

Science and Buddhism

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Introduction

I am a student of Buddhism, mainly the Buddhism of Shakyamuni's time, Buddhism in its oldest form as Shakyamuni expounded it more than 2,000 years ago.

It may sound strange for someone exploring an ancient field of study to talk about the most modern area of research, but that is the subject that I would like to take up today: "How Buddhism relates to science."

It may be that I was kindly invited to talk here today because I once wrote a paper about bio-ethics in reference to the Buddhist thought of karma, looking at areas such as organ transplants, one of the greatest problems facing the modern world. That paper attracted much more attention than I expected. In addition, I have also presented an essay on "Buddhism and Science" which was, by chance, very similar to today's subject.

Even though the above-mentioned paper and essay both had relevance to science, I developed my discussions based purely on my own field of Buddhism. I have no knowledge of modern science whatsoever, almost to the extent that I might be described as illiterate about science. Therefore, I would like to remind you that, though correlating Buddhism with science, my lecture will primarily focus on the Buddhism of ancient times.

Shakyamuni's Time and the Present Time

Compared with the time of Shakyamuni, we live in an age in which science has made incredible breakthroughs. Even Shakyamuni must not have been able to imagine the arrival of such an age. Due to this advance of science, our livelihoods have become rich and our lives more convenient. In Japan, people no longer suffer from hunger. The average Japanese life span has lengthened to more than 80 years. In the near future, we may be able to manipulate even our human genes freely. On the other hand, we are exposed to the threats of nuclear war and the terrible deterioration of the global environment.

If asked whether you would rather go back to the world of 30 years ago or Japan of 100 years ago, it is likely that most of us would refuse to do so. The truth is that a virulent poison lurks behind this affluence and convenience, and we are now so strongly addicted that we could not survive without them.

If science continues to advance at such an accelerating speed, I fear it may go beyond our control and give rise to an untenable society. At this point in time, however, we can still control this and prevent it from happening. I believe that we will be able to find a way to achieve compatibility between affluence and convenience on the one hand and environmental protection and conservation on the other.

Yet, when I look at recent scientific developments such as the manipulation of life and species through the artificial recombination of genes and the major breakthroughs in computer technology, I can hardly imagine what will happen to our society. We have steadily usurped those functions that were always considered to be in the hands of God. With the creation of a virtual world overlapping dream, reality and illusion, we find it more difficult to distinguish between the physical world and the spiritual world. I strongly feel that here we have the underlying cause of the spate of deadly crimes committed by juveniles that is afflicting Japan recently. We, modern people, appear to have eaten the forbidden fruit.

As is being promoted and advocated by the Institute of Oriental Philosophy, we need to deeply understand the present situation of science and its prospects at this time. Then based on this recognition, persons of religion like myself should establish a clear attitude toward science.

In order to do so, it is necessary for us to have the right sense of value and promote this within society. It is said that ours is an age of the diversification of values, but this does not mean that all values are valid without any exception. I am sure there is one uniquely right sense of value pertaining to each individual human being, because for an individual to have multiple codes of value would be schizophrenic. On the other hand, if an individual lacks any sense of value, he will be like a sleepwalker. Consequently, we are bound to live our day-to-day lives according to a certain sense of value, although we may be unaware of this fact.

Next comes the problem of whether the sense of value is right or not. Unless we can recognize that our values are rightful, we cannot promote them to the world with confidence.

The question of which values are rightful and which are unrightful, however, is a very difficult one. Recently I presented a report on the

dharma and *adharmā* described in the sutras and the *dharma* and *adharmā* in the vinaya, or the texts of rules of monastic discipline, at the Nihon Bukkyo Gakkai (Japanese Buddhist Association). *Adharma* means “unrighteousness” in behavior (unlawful/illegal act), and *dharma* in this case means “righteousness” (lawful/legal act). Therefore, I think these words can be used synonymously as “righteousness (rightful)” and “unrighteousness (unrightful).”

“Righteousness” and “Truth” in Buddhism

I would like now to discuss what “righteousness” means in Buddhism.

In Buddhist terms, “righteousness” is found in the “eightfold right path.” The eightfold right path refers to the principles to be followed in order to live a right life, namely right views, right thinking, right speech, right action, right way of life, right endeavor, right mindfulness and right meditation. However, no Buddhist scripture explains what this “right” means. The first of the eight principles, “right views,” is likened to the seeds of sugar cane, rice and wheat. When we sow seeds and irrigate them, we can harvest an excellent crop. Similarly, it is said that, if we sow the seed of right views, then we can gain the harvest of the other eightfold paths from right thinking through right meditation (from the Miscellaneous *Āgama Sutra*, vol. 2 and the Increasing by One *Āgama Sutra*, vol. 8). It is, therefore, clear from this that right views forms the foundation of the eightfold right path.

This is quite comprehensible because if we can view things correctly, from there, we can naturally produce right thinking, right speech, right action, right way of life, right endeavor, right mindfulness and right meditation.

The Sanskrit word for philosophy is *darśana*, which derives from the verb *drś*, which means to see or view. This indicates that the view of things is the underlying factor of all human behavior.

Then, the question arises as to what the correct view of things is. The Buddhist scriptures explain that right views is to understand the four noble truths as they are. As you may know, the four noble truths are the truth of suffering, the truth of the origin of suffering, the truth of cessation of suffering and the truth of the path to the cessation of suffering. The “truth” is *satya* in Sanskrit and *sacca* in Pali. Consequently, the correct view of things is to see the “truth” exactly as it is.

Because this “truth” carries an extremely Buddhistic connotation, and also because it is closely concerned with “Science and Buddhism,” the subject of this speech, I would like to explain it in more detail.

The word *satya* comes from the present participle of *as* in Sanskrit,

which is equivalent to a verb of being in English. Literally translated, it means to “be coming into presence or existence.” The truth of “being present,” or the real state of all things, is *satya*.

Another Sanskrit verb of being is *bhū*, whose past participle is *bhūta*. *Bhūta* also means truth. The quintessence of Mahayana Buddhism is the concept of “the true aspect of all phenomena.” One of the Sanskrit terms for the true aspect is *bhūta*. Thus, Buddhism defines truth as “true aspect” or “real state.” In Chinese versions of the Buddhist scriptures, truth is rendered as thusness, suchness or reality.

The Buddha is also called the Thus Come One. I think you probably know that the Sanskrit form of this is *tathāgata*. *Tathā* or *tatha* is translated as “thus,” and the Thus Come One means one who has come from the realm of truth. *Tathā* or *tatha* derives from a demonstrative pronoun *tad* in Sanskrit, which means that or it in English. Therefore, the original meaning of *tathā* is thusness, or “as it really is.”

I understand that the Sanskrit word for the “factor” of the ten factors set forth in the Lotus Sutra is *yathā*. *Yathā* comes from a relative pronoun *yad*, which also means to “be present as it really is.”

As mentioned above, Buddhism defines truth as the “true aspect” or “real state.” Viewed from the Buddhist perspective of truth, it indicates this thing or that thing, the concrete and tangible things or facts around us. I think that the word “truth” expounded in Buddhism should be interpreted and translated as “fact” rather than “truth.”

In systems of thought such as Western philosophy and Christianity, truth is defined as something profound and mysterious that lies behind the realities of life, which only one who has a special ability can perceive. God is the embodiment of truth, which is invisible to us. God is not an entity we can point to in the concept of this or that. In Buddhism, however, truth is something closer to fact that lies in our daily life, which we can point to, saying this or that. I am an entity of fact, and so is every one of us. The building where we are now, the Nippon Seinenkan Hall, is also a fact.

In the Christian way of thinking, truth is good, beautiful and holy. God is never evil, ugly or secular. To suggest such a thing would be blasphemy and people have been submitted to the Inquisition and burned at the stake for such offenses. However, real facts in our immediate environment are not necessarily good, beautiful or holy. Bad and dirty things actually exist around us: that is the way things are.

Consequently, in the four noble truths, the truth of suffering clarifies that all existence is suffering; we are born, grow old, suffer illness and die, and all these facts are suffering. We who undergo these sufferings

possess earthly desires. This is also a fact that is real and true, and the truth of the origin of suffering clarifies that suffering is caused by selfish craving.

On the other hand, we have the Buddha nature and the potential to attain enlightenment. This is also a fact that is real and true. There are some who can realize the state of enlightenment. Thus, the truth of the cessation of suffering clarifies that the eradication of selfish craving brings about the cessation of suffering and enables one to attain enlightenment.

Perception of All Things Exactly as They Are

Right views, which forms the foundation of the eightfold right path, is to perceive all facts as facts, or exactly as they are. The eightfold right path urges us to make efforts to gain right views, teaching that only when we have achieved this can we acquire the rest of the eightfold right path.

Teachings such as this are set forth repeatedly in early Buddhist scriptures. The doctrine of the four noble truths appears nearly 500 times in the Pali and Chinese versions of the early scriptures. It is said that Shakyamuni expounded teachings for 45 years. Calculated in terms of months, this amounts to 540 months. Thus Shakyamuni taught the four noble truths almost once a month. The reason he expounded it repeatedly is that the people like us did not see or know things as they really were. They assumed mistakenly that they had understood, although in fact they had not.

The truth of suffering is explained as “the four sufferings and the eight sufferings.” The eight sufferings consist of the four sufferings of birth, aging, sickness and death, plus the suffering of having to part from those whom one loves, the suffering of having to meet with those whom one hates, the suffering of being unable to obtain what one desires and the suffering arising from the five components that constitute one’s body and mind.

You may say you are of course aware that as long as you were born in this world, you have to grow old and die some day. After all, the concept of death as we understand it is abstract, for we can experience it only through others’ death, not through our own. As I advance in age, I often hear of the death of friends and persons close to me, and the number of funerals I attend is steadily increasing. However, after having a drink or two at a vigil the night before a funeral, in which we pay our last respects to the deceased all night, I feel relaxed to the extent that I no longer care so much who died. We are likely to take others’ funerals

easy, because they are not our own.

Yet, neither have I attained the enlightened state in which I transcend the concepts of birth and death, nor have I reached the state in which I will have no regret about when I will die. This is proof that for me death has not yet become a fact that I can indicate in the concrete and immediate concept of “this” or “that.” It must be for this reason that Shakyamuni repeatedly taught people like me that all human beings are destined to die.

The reason right views was interpreted to mean to perceive the four noble truths exactly as they are is in order for us to really understand the problem of death as our own destiny. In the famous words of Socrates, “Know thyself!” Ever since we were born with a mewl, the thing we have kept company with longer than anything else is ourselves. But can we say we know ourselves exactly as we are? In this sense, it is extremely difficult to recognize things for what they really are.

Therefore, when we perceive suffering exactly as we suffer, it must follow that various functions arise within ourselves to relieve suffering. When we perceive that suffering is caused by selfish cravings, we must work to eradicate them, and when we perceive that we inherently possess the Buddha nature, we must have the urge to bring it forth. If our attitude is “I know I shouldn’t do it, but I can’t stop doing it,” we have not arrived at a true and valid perception.

When I say “we,” I do not intend to be rude to others: in my case, at least, I still have not been able to perceive things exactly as they are. This is partly because I have little or no time to reflect on myself due to the busy schedule of my daily life.

Certainly, with the development of medicine, the suffering of sickness and death is becoming less immediate for us. According to Buddhist teaching, however, the greatest cause of our failure to perceive things as they are lies in the idea “I am different from others; I am special; I can successfully control the problems of sickness and death.” It is said that this idea has imperceptibly gnawed at our minds and become deeply rooted in our hearts.

In short, it is said that we all have self, or *ātman* in Sanskrit, at birth. This is an instinctive desire, which all human beings possess, from which selfish, egocentric desires and impulses arise. But in fact it is true that every individual is a form of temporary union of physical and spiritual components, that has no eternal core such as *ātman* within it. Therefore, just as all that is born is destined to die, where there is cause there is definitely effect. This is the concept of dependent origination or dependent causation.

Everything in this world comes into existence in response to various direct and indirect causes. Nothing can exist independently of other things or arise in isolation. The ideas that we might live forever or that nothing exists after death are also wrong. The correct view is based on the Middle Way that transcends polar extremes, indicating the true nature of all things.

If we base our understanding on the views of non-self, dependent origination and the Middle Way, we would be able to see things correctly, equally and impartially without thinking “I am special; I will never die.” We could completely get rid of our self-centeredness. This is the foundation for us to perceive things exactly as they are, out of which is born wisdom.

This is the wisdom to perceive all things and their true nature. The term *yathābhūtaṃ pajānāti* is often found in early Buddhist scriptures, meaning to “perceive things exactly as they are.” As you can probably surmise, this *pajānāti* is a verb form of *paññā*, that is, wisdom. This Pali word *paññā* is used as a part of the *Heart of the Perfection of Wisdom Sutra*. Because *paññā* leads to enlightenment, it is regarded as being synonymous with right views in Buddhism.

Consequently, “righteousness” in terms of Buddhism means to get rid of self-centeredness and perceive things exactly as they are, equally and impartially, from the standpoint of non-self. This view corresponds to the viewpoint of dependent origination and the Middle Way. Right views give rise to right thought, right action and right livelihood. The truths discovered while perceiving things exactly as they are boil down to the concept of the four noble truths. All in all, the Buddhist teachings are what Shakyamuni discovered by observing things exactly as they are and perceiving their true nature, and Shakyamuni expounded them for the sake of people.

Changes in Perception of Things and Phenomena

I have so far developed my discussion based on the earliest Buddhist teachings known as early Buddhism. In the time of Shakyamuni, science was insufficient and the economy was immature. On the other hand, when people had a meal, they knew who produced the rice and who made the bowl. In those days, they maintained a so-called “relationship with a human face” with one another. It is recorded that medicine was so developed in ancient India that Jīvaka, the physician responsible for Shakyamuni, performed a brain operation on a king, but in fact the level of surgical treatment of the time was limited to the removal of worms. People, however, could live as a part of nature and in

close relationships with one another.

In contrast, human beings today live as a part of society, and indeed can no longer live apart from the society. This tendency is spreading worldwide. We also live in a world of highly developed science and technology. When we eat bread at breakfast it is absolutely impossible to know where and by whom the wheat was produced, even if we wanted to. Perhaps the wheat was harvested in a remote foreign country, or it might be mixed with some genetically modified and enhanced wheat.

Therefore, the things and phenomena seen as they were in the time of Shakyamuni are extremely different from those surrounding us today. What people saw as it really was in the age of early Buddhism can be defined as individual human beings, and this was entirely sufficient at the time. Now, however, our sphere of livelihood has greatly changed and expanded far and wide. With the development of science, the economy and society, all the things and phenomena in our environment have been subjected to a variety of changes.

Buddhism developed from early Buddhism through Abhidharma Buddhism (Hinayana Buddhism) and then through the introductory period of Mahayana Buddhism and the intermediate period of Mahayana Buddhism to the period of Esoteric Buddhism. I think Buddhism's worldview has expanded in proportion to its development. Thus the object people tried to perceive exactly as it was in early Buddhism was the realm of sentient beings, while Abhidharma Buddhism added to this the world and the universe where we are now living. With the progress of science, the analysis of people's mental activities and the material world became more precise and detailed. Even so, at this stage, the enlightened state of Buddhas and bodhisattvas was not the object of perception.

However, with the rise of Mahayana Buddhism, the Buddhalands such as the Pure Land of Perfect Bliss and the Buddhas' enlightenment were positively preached in various scriptures. One of the major Mahayana schools, called the Yogācāra school, or the Consciousness-Only school, succeeded in analyzing the mind more precisely.

Chinese Buddhism and Japanese Buddhism have each developed in their own ways. In India, new scriptures have been produced in accordance with changing times, that is, changes in things and phenomena. These were the crystallization of perceiving things and phenomena exactly as they were. If new Buddhist scriptures could not be created, it would mean the death of Buddhism. The more new scriptures were created, the more it proved how vividly Buddhism took an active part in people's real lives as a living philosophy.

In China and Japan, however, it was established as a peculiar agreement that scriptures other than those produced in India are not authentic, and as a result, the people of both countries lost the good and legitimate tradition of making new scriptures for themselves. Notwithstanding this, I believe that the writings produced by such founders of Japanese Buddhism as Shinran, *Dōgen* and Nichiren have played the role of scripture instead.

Buddhism and Science

If Buddhist scriptures were produced as a result of perceiving things and phenomena surrounding us exactly as they were, then how was Buddhism related to science? According to the Kōjien dictionary, the definition of science is as follows: “systematic rational recognition concerned with a part of the world as its area of study, which is experientially demonstrable. According to the object or method of study, it is classified into several categories such as natural science and social science, natural science and mental science, and natural science and cultural science. Science is generally distinguished from philosophy, but both disciplines should have the same certainty in common. From this point of view, such approaches as scientific philosophy and philosophical science are available.”

To put it more briefly, “systematic rational recognition that is experientially demonstrable” can be interpreted to mean to perceive things and phenomena in our immediate surroundings exactly as they are.

If my understanding is correct, it follows that there is no difference between Buddhism and science in their approach toward things and phenomena.

Early Buddhism and Abhidharma Buddhism focused on the real world of illusion, that is, this world in which we actually live, and in this sense they can be defined as very rational religions. It is no exaggeration to say that Abhidharma Buddhism is compatible with science. Its teachings contain various scientific elements such as physics, astronomy, geology, psychology and medicine. Some 1,500 years ago, when Abhidharma Buddhism was expounded, microscopes, telescopes and other scientific tools to observe things and phenomena as they really are did not exist. In the light of modern science, there are several misconceptions in its concepts. In astronomy, for example, the geocentric theory was believed instead of the heliocentric theory, and Earth was understood as not spherical but cylindrical.

Even so, Buddhism was trying to make a rational interpretation of the motions of the sun and the moon and of seasonal changes. Our solar

system belongs to the galactic system, and according to modern astronomy there are other galactic systems outside of ours, such as the Andromeda nebula, and several hundred or thousand such galactic systems form a cluster of galaxies. Nearly 10,000 galaxy clusters have already been discovered.

Buddhism called one galactic system a “major world system” or a “thousand-millionfold world,” and conceived that countless major world systems exist in the ten directions, that is, in all directions throughout the universe. 1,000 worlds (a world being similar to today’s concept of a solar system) make a minor world system; 1,000 minor world systems compose an intermediate world system; and 1,000 intermediate world systems form a major world system. Therefore, one major world system comprises one billion worlds. This concept might be compared to modern cosmology.

In the field of physics, meanwhile, Buddhism conceived that basically submicroscopic particles were combined to constitute matter. The particles might be compared in modern terms to the concept of molecules or atoms.

At first glance, it seems that the scriptures of Mahayana Buddhism describe a completely different world or realm than that described by science. This is because they resulted from a perception of the world of the Buddha exactly as it was. The world of the Buddha is on a different level from that of us ordinary people, because of which originally no word can express it. The world or realm of the Buddha is depicted so abstrusely in Mahayana Buddhist scriptures that ordinary people could hardly understand it with their discriminating-consciousness. Consequently, we would rather regard it as the world that can only be understood and shared between Buddhas.

In the final analysis, I believe that Buddhism and science never contradict or conflict with each other: rather, they have much in common. Buddhism is polytheistic, quite different from monotheistic religions such as Christianity. Christianity has caused various complications with science, and their discord still continues up until the present. In several states of America, for example, it is prescribed according to state law that the same amount of time as is spent at schools on the instruction of the theory of evolution and the heliocentric theory be given to creationist theories. In short, the truths of science and religion are at variance with each other, which gives rise to complications.

In contrast, Buddhism has developed in response to the progress of science. As I have mentioned already, the further people’s worldview has broadened and their scope of observing things and phenomena as

they really are has expanded, the wider the Buddhist teachings have spread and the deeper people's understanding of Buddhism has become.

However, the world we live in today is changing so greatly that we cannot comprehend this reality with the knowledge of our Buddhist tradition. As the enigma of the creation of the universe is being investigated, the mysteries of life are solved and the revolution of information technology advances, our whole attitude to life is also changing completely. We are in danger of confusing reality with a dream or an illusion. Doubtless, such breakthroughs in the area of science will have a great influence on our mental life and spiritual culture.

Buddhism seeks to perceive reality exactly as it is, but the reality has undergone qualitative changes. Buddhism basically displays a flexible stance toward this phenomenon, never giving way to the desire to row against the stream and return to the ancient times. Far from looking back to the past, it welcomes the fact that the ways we observe things as they really are evolve, and that new discoveries increase with the progress of science. It is a Buddhist tradition that new scriptures are produced on the basis of new perspectives of perceiving all things exactly as they are.

All things and phenomena nowadays are changing rapidly and drastically. If a Buddha were to appear in this world today, he would surely be puzzled. I wonder what kind of scripture he would make perceiving the nature of this world exactly as it is. This is far beyond the capacity for imagination for me, an ordinary person. My biggest anxiety, as an ordinary person, is about what will become of our world in the future. I cannot clearly envision our future. No one can get a clear picture of our future world even in 50 years or 100 time, even though that is not distant future.

Recently I read a newspaper article that reported the results of a survey questionnaire conducted by the National Institute of Science and Technology Policy of the Science and Technology Agency. The question was: "What kind of new technology and what changes in life and society do you think will come into existence, or do you hope will come into existence, in the 21st century?" The article says that 1,200 researchers working in the field of science and technology in the academic and business world replied to the questionnaire.

There seem to have been a wide variety of answers, including fanciful tales and nightmarish delusions. For example, "people can solve food and population problems by downsizing the human body," or "the human body will be composed of artificial organs through the generalization of regenerative medicine." In any event, our world in the 21st

century is not one that we can easily visualize.

I think this is because natural science, life science, social science, human science and information technology are all developing in completely different directions, lacking in interdisciplinary unity, which makes it extremely difficult for us to get a holistic worldview. As a result, we are now confronted with various problems, such as what will happen to the future of humankind due to the development of medicine and reproductive technology, how genetic engineering or cloning technology will change the world of plants and animals, and how the online revolution will influence our mental activities and culture. Things and phenomena, the objects we should perceive exactly as they are, are becoming ambiguous and intangible, like blurred photographs.

Expectations and Concerns for Science

What I expect most of science is a comprehensive analysis of the present situation in which we are living and of the direction we are heading in the future. To achieve this, input from all fields of science, including natural science, social science and human science, is required.

At any rate, scientists must begin by viewing things exactly as they are. On this basis, I hope they will show us a clear vision of the future. They should make a study on the appropriate perception of the present situation and the forecast of future developments not only in their specialized fields but also from a broader perspective. Their studies should include futurology as well as analysis of existing circumstances.

In Buddhism, mystic powers such as forecasting the future, which are far beyond the abilities of ordinary people, are called supernatural or transcendental powers. The original word for them is *abhijñā* in Sanskrit and *abhiññā* in Pali. This derives from a verb *abhijānāti*, which means “to see.” When one sees things as they really are, one is inevitably equipped with transcendental powers. Therefore, if scientists could perceive the “present situation exactly as it is,” it would be easier for them to forecast the future. I believe herein lies their obligation as scientists.

Just as new scriptures and founders’ teachings have come into existence according to the times, correct new systems of value should naturally be created in harmony with the present situation of the 21st century.

This expectation may be too optimistic. Of course, there are some concerns as to whether science can perceive things exactly as they are in the true sense. I mentioned before that according to the doctrine of the four noble truths we can relieve suffering and eradicate our earthly desires by viewing things as they really are. However, I still doubt

whether science is developing in that direction.

Although we can say that our physical and material sufferings are being diminished and alleviated with the progress of science, as long as earthly desires remain, our sufferings are not eradicated. Thus, when viewed from the Buddhist perspective, the eradication of selfish craving brings about the cessation of suffering and enables us to attain emancipation.

Furthermore, as a condition for perceiving things exactly as they are, we need to see things based on the concepts of dependent origination and the Middle Way and from the standpoints of non-self and non-substantiality, or emptiness. I wonder if modern science is capable of fulfilling these conditions.

Simply put, scientists may not be solely motivated by a purely scientific desire to perceive things as they really are. Some of them may be driven by ambition or dreams of making a fortune at a stroke with the development of science. Needless to say, the progress of science has been driven by our contemporary society that seeks convenience and affluence. If this is the case, science is open to question. Is this really worthy of the name “science,” or is it no more than “scientific technology?”

Abhidharma Buddhism teaches that the birth, decline and disintegration of our globe all depend on our karma or actions. This is referred to as common karma, or the deeds of the community. It explains how our world is destroyed and disappears, as follows. First, war rages, then epidemics prevail, and finally famine attacks. These are called the three lesser calamities. Their causes are defined as greed, indulgence in dainty food and negligence. Consequently, these three calamities are man-made disasters, and it is said that they can be prevented by deeds such as not killing and offering medicine and food.

When these three calamities occur repeatedly, a great fire takes place and burns up the world. This fire marks the end of the kalpa of decline. Then, there is a sweeping flood, and finally a great storm demolishes everything in the universe. These calamities of fire, water and wind are called the three greater calamities. In short, the remote causes of these disasters are also defined as common karma shared by humanity. Our globe and universe decline and disappear entirely due to the responsibility of us, sentient beings. If the three lesser calamities do not occur, neither do these three greater calamities. Therefore, we have only to prevent the lesser calamities.

As stated above, Abhidharma Buddhism holds that the destruction of this globe and universe is nothing but the result of common karma created and shared by sentient beings, at the root of which lies excessive

and insatiable desire. I strongly feel that various problems facing our modern world are proving the validity of this teaching.

Excessive desire or greed has brought about a worsening of the global environment, ozone layer depletion and global warming. One of our serious problems is exhaustion of natural resources. If nuclear war should break out on our planet and the total arsenal of nuclear weapons explode all at once, our planet is certain to shatter into pieces.

The world economy has developed with the spreading of the free economy. The free economy is based on the premise that, as represented by Adam Smith's exposition, if a market freely conducts economic activities based on individual desire, the "invisible hand" of competition guides the economic system and maintains harmony. Smith was a professor of moral philosophy at the University of Glasgow, and in this capacity he thought desires should be suppressed. However, he felt it was necessary to overlook this for a while and instead place priority on economic development.

Nowadays people tend to think that the greatest value is to fulfill desires. There are some indications that, far from reflecting on the self-serving satisfaction of desires, they even claim that it is their fundamental right as human beings. This phenomenon is spreading to the sphere of the spiritual, as well as the material world. In the virtual reality experience, people can manipulate and conquer the entire world as their own. Eventually, someone may develop a scheme to make this a reality.

In Abhidharma Buddhism, the concepts of good and evil are divided into the four stages of primary meaning, self-nature, conjunction and emergence. The "primary" non-good or evil is the suffering of birth and death, and the "self-nature" evil is regarded as shamelessness, regretlessness, greed, anger and foolishness.

The three poisons of greed, anger and foolishness essentially assume their self-nature of evil or non-goodness. Thus, Buddhism teaches that excessive greed lies at the root of all evil. In Buddhist scriptures, a virtue is expressed as "little desire and contentment with a little gain." Although this idea seems so old-fashioned and hackneyed that it may be hardly accessible to people today, I believe it is the basic concept of all religions as well as of Buddhism.

Buddhism is compatible with science. I think Buddhism has never excluded the scientific approach of "perceiving things exactly as they are," and rather has in fact welcomed it.

However, people have given free rein to their desires, and, at the mercy of earthly desires and impulses, have lost sight of the fundamental concepts of non-self, dependent origination and the Middle Way that

enable them to perceive things exactly as they are. As a result, most likely, they have made light of the areas of futurology and the analysis of existing circumstances, and have given higher priority to technology and methodology.

If modern science is defined as science that aims to seek convenience and affluence, it has strayed from the right track of perceiving things exactly as they are. This is totally wrong, and modern science cannot really work to bring happiness to humankind, living beings and the entire world.

For this reason, we must eradicate the source of excessive desires, encourage the concepts of non-self, dependent origination and the Middle Way, and thereby create an environment conducive to the perspective of perceiving things exactly as they are. On this basis, we need to see all things and phenomena for what they really are in our present time. I am convinced that in our efforts to do so, we will be able to naturally realize what we need to correct and remedy and what we can get the most out of and develop. Moreover, we will be able to naturally find the path we should follow. This is due to the practice of perceiving things exactly as they are. It is the role of us, persons of religion and Buddhists, to put all the conditions into place and create an appropriate environment to restore and actualize the perspective of perceiving things exactly as they are in our contemporary society.