

Deforestation and Civilization: A Buddhist Perspective

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1 Introduction

I had the opportunity to visit the Amazon rainforest of Brazil with colleagues in July of 2004. We chartered a small plane from the city of Manaus to survey the rainforest from the sky. Deforestation is not progressing nearly as rapidly in this particular area compared to other areas. During our flight the vast broccoli like rainforest continued in all directions to the end of the horizon. The rainforest was so expansive that it felt like we were looking at the lungs of the planet Earth, figuratively. We did observe, however, blank forest zones in some places. A developed rural road continued straight toward the direction of the horizon and it was clear that deforestation was progressing along both sides.

We also had the opportunity to visit a small village 300 km south of Manaus city. What we saw at the village was surprising. Although modern houses in the village were scarce, to our surprise we saw a large parabola antenna pointing towards the heavens. Our guides explained to us that the native people of the village are now watching television. Since electricity lines do not lead to this remote village, they utilize an electric generator source to power a refrigerator, a laundry machine and other home appliances. From the village we drove into the forest for 30 minutes and along both sides of the road large trees were cut down. During our drive we also came across young individuals who were transporting these large logs by truck. Our guides told us that it is very difficult to stop the native people from cutting and selling the large logs as it is often how they make a living and buy modern electrical appliances.

During our trip we also met with Professor Thiago de Mello who is a world renowned poet residing in the city of Manaus. He claims that the Amazon rainforest is first the inheritance and responsibility of the Brazilian people before it can be identified and characterized as the inheritance to the world. He is actively organizing deforestation opposition movements to protect the rainforest. Further, he is lobbying to secure various profit rights for the native people by obtaining interna-

tional patents for the ancestral knowledge and uses of medically relevant herbs found only in the Amazon rainforest. Unfortunately, he said that he is often physically attacked by the native people because they misinterpret his intentions. That is, some of the locally organized syndicates are against anyone who tries to disrupt or prevent them from profiting by cutting down trees. The organized groups say that no one has the title to control or take away their right to advanced technology, industrialization or monetary profit.

The present age is a time when human beings are enjoying the richest and most plentiful life in history. The current utopian existence is due to industrialized advancements in sciences and technologies. On the other hand, the destruction of our natural environment including deforestation of the Amazon rainforest is at an all time high. Never before in the history of the human existence have we seen unprecedented degradation of ecosystems as we do today. To put it simply, we are recklessly destroying our environment.

Not only have we reached a potential threshold of no return, it appears difficult if not impossible to stop this rampant process. At the current rate, we can easily envision the serious implications to future generation. The modern technological civilization can be viewed as a product brought about by hierarchical Western philosophy that emphasizes a supreme entity or creator, people second and nature last. The concepts of survival of the fittest and conquest are often linked to these ideologies. The concept of 'good' and 'evil' are also often associated with Western philosophy. With so many implications, Western philosophy will be referred to as a 'conquest of nature' in the context of this paper.

Xianlin, Zhongxin and Ikeda (2002) agree in the book, "Dialogues on Eastern Wisdom" (1) to the concept of "heaven and humankind as one" from ancient Chinese philosophy and the concept of "the non duality of life and its environment" from Buddhism, (2) to the ancient oriental thought similar to the idea of "heaven and humankind as one;" e.g. "The non duality of Brahman and Atman" of India and "the principle of all things in the universe" from the Korean peninsula, originating from Chinese thought, (3) to the concept that Eastern philosophy is holistic and that Western philosophy is analytical, and (4) to the importance of converting the present Western civilization of conquering nature to a civilization that harmonizes human beings and nature in line with Eastern civilization.

From a philosophical point of view, the concept of 'conquering nature' is associated with the degradation of the environment. In other

words, conquering nature implies the loss of natural resources, such as deforestation, suggesting a collapse of our natural ecosystem. Furthermore, in the process of environmental degradation we lose the wisdom and culture cultivated from the symbiotic living with our natural surroundings. In Eastern philosophy, the integration of living beings and nature are deeply rooted. In this paper, we would like to examine the meaning of environmental degradation including deforestation from the viewpoint of Eastern philosophy, particularly Buddhist thought.

2 Deforestation in the World

In recent years environmental degradation is occurring at an unprecedented scale. Environmental degradation is occurring in many forms including deforestation, desertification, destruction of the marine ecosystem, chemical pollution of the polar areas, reduction of water resources and frequent occurrence of floods, etc. Here, only deforestation will be described as part of the present condition according to “The Earth Environment Report II” (Ishi, 1998) and “State of the World 2004” (Worldwatch Institute, 2004).

The deforestation of the Amazon rainforest is well known. For example, the forest area in the Rondonia state of Brazil has decreased from 99.8% to 78.8%. This is mainly caused by modern development. The entire Amazon basin alone has lost 37 million hectares from 1974 to 1996 which is approximately equivalent to the entire area of Japan. It is clear from this fact alone that the extent of deforestation is occurring at a pace beyond our imagination. Deforestation from naturally occurring and controlled forest fires are also increasing in recent years. 1997 was the worst year ever for forest fires. This is well documented in the report titled, “The Year the Earth Burned” by the World Wide Fund for Nature (WWF). During this particular year forest fires occurred not only in Indonesia and Malaysia but in the Amazon of Brazil and Colombia as well as in Kenya, Tanzania, Senegal, and the Congo in Africa. Moreover, in Malaysia and on the Kalimantan Island of Indonesia, destruction by forest fires amounted to about 3 million hectares. These areas are equivalent to 8% of area of Japan.

Why did such big fires occur? Forest fires were anomalously extensive that year due to unusual dryness in certain parts of the world influenced by the large El Nino Southern Oscillation event. In Papua New Guinea, much of the forest area was cleared by Japanese companies that had cut down trees for more than 20 years. The clearing of forest land progressed to unusual dryness which became a forest fire friendly envi-

ronment. Further, the direct cause of fires is the reclamation of large plantations which burn hundreds of hectares of forest at once. Another large cause is incendiarism by exploited low-wage farmers. The exploited farmers also caused fires from careless smoking, cooking accidents, accidental collier fires and recent incendiarism. In addition to these causes cutting down trees and controlled burnings were also problematic. The Kingdom of Thailand, Ethiopia, Bangladesh, and Peru have been designated by the United Nations Environment Program (UNEP) as critical ecosystem zones which require immediate attention and environmental protection. Although the forest made up 42% of the area in Thailand in 1961, it is now reduced to 13% where 5 million hectares have been lost. Precipitation is also decreasing from 1300 mm to 700 or 800 mm due to deforestation. In addition to those countries 42 thousand, 7.2 million, and 9.5 million hectares of the forests have disappeared by forest fires in the Philippines in 1998, in Northern China in 1987, and in Mongolian in 1996, respectively. Based on these facts, it is estimated that about 20% of the tropical rain forests in the world have been lost during the 30 years spanning from 1960 to 1990. Asia in particular has lost more than 88% of its natural rainforests since the beginning of the Agricultural Age more than 8000 years ago.

The phenomena advancing this degradation are rapid urbanization and the diffusion of the modern products and technology. According to the population estimates of the United Nations, although the world population was about 2.5 billion in 1950 the world population increased 2.4 times to 6 billion in 2000. Furthermore, city population is also increasing rapidly. While city population was about 800 million people in 1950 (about 30% of the world population) it has grown 3.6 times to 2.9 billion people in 2000 which is about 47% of the world population. It has been estimated that city population will increase to 50% of the world population in 2010 and 60% in 2030. Thus, the world is rapidly urbanizing and this feature is estimated to increase even quicker in developing countries.

The mass production of cars and home electronics as fruits of science and technology are also progressing simultaneously. For example, although car ownership was 70 million in the world in the 1950s, it increased 10 fold to 680 million in 1999 (Christopher, 2004). Car ownership increase is particularly formidable in developing countries where urbanization of city centers is rapidly advancing in science and technology. Thus, while deforestation and environmental degradation are taking place on a global scale, people are saturating cities simultaneously where science and technology flourish.

The primary cause of such phenomena lies in the increase in population and economic globalization. Increase in population stem from advances in agricultural production and decreasing mortality rates by development of medical treatments. Naturally, if the world population increases consumption increases will follow. On the other hand, international companies are penetrating deeper into developing countries and economic globalization is rapidly progressing. Although the modern concepts of economic globalization and unification of monetary value and money are romanticized today, these ideas can be called into question. The current structure of economic globalization has forced developing countries to produce and sell precious natural resources at lower prices while more developed countries sell at higher prices for profit. Consequently, poor countries become still poorer and wealthy countries become even wealthier. The balance of both rich and poor people was found in even developing countries in the past. The balance today, however, is for rich countries to maintain wealth by controlling and developing poorer countries. Thus, it becomes quite natural for developing countries that are behind in modern industrial methods to sell natural resources such as timber and marine products. The concluding sequence becomes environmental degradation and depletion of natural resources in those countries. Today, the international community refers to this process and structure as economic globalization.

Educating people of developing countries about the global consequences of environmental degradation appears to have little impact or effect. Those people of developing countries are already desperately trying to survive on a day to day basis so it is difficult for them to comprehend the consequences of global deterioration. For example, it is impossible for a farmer who is barely making a living to comprehend the meaning of protecting a forest by not cutting trees down. The natural instinctive feeling in the farmers' case is to take care of his/her immediate needs first before considering the needs and wants of others. Naturally the idea and principle that he is the most important and needs to protect himself is at work. Furthermore, it is difficult for the farmer to consider future generations when he is barely feeding his own children. Consequently, society itself becomes intensely greedy where the present civilization recklessly consumes all natural resources; those who consume faster, make more money and are considered successful.

Such a situation is an aspect equivalent to the defilement (impurity) of the period (*ko-joku*), one of the five defilements (*go-joku*) of Buddhist philosophy that views the relationship between time and civilization. The five defilements (*go-joku*) consists of the defilement of period (*ko-*

joku), the defilement of view (*ken-joku*), the defilement of evil passions (*bonno-joku*), the defilement of sentient beings (*shujo-joku*) and the defilement of life (*myo-joku*). The defilement of period (*ko-joku*) is defined as an impurity of an age and society which leads to the destruction of civilization. In the *Hokke Mongu*, T'ient-t'ai describes that the defilements of evil passions and the defilements of views are fundamental principles of life. He also mentions that the root cause of the defilement of period (*ko-joku*) stems from the defilement of evil passions and the defilement of view, which subsequently leads to the defilement of life of sentient beings. Since the present age is already engrossed with various desires, it may be fair to say that the world is already invaded by the defilement of evil passions which will consequently lead to the natural destruction of the environment. Zhongxin describes in the book, "Dialogues on Eastern Wisdom" (2002) that Buddhism categorizes greed (*ton*) as the most important element of the three poisons (*sandoku*): greed (*ton*), anger (*jin*) and stupidity (*chi*). Furthermore, he quotes the opinions of Dr. Toynbee in the book "21 seiki heno taiwa (Choose Life)" (Ikeda and Toynbee, 1975) that "Our greed in the present age threatens future generations by using up irreplaceable resources," and describes that the restriction of greed must be the guiding principle for the entire human race. His opinion is concurrent with the concept of the five defilements in Buddhism.

3 Deforestation and the Rise and Fall of Civilization

Recent research discusses the relationship between the rise and fall of ancient civilizations showing the clarity that civilizations are ruined by deforestation, and when environmental change is severe, new civilization rise (Yasuda, 1996). The Mesopotamian, Minoan and Mycenae civilizations are examples of civilizations that were ruined by deforestation. The reason the Mesopotamian civilization eventually fell to ruin is told in the Old Babylonian heroic poem, *Gilgamesh* (Umehara, 1988). The Mesopotamian region had few forests to begin with. In the upper area of the Euphrates River in 2600 B.C., King Gilgamesh conquered the semi divine and semi beast God Funbaba of the forest by cutting down a Levant cedar. Unfortunately, the tree was indispensable to maintain the civilization. The large scale development of the Mesopotamian civilization can be attributed to the destruction of the forest. For example, many trees were required for building shrines, trade ships, for burning bronze ware and earthenware, and also for cooking. Before long, it is presumed that the Mesopotamian civilization was ruined due to the loss of forestry

source material.

It has also been suggested that the rise and fall of the Minoan civilization of the Mediterranean, which prospered in 2000 B.C., was related to the forest. Crete Island, the center of Minoan civilization, was blessed with rich forest when the southern region of Mesopotamia had lapsed into a serious shortage of woodlands. And, the Minoan civilization prospered on the background of the rich forest resources. It has so far been explained that the collapse of the Minoan civilization was based on a volcanic eruption occurring on the small island of Santorini in the Mediterranean. Recent studies, however, suggest that the civilization might have been demised by the gradual loss of forest resources due to size limitations of the island and time limitations for rejuvenation of new trees. Consequently, Crete Island today is a bare island.

After the fall of the Minoan civilization, the Mycenae civilization gained power around 1500 B.C. and is also considered to have been supported and developed by rich forest resources. Around 1300 B.C., the Mycenae civilization prospered and the population rapidly increased. The increase in population, large scale exploitation of the farming ground, consumption of construction material and fuel and deforestation progressed quickly. Historically, it has been proposed that a factor which led to the ruin of Mycenae civilization was based on the invasion by the Dorian culture from the north. In actuality, however, the cause of ruin is considered to be associated with a shortage of firewood from deforestation and a shortage of food stemming from degradation of the soil from cold climate. Eventually, hunger and reduced physical strength led to the collapse of the city. Yasuda (1997) concludes that the downfall of civilization is not merely the consequence of invasion and natural disasters but profoundly linked to the loss of natural resources and deforestation. He further states that, "... a country (civilization) is ruined when the forest is demised."

On the other hand, Yasuda (1997) also points out that new civilizations rise during times of severe environmental change, such as during extremely cold climate conditions (glacial periods) or hot dry conditions (desertification). Wheat cultivation farming blossomed at a time when cold climate conditions prevailed about 10,000 years ago during the Younger Dryas time. This was the first glacial and desertification period of the five extreme climate change periods. What we refer to today as cities or centralized civilization was born during the end of the second glacial period almost 5000 years ago. Monotheism was born at a time of desertification 3000 years ago (the third period). During the fourth period of cold climate and desertification change in the 15th century, forest

resources were drained and European civilizations went in search of resources to new continents. This period was a small glacial epoch and the beginning of the period which Yasuda (1997) refers to as the “civilization of deforestation.” The present age is the fifth desertification period. Not only are we faced with deforestation but civilization today has added the artificial impact of global warming, a combination of extreme risk. Regardless of whether civilizations are good or evil, poor or rich we can conclude that new civilizations are born from severe fluctuations in climate and natural resources.

4 Thought and Wisdom for the Maintenance of Nature

The link between deforestation and the rise and fall of prior civilizations has been stated thus far. The previous examples show how civilizations lost their means to live by the reduction of natural resources. Although losing natural resources such as forests may be a critical link to the demise of a civilization, they may be something even more importantly lost in the process. More importantly, it is the loss of thought and wisdom gained from human symbiosis with nature. This loss is the equivalent to Buddhist expression of the defilement of view (*ken-joku*). Rather than losing raw materials for the sustainability of civilization, losing the thought and wisdom from the relationship with nature may have significant meaning. We see this opposite outcome of the rise of a new civilization during or after the occurrence of severe climate change. That is, as long as a culture maintains the thought and wisdom learned from living with nature, poverty of material resources for human beings becomes a new opportunity or departure for revolutionizing civilization once again.

Many examples of symbiosis between human beings and nature through thought and wisdom are found in history. For example, in Japan there are many regulations and maintenance protocols that stem from symbiosis with nature. Nomoto (1992) who advocates environmental ethnology found many examples in various places in Japan of historical tradition based on thought and wisdom gained from symbiosis nature. For example, there are proverbs and traditions to prevent over hunting and natural resource degradation. One such example is the proverb that explains the foolishness of cutting a horse chestnut tree and planting a new one. In other words, this proverb suggests it is foolish to cut the horse chestnut tree which has provided food until now and to assume that by planting a new one a harvest can be made in a short period of time. It takes three generations to obtain good fruit from the horse chest-

nut tree and the proverb warns people to take good care of the trees. There is another tradition that says, "Leave the first and largest mushroom as a seed (*Taneko*) for future generations when you pick mushrooms." This proverb suggests the largest mushroom will bear seeds for next year's harvest. Today, we generally venture into the forest to find the largest, most edible mushroom we can find. The thought and wisdom from these traditions appropriately suggests that it is critical to allow natural processes to unfold in time and that permission from nature is warranted. Another thought, "opening the mouth (*Kuchiake*)" is typically used to begin or open the hunting or fishing season. Nomoto (1992) points out that although the thought of "opening the mouth (*Kuchiake*)" directly aims at fairly distributing the resources of the mountain or sea among community members, there is also the thought of "praying for a good harvest and waiting for the blessing and timing of resources" at the basis of this tradition.

In addition, there are concepts of animals being the "master (*Nushi*)" of a lake, pond and waterfall in the form of a large eel, a trout (*Yamame*) and a Dragon God (*Ryujin*), respectively. If human beings polluted the water of a pond or waterfall, the master (*Nushi*) left the ecosystem. And, when the master leaves, it is explained that the pond or waterfall will disappear leaving a village exhausted of fortune. This thought suggests that the "masters" were residents and keepers of the environment before people were allowed to live as part of the "masters" ecosystem. These analogies suggest that more important elements exist in nature than human beings alone. Thus, the ethics of the symbiotic relationship between people and nature revolves around the fact that people must not infringe on the habitation place of other living things.

The thought of "sharing with other living things" is found in the slash-and-burn-land cultures living in the tropical rain forests of Southeast Asia (Takaya, 1992). The slash-and-burn-land cultures believe that all living things contribute to all other living things in the environment, including forest gods and deities. The annual slash-and-burn-land process starts by a farmer determining a suitable location to begin cutting and burning an area of forest. Once the arable location is determined, the farmer announces his/her intentions to work in that particular forest by ordering the dwelling gods or insects to leave. Rice seeds are subsequently planted and a harvest term follows. The farmers care for the area of land as a living entity, as if it has a soul. If the farmers forget to properly care for the soul of the land, the soul will leave and the harvest will not bear fruit. Furthermore, there are protocols and a specific sequence of events associated with a harvest.

The harvested rice load is first gathered, dressed with beautiful fabric and is then displayed on an altar in the best agricultural barn of the village, after which the ear of the rice is processed. The first batch of rice is cooked after the harvest is completely finished. Then, the specially cooked rice is offered to the gods, ancestors, dogs, birds and even insects. After the village people finally finish eating their own servings, they go into the field to burn in scents whereupon the altar in the barn is dismantled. Lastly, the villagers pay respect and gratitude to the forest from which the process began. The thought that humankind must not infringe on the habitation place of other living things is also seen in this example. Moreover, we can see fundamental ethics that equally share the harvest to other living things and the land.

On the continent of Africa there is a proverb describing intergenerational ethics that says, “We did not inherit the earth from our parents; we are merely borrowing it from our children” (Kenyan Proverb; Hoite, 1992). There are many similar traditions and proverbs found between civilizations that have common occupations such as hunting, gathering, fishing or slash-and-burn-land farming. That is, those civilizations are in direct contact with nature and must live symbiotically with nature. All of these traditions and proverbs were produced from a close association with nature and created by an equality, fairness, humbleness and intergenerational ethics. Human beings and civilizations must understand the balanced order and circulation of the natural habitat. We must come to understand that we cannot survive without protecting and respecting our environment. Moreover, if we do not change our current ethical stance towards nature, we will be faced with a life and death struggle for existence.

Although the reasons which ancient civilizations were ruined may be directly correlated with a drain of resources as described previously, we can also conclude that a major reason for the demise of a particular civilization stems from the loss of thoughts and wisdom, as described earlier. Although the traditional taboo, “... you will be cursed if you go to that forest” is told in the epic poem “Gilgamesh,” the Gilgamesh king ignores the tradition and conquers God Funbaba of the forest. Ji-Xianlin (Xianlin, Zhongxin and Ikeda, 2002) pointed out the significance of the following three writings by Dr. Toynbee (Ikeda and Toynbee, 1975); first, “the non-duality of life and its environment (*Esho-funi*)” of Buddhism is a similar concept to the view of Greece and Rome before Christianity; second, the evolution of Judea monotheism was the beginning of a conscious invasion to the concepts of “the non-duality of life and its environment (*Esho-funi*),” which was a common concept to

human beings; third, as a result human beings were separated from nature and the natural environment was divested to holy retention. These are interesting revelations to the relationship between the rise and fall of civilization and deforestation.

Another important factor for the birth of any thought and wisdom from nature is that the region or environment must be lush and rich with nature. Although it may be obvious that such thought and wisdom are born where nature is rich, not much thought is given to traditions after the environment is depredated. Then, why do such traditions evolve while nature is rich? We can conclude that traditions are the result of constant observation and management; i.e., always observing the state of nature and immediately adopting measures to counter the balance of degrading effects. It is also because people are always dependent on nature and must fulfill their knowledge to slight changes in nature. Slight changes in nature effect the development of wisdom. Therefore, the various wisdoms and artifices for maintaining nature are produced.

5 The Buddhist View of Civilization

From the idea that religion is produced by the natural features of the land, Suzuki (1978) describes, "There are two concepts of human logic, that all things in the universe repeat metempsychosis forever or a continuous cycle, or that there is a beginning and an end from the top to the bottom. The former is the world view of Buddhism, and the latter is that of Christianity. The forest induced Buddhism and the desert induced Christianity." Why is Buddhism referred to as a religion of the forest?

Buddhism is a product of the forest. Although Buddha Gaya in India is covered by a rock surface now, it is thought that the place was a thick forest when Gautama Buddha first reached spiritual enlightenment. Moreover, it is drawn in Buddhist literature that the animals of the forest gathered at the time of Gautama Buddha's Nirvana, and it is told in the "Jataka Tales" that he practiced continuously with animals in his past life. Thus, Nakamura (1988) points out that only Buddhism draws the anecdote which made the animal the hero in religious scriptures.

Let us consider the meaning of correspondence between the uniqueness of a forest and Buddhist thought. Various living things inhabit the forest. This is immediately clear if you venture into the jungle of the Amazon rainforest of Brazil. Various living things are thriving such as plants, fungi, bacteria, insects, animals, etc. It is important for these living organisms to maintain an ecological balance through complicated relationships with each other. In the forest, every living thing has a cer-

tain role to play that revolves around mutualism. The relationship between these living organisms is so complicated that we cannot haphazardly decide the relevance or irrelevance of any of them. This mutualism is suitably expressed in the simile of Indra's Net describing the aspect of "arising from causation (*engi*)" in the Huayan or Flower Garland Sutra (*kegon-kyo*) in Buddhist literature. The simile describes a great net that hangs in the palace of Indra, the God of Thunder. The net has countless joints or knots adorned with jewels in a beautifully complex mesh. Each of these jewels clearly reflects all the other jewels in the net, so that every part of the net reflects all other parts. The knots of the net express each living entity, and the net is stabilized so that the relation is complicated. The reason each link or knot is expressed as a jewel implies that each living thing has value beyond imagination and projecting other jewels signifies the mutual respect and deep relationship each living thing has towards one another. However, if parts of the net are cut out or a jewel is removed, the stability of the mesh will be lost. It is said that the mesh is so complex that it would even be difficult to pinpoint the area that has been cut or removed and even more difficult to determine where the next break may occur which would eventually bring the entire net down. This parable correctly explains the process of environmental degradation and collapse of an ecosystem. At present, we often overlook the impact of the extinction of a few small animals in nature. However, the simile of the sutra suggests that it is very difficult to predict where and how this influence will appear in the future. Further, we are forewarned that the entire ecosystem could collapse by the destruction of one link. Thus, we can read the appearance of the ecosystem and the process of collapse of the ecosystem from the concept of "arising from causation (*engi*)." Moreover, all living things that die will return to nature and be reborn again and die again in a reincarnation cycle, a concept that actually emerged from the natural processes occurring in nature. This is expressed as if the living entity itself repeats life and death. Setting aside whether reincarnation actually occurs, we can consider this cycle as an expression of the transmigration of a living entity. It is therefore easier to understand that the concept of "arising from causation (*engi*)," the equality of life and the migration of life which are the major feature and the basis of Buddhist thought are closely related with the forest. Buddhism is simply a religion that expresses the natural processes of the forest. And simultaneously it is important that the feature of Buddhist thought relating deeply to the forest lead into the thought and the wisdom of symbiosis with nature.

Then, how do we relate this concept to our modern age dazzled as the

civilization of science and technology? Yamamoto (2001) examined the relationship between Buddhism and four assumptions of modern science and technology. Namely, where features of science and technology are (1) the product of technology is material (materialism), (2) excluding or reducing labor (creating an easier existence), (3) shortening time (principle of efficiency), and (4) maintaining all controls (the possibility to control). Buddhism expounds opposite features where (1) the mind or heart is more important than material, (2) the importance of evil passions being the source of enlightenment and that life and death are themselves nirvana (effort and hardship are critically linked to happiness), (3) human growth and development need time and nurturing and (4) human nature and the environment are not factors that can be controlled.

Although we won't go into details here, in short Buddhism first considers that the mind is important rather than material. This does not mean that material is naturally unnecessary, but emphasizes that the mind should be respected. Naturally this leads also to respecting human culture and education. Obviously, reducing labor through technological advancements is attractive and has large benefits, but it is foolish to think that the human existence will reach utopia without efforts and hardships; learning patience and effort are the fruit of a balanced life. Thus, Buddhism reveals that the way of life as a true human being and true happiness are derived from, "evil passions are themselves enlightenment (*bonno-soku-bodai*)" and "life and death are themselves nirvana (*shoji-soku-nehani*)." Although science and technology propel efficiency, human beings and natural growth cannot develop in a quick and efficient manner. This concept is easier to understand when considering the growth of a human being. At least twenty years is necessary for a baby to become a fully mature adult both physically and mentally. The only solution to this process is time as science and technology are powerless to increase the growth rate of a natural human being. However, we are apt to forget simple things by the progress of science and technology. The paradox is that humans desire to control and optimize that which is uncontrollable and has a natural process. We cannot control living things that have in essence autonomy and biological structure.

Since the products of science and technology are centralized in cities, and Buddhism finds its roots in the processes of the forest, it becomes important to compare the life of human beings in cities and the forest. Cities are places intentionally built by human beings where operation and functionality are efficient for daily living. In cities not only are buildings, roads and vehicles structured intentionally, but trees, plants

and environmental systems are also arranged intentionally. On the other hand, the natural environment is intentionally structured in a disorderly and intricate fashion so that human beings have a difficult time surviving and catching other living organisms. Simply, cities are designed for easy control and manipulation while nature is designed intricately. Therefore, when managing a forest, it is based on the premise of leaving natural growth of plants, as seen in the thought of “care (*Teire*)” in a Japanese village mountain (*Satoyama*). And it is fundamental to help manage nature from over or inadequate growth. Although cities are filled with various comforts such as various machines, elevators and cars, constant patience and constant efforts are required for *Satoyama*’s “care.” Moreover, although we have illusions that human beings are the only living entities in the city, human beings are only one of many living things in the forest. Thus, cities become places for human competitiveness and slight. However, all of nature is made up of a symbiotic relationship and harmony where the principles of competition are working effectively between each living entity in the forest. The wisdom for this symbiosis and harmony are found in the thought and wisdom from ancient civilizations described earlier. Thus, life of the human beings is contrastive in the city and the forest.

6 Conclusion

The present destruction of our natural environment is so severe that we do not even understand where to begin the replenishing process. All degradation processes have already lapsed into a vicious cycle. At the present rate we are destined to catastrophe. The human race is now in its final stage for either a hard landing or a soft landing (Ishi, 1998). The hard landing is a new civilization being born as a result of a catastrophe, and a soft landing is avoiding or overcoming a catastrophe through wisdom. Most people likely desire the soft landing. However, it is highly more likely that we will find ourselves making a hard landing.

Ji-Xianlin takes up a Chinese proverb “Thirty years, river west; Thirty years, river east,” and points out that there is no culture in human history which follows either river direction forever. He goes on to say that Eastern culture must become the leader instead of the current “river west,” e.g., western culture from the 21st century. Western science can no longer rescue the serious results of environmental degradation ironically brought upon by Western culture. The most important thing now is for the holistic Asian thought to inherit the hundreds of years of shining achievements of the analytical Western culture in order to save the plight

of our human race. Moreover, all human beings and the global civilization itself must develop into yet higher and still newer levels of thought and wisdom (Xianlin, Zhongxin, and Ikeda, 2002).

The fundamental aspects of this new departure or revolution are through the spread of Buddhist thought and education. That is, Buddhism does not advocate a radical revolution in its purest sense, but a gradual revolution of education and thought. As seen in the “The Five Defilements,” the defilements of evil passions and view are the factors for bearing the defilement of period, i.e., the destruction of civilization. And we must lead the present civilization to a civilization based on the thinking of the forest through the revolution of the “the defilements of evil passions and view.” However, as already described, “the defilement of evil passions” sweep across the world and natural destruction which is represented by deforestation has already reached an unprecedented point. Moreover the thought and the wisdom for symbiosis with human being and nature, such as harmony, equality, and fairness are being lost by urbanization and the osmosis of science and technology on the global scale. We may be faced with an even more serious problem for the maintenance of human civilization rather than the loss of natural resources alone. The natural aspects represented in the forest and the thought and wisdom which are rooted there are both closely connected with each other for the construction of a new civilization that can replace the civilization of science and technology. The critical question is whether we can awake to these traditional thoughts and wisdom to maintain and advance towards the future.

References

- Christopher Flevin. 2004. *State of the World 2004-05*. Worldwatch Institute. Translated in Japanese. Ie-no-Hikari-Kyokai.
- H.D. Hoite. 1992. *Rio heno michi Kaihatsutojōkoku no zento* (The way to Rio, the future of developing countries). Shuichi Yamamoto translation. Toyo gaku-jutsu kenkyu, vol. 32-1, pp. 161-172.
- Daisaku Ikeda and Arnold Toynbee. 1975. *21 seiki heno taiwa*. Bungeishunju-sha. This book is translated in English to Arnold Toynbee and Daisaku Ikeda (1976) “Choose Life”, Oxford University Press, London. The quoted sentences in the text are translated by us from the Japanese book.
- Hiroyuki Ishi. 1998. *Chikyū kankyō houkoku II* (Earth environment report II). Iwanami-Shoten.
- Kegon-kyo* (the Flower Garland Sutra). Daito Shupan-sha. Taisho-Daizokyo. vol. 35, pp. 115-117.
- Hajime Nakamura. 1988. *Bukkyō doubutsu sansaku* (Exploring animals in Buddhism). Tokyo Shoseki.
- Kanichi Nomoto. 1992. *Keiku ni kometa shizen tonō kyousei* (Symbiosis with nature

in epigrams). Yomiuri-Shimbun, 1992.4.8.

Hideo Suzuki. 1978. *Shinrin no shikou: Sabaku no shikou* (Thinking of desert, thinking of forest). Nippon Hōsō Shuppan Kyokai.

Koichi Takaya. 1992. “Kaihatsu to jizoku no chikyū he: Yutaka na mori to yakihata no hitobito to” (To the earth with sustainable development: Rich forests and the people of slash-and burn land). *Seikyo-Shimbun*, 1992.5.21.

Takeshi Umehara. 1988. *Girugameshu* (Gilgamesh). Shinchosha.

Ji Xianlin, Jiang Zhongxin and Daisaku Ikeda. 2002. *Tōyō no chie wo kataru* (Dialogues on Eastern Wisdom). The Institute of Oriental Philosophy.

Shuichi Yamamoto. 2001. *Kagakujutsu ni taisuru bukkō no shiten* (Viewpoint of Buddhism over the science and technology). Toyo gakujutsu kenkyu, vol. 40, pp. 81–95.

Yoshinori Yasuda. 1996. “Souron 1, Mori to bunmei” (General statement 1, Forest and civilization), in *Kouza, Bunmei to Kankyō 9: Mori to Bunmei* (The lecture: civilization and the environmental, 9th volume, forests and civilization). Asakura-Shoten.

Yoshinori Yasuda. 1997. *Mori wo mamoru bunmei, Shihai suru bunmei* (The civilization which protects forest, the civilization govern it). PHP Kenkyujo.

Takeshi Yoro. 2003. *Ichiban daiji na koto—Yoro kyouju no kankyōron* (Most important thing—Environmental theory by the professor Yoro). Shueisha.