dragon Snow Mountains that is worshiped by the Naxi as their main god. Their second settlement was in Dragon Spring in Suehe village between Jade Water Spring and Lijiang. Lijiang was their third main settlement where six springs were investigated by us, five of them being used for the three-eye well. The River Jade is flowing through the town with stable discharge supplied with the spring water from Elephant Mountain. For the nomad wandering the grassland with the herd of sheep searching for water, water is the substance of far greater value materially as well as mentally than for those living in the humid environment with ample water. It seems natural that the Naxi worshipped water as a god and succeeded in building a harmonious water town.

The old town of Lijiang, pride of the Naxi, was designated a world cultural heritage site on December 6, 1997, a year after the immense damage of the Great Yunnan Earthquake. I got very surprised and admired when I firstly saw the neat landscape of the old town of Lijiang, where rivers, bridges, and stone-paved streets are beautifully harmonized with one story or two stories houses with tiled roofs. The old Dongba Encyclopedia, designated a world memorial heritage, written by the famous Dongba pictograph told: “Humans and nature are brothers born from different mothers with a same father.” The ecological thought of the Naxi originates in their old legends. Figure 3 shows the water town of Lijiang expressed by my four quadrants framework. Four quadrants were harmoniously related each other with water.

The old town of Lijiang during the Qing dynasty was a prosperous commercial town for trading tea and horses. It is reported that as many as four million people visited in 2006 to this small town of only 3.8 km² for sightseeing. Our reports on water and society of the old town of Lijiang were already published (Kayane et al., 2006; Kayane, 2006) in Japanese and in Chinese.

Table 1 shows the reality and water of Lijiang by the 4 quadrants framework. Water cycle is the main

subject in modern hydrology. The three-eye well is a good example to explain the reality of water community and water management in Lijiang. The water to the well is supplied from the spring, a typical hydrological phenomenon in the limestone area. The well is composed of cascading three eyes of the upper, the middle, and the lower. The upper eye is for drinking water, the middle one for washing vegetables, and the lower one for washing clothes and entrails. Management rules to use the three-eye well were autonomously laid down by water community members of the well. Management rules for river and channel water were also autonomously laid down in order not to be nuisance to downstream water users. The dirty water after washing had to be sprinkled on the stone-paved road in order not to pollute channel water. The distance to waterfront from each house is not more than 50m in the old town of Lijiang. The channel system here was carefully designed according to the traditional Chinese thought of “fenshui” to maximize functional roles of the water cycle in the town. For example, the stone-paved central square (四方街) where marketing was taken place was cleaned daily by artificial flooding from the upper channel, which was dammed up in order to overflow water from the channel for washing out rubbish from the square to the surrounding channels. The washed rubbish was mostly of organic matter, so that it was scooped up at a downstream point of the lower channel and used for fertilizer in the field. The Naxi in Lijiang succeeded in building up a bottom-up water management system to enjoy daily and commercial lives blessed with water.

Table 2 shows the degree of harmony between the 4 quadrants in Lijiang seen from the time as a level of development. In the past, harmony was kept well. The main reason why so many visitors come to Lijiang for sightseeing would be that visitors tired with the life in the modern social system can relax and enjoy in Lijiang’s harmonious atmosphere with spiritual satisfaction. What was the big pie to wrap nature and humanity, then? The answer would be in the worldview of the Naxi cultivated through water use in the community. At present, the harmony is no doubt in danger. What is the main cause destroying the previously well-kept harmony, then? The answer is in modernization and tourism. The intrinsic value of the old town of Lijiang for tourism was created by the Naxi. It was the mind of the Naxi that created this beautiful water town. If the resources for tourism, the exterior and interior ones, in this town will be consumed for making money only by tourism, they would be consumed-up soon. Could they keep the harmony in the future? It depends on their future policy in eco-tourism. They/we should pay more attention to the interior aspects as well as the exterior ones.

Morals

So far, we have looked at the occurrence of environmental problems in conjunction with modernity. However, even in pre-modern era, there existed what we would call environmental problems: denuded mountains, excessive slaughter of rare beasts, and so forth. The fundamental difference between modern and pre-modern environmental problems, however, is that mass production and mass consumption are now possible because of the advance of science and technology. Unlike natural recycling of materials, huge quantities of man-made materials are being discharged from the human sphere to the sphere of nature.

Modern science, which has made this possible, has “killed God.” Rephrasing Wilber, this is the “debility of the mind sphere.”

Fortunately, the advance of science is clearly bringing modernity to a close, creating information – the link between matter and mind – and giving birth to mind. We can dimly discern the possibility that moral “brakes” will stop the flaws of the runaway train of capitalism, creating a return to the possibility of a healthy form of nature and mind. Here, again, I want to shed light on “information” and consider ethics and morality.

First, with respect to word definition, the Japanese *Kojien Dictionary* translates “rinri” as ethics and links “dotoku” (morality) to Lao Tzu. The origins of words define them. Whether we use the words ethics or morality, both are linked to a specific religion: Christianity and Taoism. Accordingly, because the *Shinmeikai Kokugo Dictionary* says that “dotoku” and “rinri” translate as morals, I have used this as the basis of my decision to use the term “morals.”

Modern science, which is illogically said to have “killed God,” may again be raising the question of an existing religious consciousness, due to the emergence of the concept of “information.” Religions, and not just Taoism and Christianity, are the basis of morals and have natural features. Separating out the so-called world religions from animistic folk religions is an adverse part of modernism.

In Wilber’s 4-quadrant framework, the aspects of mankind’s interior world appear in the 2 left quadrants, with individual faith in the upper left quadrant and group religions in the lower left quadrant. Our paper, *Water and Society in the Old Town of Lijiang*, finds that the collapse of the harmony of knowledge in the 4 quadrants is the basic cause of the emergence of environmental problems, due to the prominent growth of science and technology in the upper right quadrant.

First, let’s consider the collapse of the harmony of knowledge, using disease as our example. Modern Western medicine explained that cause leads to effect in a causal relationship that underlies the outbreak of disease (bacterial infections). This caused medicine (knowledge about the body) to develop entirely in the upper right quadrant. This system, however, does not heal when cause-effect relationships are poorly understood. Chinese doctors (practitioners of traditional Chinese medicine) do not separate body and mind. They understand disease as the disturbance of the harmony between yin-yang forces and make a more integrative diagnosis.

Osteopath Katayama (2007) states that osteopathic observation of the body employs the reciprocal approaches of synthesis (unification) and observation-objectification (dualism). Inamura (1996) writes that the Indian medical practice of “ayurveda” has even a greater integrative approach to the individual. Food is not only necessary to the body, but is good for the spirit and the soul. Food is necessary to the spirit, she says, for good conduct, and to the soul for meditation, the mind’s love of peace and other conduct. We can interchange the word “information” for the word “food.”

We all know of the positive medical efficacy of the “placebo effect,” in which spurious information deceives the brain. This is similar to walking along a mountain path and mistaking a rope for a poisonous snake. The viewer breaks out in a cold sweat, since the brain is easily deceived by false information.

However much analytic information we accumulate on cause and effect in the entity that is the body, we still cannot cure certain categories of diseases of the mind.

Religions also function as information for the brain. Some “diseases” can be cured by religious information. If the various roles played in society by religion (including morals) were done by another modern “something,” perhaps that “something” would be an endlessly complex system that requires huge sums of money.

Religious founders and saints may have had the ability to access the information field of the cosmos. This is a question about knowledge that involves the left quadrants, but modern science still cannot explain it and still cannot access the information field through technology. It may be, as Laszlo says, “a subject that cannot be scientifically verified.”

There are reasons to criticize religion as superstition. But when we consider that scientific understanding of information and the information field is still incomplete, we cannot say that it is reasonable (at this point in time) to unilaterally criticize religion as unscientific.

It is especially important for the creation of the mind that 3-year olds come into contact with things that are “holy” and “transcendental.” Such experiences are the foundation of morals in the adult. To put it plainly, the presence or absence of the feeling “In front of gods, I can’t do anything bad” can happen depends on how the young child experienced his/her early years in life.

The most important topics in the construction of “the next social system” are the small child’s relationship with the mother, the natural and social environment in which the child is raised, household education, compulsory education and so forth. These will change the child’s mind-formation into a more appropriate system. For the sake of environmental improvement, it is very important to conduct an academic and social dialogue about the form of this “more appropriate system.”

Iwai (2006) writes that ethics are absolutely necessary as a counter to capitalism. I think ethics or morals are also inevitable for environmental problems. He says capitalism is global because of its universality, and it will take a long time before capitalism is exchanged for some other system. The nation-state as a governmental system is also unlikely to collapse for some time. Therefore, the three legs of “the next social system” will be 1) capitalism as the driving mechanism of desire, 2) the nation-state as the protector of the common good, and 3) morals as the brake on the recklessness and environmental destruction that is inherent in capitalism and nationalism. In Iwai’s three-legged model, civilism (市民主義) corresponds to morals, which specifically manifests itself as compassion and kindness. Saeki (2005) sees the social community and its system of underlying values as morals.

With these thoughts in mind, “the socialist market economy” and “socialism” will have to take on a moral role in China. However, even if they can act as a brake on the market economy, it is a question mark with respect to environmental destruction. If it is necessary that “a system of common values” changes into “socialism,” Taoism is more appropriate than Confucianism. Etymologically speaking, “morality” derived from Lao Tzu.

The “next social system” will respect the value of nature. It will not impede the formation and

evolution of thought patterns such as I have discussed above. Instead, it must be a single system which can bring forth an environment that nurtures “utopistics.” (Wallerstein, 1999)

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(Annex)

<ul style="list-style-type: none"> • I (upper-left quadrant) • Consciousness • Subjectivity • Spiritual disciplines 	<ul style="list-style-type: none"> • It (upper-right quadrant) • Brain • Objectivity • Hard sciences
<ul style="list-style-type: none"> • We (lower-left quadrant) • Culture • Intersubjectivity • The humanities 	<ul style="list-style-type: none"> • Its (lower-right quadrant) • Society • Interobjectivity • System sciences

Fig.1 Ken Wilber's "Theory of Everything"

<ul style="list-style-type: none"> • I • Nature \rightleftharpoons Water <ul style="list-style-type: none"> • Information • <Myself> 	<ul style="list-style-type: none"> • It • Nature \rightleftharpoons Water <ul style="list-style-type: none"> • Information • Environment
<ul style="list-style-type: none"> • We • Nature \rightleftharpoons Water • Information • Environment 	<ul style="list-style-type: none"> • Its • Nature \rightleftharpoons Water • Information • Environment

Fig.2 Kayane's framework of four quadrants

<ul style="list-style-type: none"> • WATER CREED • Dongba religion • Animism • Ecological thought • Open-mindedness 	<ul style="list-style-type: none"> • WATER CYCLE • Hydrology • Hydrogeology • Groundwater • Springs
<ul style="list-style-type: none"> • WATER CULTURE • Dongba pictograph • Fengshui • Water use rules • Ecological legend 	<ul style="list-style-type: none"> • WATER COMMUNITY • Three-eye well system <ul style="list-style-type: none"> • Cleaning by artificial flooding • Collaboration of top-down and bottom-up approaches

Fig.3 Lijiang: A water town

Tab.1 Methodology and the framework of investigation

Quadrant	Wilber's framework	Reality in Lijiang	Water
Upper-right	It	Jade Dragon Mountain	Water cycle
	Exterior aspects	Jade Water Spring	Water amount
	Individuals	Earthquake	Water quality
Lower-right	Its	Local leader's office	Water community
	Exterior aspects	Tea trading road	Water use
	Collectives	Ecotourism	Water management
Upper-left	I	Belief in nature	Water creed
	Interior aspects	Ecological thought	Water as a god
	Individuals	The third paradise	
Lower-left	We	Dongba legends	Water culture
	Interior aspects	Dongba arts	
	Collectives	Dongba pictograph	

Tab.2 Harmony of four quadrants in the old town of Lijiang
seen from the time as a level of development

Time	Harmony between four quadrants	Question
Past	Were they harmonized?	What was the big pie wrapping nature and humanity?
Present	Are they harmonized?	What is the influence of modernity and tourism?
Future	Can they keep the harmony?	Should they/we pay more attention to the interior aspects?

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