

LIFE AND CONSCIOUSNESS IN THE UNIVERSE

Geshe Jangchup Choeden

If we don't understand the role of life and consciousness in the Universe, we may end up doing more harm than good. What is life and what is consciousness? When do life and consciousness begin? Where and how do they thrive? Is it possible to improve life and consciousness? If so, how? These are tough questions. Different contemplative traditions and fields of science have tried to define the terms "life" and "consciousness" but are yet to reach consensus. How did life and consciousness evolve in the Universe? Did the great thinkers ponder this question and fail to find clear-cut, and universally acceptable answers? Many of the contemplative traditions of India developed a strong culture of studying life and consciousness, primarily to achieve a common human goal—happiness. It appears that mainstream communities of scientists have focused on a search for life beyond planet Earth, while ignoring the study of consciousness. Many Western psychologists, inspired by Eastern culture, have tried to address the importance of the study of mind and consciousness but research in this field is still limited. From a Buddhist point of view, the Universe is just one whole township built up by blocks of consciousness and matter, and consciousness plays an exceptionally greater and more important role than matter in achieving the common human goal of happiness.

Geshe Jangchup Choeden: Good afternoon brothers and sisters. It's a great pleasure to be here with you all, especially in the presence of His Holiness. The topic that I've been invited to discuss is life and consciousness in the Universe. Professor Chris Impey gave a precise and informative presentation this morning about the probability of life in the Universe, and the definition of life according to the field of astrobiology, along with his personal views.

The first important thing we need to note about life and consciousness is that we are discussing life and consciousness within this present Universe; the Universe in which we are dwelling. From this point of view, it is interesting to talk about the Universe itself. How the Universe came into existence is a question that human beings have pondered for a long time, perhaps since the beginning of human community. Different spiritual traditions and all the religions have tried to answer this question and in the past century and a half new answers have replaced the old.

As I am representing the Buddhist community, I will give a Buddhist perspective on how we look at the Universe and how it came into existence. Of the various views of cosmology presented in Buddhist literature, I will primarily rely on those given in the Abhidharma (special topics of knowledge) and specifically the Abhidharmakosha.

According to Buddhist cosmology the Universe came into existence as a result of karma. How this occurred is not clearly explained. Buddhist literature provides an explanation of how the Universe came into existence, but it is not as clear as the Big Bang theory.

Here we need to reflect on the meaning of the term "Universe" as

1 The Tibetan term *jig-rtan* is composed of two syllables/words: *jig* meaning "disintegration" and *rtan*, which means "support" or "contingent." Together they mean "disintegrating support," which can be interpreted as the "disintegration of the container being contingent upon the illusory notions of the contained." Another description of the Universe is "one that acts as a support system for sentient beings' death and impermanence."

used in Western cosmology. Is there an equivalent term in Buddhism? I'm not sure there is. When we speak about the "Universe" in the Tibetan language we use the term *Jig rtran gyi kham*. Unlike terms such as "planet Earth," "Solar System," "Milky Way galaxy," and "Universe"—which each refer to something of a different size—*Jig rtran gyi kham* has a number of connotations.¹ This may lead to ambiguity when Western scientists and Buddhist scholars discuss the "Universe."

When we learn in the Abhidharma how *Jig rtran gyi kham* came into existence, we also learn about time span. According to the Abhidharma it takes 80 intermediate eons² to complete one whole cycle, which includes an era of emergence, an era of existence, an era of ceasing, and an era of absence of the Universe. These four eras are required to complete a whole cycle, just as the completion of a year requires four seasons. This is the traditional explanation as presented in the Abhidharma. I don't claim it to be true.-

The next question is: Who created the Universe? This is a recurring question in the general community. Some spiritual traditions claim that the Universe is a design and that it was designed. If so, who designed it? Some of these traditions claim there was a creator who created the Universe and they provide explicit details of how this occurred.

Of the various scientific theories on the beginning of the Universe, the commonly accepted one is the theory of the Big Bang. This theory has prevailed for the past 100 or 150 years and is now commonly accepted in the scientific community; ironically it is taking the shape of a religious dogma. Experiments validate the theory as being accurate and precise. As I'm not an expert I'll leave that to the cosmologists, astronomers and physicists who may address this topic later on. The Big Bang is one way of looking at how the Universe came into existence.

2 80 intermediate eons equals one great eon.

Of the various theories in Buddhism, the most common is that following completion of the era of absence of the Universe, very subtle particles gradually formed into the coarse Universe. A time

span of twenty intermediate eons, one medium *kalpa*, is required for completion of the emergence of the Universe, which some Buddhist scholars have calculated to be 300 billion years.³ I can't verify the accuracy of this time span; when I studied this theory, I didn't learn how to prove it through experiment. Scientists are required to prove their theories through experiment so they have far more empirical data.

The next question we are looking into is how life and consciousness evolved in the Universe. This is a very tough question. According to the Abhidharma, life and consciousness recycle continually one after the other. Therefore, logically, there is no beginning point. From this perspective, the commonly accepted theory of natural selection does not completely explain the beginning of life and consciousness. The theory of natural selection is an important part of the science of evolution. However, it focuses on explaining the origin of living matter rather than addressing the origin of consciousness. I believe this is the wrong approach.

The Abhidharma and other Buddhist scriptures teach us that life has existed eternally; instead of explaining how it begins, emphasis is put on explaining how it continues through recycling. This theory applies to consciousness too. The Abhidharma does not tell us how and where life started; if life has existed without a beginning point the question is irrelevant. This is the Buddhist point of view on the beginning of life in general and it applies similarly to consciousness. This view is easily understood by those who reject the idea that the Universe and beings were designed by a creator.

As His Holiness reminded us this morning, the most important

³ Each of the four stages takes 20 intermediate eons, approximately 300 billion years each, or in total, 1.2 trillion years.

thing is human happiness and this is deeply related to consciousness or the mind. Therefore, according to Buddhism, it is very important to study and understand consciousness: How does it occur? How is it sustained? How can it be modified? How can it be controlled? How can it be improved? These are vast and important fields of study in Buddhist academia. So, too, the way in which life is sustained and recycled.

Buddhist teachings explain the recycling process of life through the law of karma and result. To understand the recycling process and continuity of life, we first need to answer the question, “What is life?” My friend Professor Impey has just explained the definition of life according to astrobiology. From the scientific perspective, the definition of life is surprisingly difficult to agree upon. Everyone agrees on the attributes of growth and reproduction, and that is one way of explaining life. Another definition that Chris put forward is the idea of life as flow of matter and energy, and that makes perfect sense.

Buddhism offers other definitions. Among the Abhidharma texts, the most widely studied and accepted in the Tibetan Buddhist community are the Abhidharmakosha and the Abhidharmasamuchaya. According to the Abhidharmasamuchaya, the primary function of life is to act as a support for consciousness and heat. This definition of life is the one most commonly accepted by Tibetan Buddhist scholars. On the other hand, the Abhidharmathasangho divides the life force into two: one belongs to the category of consciousness and is listed as a main mental factor; the other belongs to the category of form and is counted as the 6th sense organ.

To discuss the existence and emergence of consciousness we also need to define and understand consciousness. I have no idea what consciousness really means to scientists. Buddhism explains consciousness as something characterized by clarity in its nature, and having the function of knowing. According to Buddhist philosophy, these characteristics are indispensable to consciousness.

Up to this point we have discussed life and consciousness and their definitions. Now we look again into whether there is a beginning point of life and consciousness. As I mentioned earlier, according to Buddhism, life and consciousness, in general, had no beginning point. The Abhidharma, however, tells us that life began evolving on Earth as long as 19 eons ago.

How did life begin to evolve on Earth at that time? According to the Abhidharma, life moved down to Earth from higher realms where it had existed continuously during the era of the ceasing and absence of the Universe. Life remained in the higher realms without destruction. According to the Abhidharma the higher levels of existence are free from destruction and are not included in the meaning of the term *Jig rtan gyi kham*.

After the completion of the emergence of the Universe, when the Earth was young and just ready to host beings, a private being from the higher realms descended to Earth due to the power of previous karma. Over time, due to karma, more beings descended and these were the first points of the evolution of beings on Earth. This process of evolution continued step by step all the way down to the final stage of the era of the emergence of the Universe, which lasts for a total of 20 intermediate eons. Once the era of the emergence of the Universe is over, the era of existence begins, then the era of ceasing, and finally the era of absence, the empty era.

Once the Universe is completely destroyed with its debris swept away by strong winds, the era of absence (the empty era) begins. It, too, lasts for 20 intermediate eons and there is nothing except empty and open space holding the scattered particles. As mentioned earlier, the four eras of emergence, existence, ceasing and absence each last for 20 intermediate eons.

According to Buddhist texts, amoeba did not move step by step towards emerging into a new form of intelligence that finally ends up in producing human beings. Instead, beings of a much early period

were physically and spiritually more advanced than modern human beings. The first beings that descended from the higher realms had bodies made of light and could astral travel at will. This is the Buddhist view of evolution.

The next question I must address is: Where and how do life and consciousness thrive? Under what conditions do they flourish? According to scientists, and as mentioned in Chris's book, *The Living Cosmos*, they require nourishment such as air and water, and may also need carbon or amino acids. However, there are many unanswered questions. According to the Abhidharma, four types of nourishments are necessary: food, contact, volition, and concentration. Carbon could be a necessity for a limited variety of life—the Abhidharma doesn't mention carbon, as it wasn't recognized in those days, at least not with its present name. Many of the questions raised by scientists are new to Buddhism. When we say nourishment, we are referring to different varieties of nourishment. The nourishment that contains mass, taste, and liquid are necessary for the survival of a special variety of life, but not for all types of life. Contact is a different kind of nourishment that is necessary for different varieties of life. Volition and concentration are types of nourishment that are needed specifically for the sustenance of consciousness.

As I explained earlier, from the Buddhist point of view life is primarily supported by consciousness. If we look at life from this point of view it makes sense, because Buddhist scriptures count food, contact, volition, and concentration as nourishment required for the sustenance of life. Scientists, who have a different definition of life, would not see this type of nourishment as acceptable in terms of sustaining life.

Now let's find out if it is possible to improve life and consciousness and, if so, how? Scientists say it is possible to improve life and consciousness through methods ranging from medicine, business, and education through to technology etc. Buddhists say it is possible, too, but mainly through the spiritual methods outlined in great detail in

the Dharma, such as training in the Noble Eightfold Path and the Six Perfections. Learning about life and consciousness is important. As long as improvement remains a primary goal, spirituality is indispensable. Spirituality is different to science. Buddhist spirituality provides detailed methods of how to improve life and consciousness, how to make consciousness grow calm, stable, efficient and powerful. Improvement occurs when people are trained properly and dedicate themselves to the practices for extended periods of time. Specifically, when someone trains in mental concentration and insight meditation the employment of these techniques improves consciousness and elevates it to higher level and makes one's life more peaceful, satisfactory and happy.

Now let's look at another question: Is it possible to produce new life and new consciousness? Here, science probably says "yes" for life, but I'm not sure what the response is with respect to new consciousness. This is a question that makes me eagerly await the presentations of our scientist friends. Buddhism is very clear on this. Buddhism says "no"—there is no chance to produce a new life without the involvement of an existing life. Life existing at present is continued from a source life of the past; it is a long term recycling process. There is no chance at all to produce a fresh new consciousness without a source consciousness from the past. I remember David raised the question of whether it is possible to produce new life and consciousness with Chris earlier.

There are clearly huge differences in how scientists and Buddhists explain life. I think this is due to the way in which each defines life. According to Buddhism, it is not necessary to have any kind of form, or matter, to sustain life and have consciousness. Consciousness is able to sustain itself without any support of matter. This is completely different to the way in which scientists view life and consciousness. Scientific approaches are based primarily on day-to-day experience, detectability of matter through machines, and contemporary human interaction with the external world. Buddhism explains the Universe from a much wider perspective that creates huge differences between these two traditions. There could be specific findings of scientists that

concur with Buddhist studies of life and consciousness, and specific Buddhist theories of life and consciousness that scientists may assert through experimental studies. As the authentic scientific approach is unbiased, focused, research based, and impartial, it is appropriate to agree with science and scientists on particular findings.

Discussion

Monastic Graduate: In science we talk about the Big Bang as the beginning of the Universe, and in Buddhist traditions we talk about the emergence, existence, ceasing and finally the absence of the Universe, where there is a specific cycle for the beginning and the end of the Universe. When we bring these two traditions together, what are the diverging points and converging points between the two?

Geshe Jangchup Choeden: The long time span required for the emergence, existence, ceasing and absence of Universe as referred to in the Abhidharma is a key point of divergence. If Buddhists were to renounce this, I believe we would find many points of convergence with the Big Bang theory. But for Buddhists, discussion of and research on the birth of the Universe is not as important as it is to cosmologists, so Buddhist scholars have provided very limited research material on this topic. I hope that will change in the future.

David Presti (Moderator): I like the definition of life as a center of support for consciousness, and these are very interesting questions to consider. A discussion I have often had with monks over the years is where do you draw the boundaries around where consciousness is possible? For instance, consider a sentient being, perhaps a fly, and a plant. Is a plant a sentient being? I am wondering what you, or the Abhidharma, might have to say about what is possible. Can bacteria be conscious under these definitions?

Geshe Jangchup Choeden: I don't know if bacteria have intelligence or not. If bacteria have the ability to think, then I can accept that bacteria have consciousness and are sentient. Generally, we don't accept the idea that plants can think, and anything that cannot think is not seen as a sentient being. Thus, it all depends on whether bacteria can think or not.

David Presti (Moderator): What do you mean by “think?”

Geshe Jangchup Choeden: I mean whether bacteria can plan and, based on that planning, move to consume things and undertake some of the functions carried out by intelligent beings.

Monastic Graduate: From the Buddhist point of view, when we talk about consciousness we talk about a very subtle consciousness, and along with that we talk about subtle wind energy, the mount of subtle consciousness. If we combine these subtle wind energies, is it possible to produce a grosser level of wind energy that can be detected?

Geshe Jangchup Choeden: Different schools of thought in Buddhism recognize different theories. This explanation of subtle consciousness is generally found only in specific parts of the Tibetan Buddhist tradition. According to Tibetan Buddhism, it is very difficult to say whether the mount of subtle consciousness, which is known as subtle wind energy, can evolve to become coarse matter. Firstly, I haven't seen an explanation of such development in any text. Secondly, I think it is difficult to hold the view that subtlest wind can evolve to a level of coarse wind. Although the Abhidharma provides an explanation of the different levels of subtleness of mind, it doesn't get close to the subtlest level of mind that is explained in the highest yoga tantra.

David Presti (Moderator): Thank you. The topics we are learning about are so huge and bring up so many questions that ten minutes is not enough. There were many fine questions from the audience that we were reviewing over the tea break and we

will try to address as many of these as we can during the panel discussion later this afternoon. Now we will move on to the second presentation of the afternoon.