

BUDDHISM AND SCIENCE: ALLIES OR ENEMIES?

by Pinit Ratanakul

Abstract. Buddhist teachings and modern science are analogous both in their approach to the search for truth and in some of the discoveries of contemporary physics, biology, and psychology. However, despite these congruencies and the recognized benefits of science, Buddhism reminds us of the dangers of a tendency toward scientific reductionism and imperialism and of the sciences' inability to deal with human moral and spiritual values and needs. Buddhism and science have human concerns and final goals that are different, but as long as the boundaries between them are not trespassed, they can be mutually corrective and allied to benefit humankind. Buddhism must be open to the discoveries of science about the physical world as must all religions today, but no matter how much it may have to modify some of its ancient beliefs, its basic truths—the truths about human suffering and its release—will remain untouched.

Keywords: boundaries; law of conditionality; moral law; open enquiry; release from suffering; verifiable truth.

It is not difficult to consider whether science is an ally or enemy of Buddhism, for there are close analogies between Buddhist truths and some discoveries in modern science. An obvious analogy is the Buddhist fundamental belief that existence is orderly (*itippapccayata*) and that humans can discover that order inherent in the structure of physical reality for themselves. This natural order is understood as the law of cause and effect, which states the conditionality of all phenomena (*paticcasamupapada*)—

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that all phenomena are mutually conditioned as cause and effect of one another. Causation in Buddhism is therefore neither strictly deterministic nor completely indeterministic, for it refers to the conditioned state of being or the interrelated and dependent relationship of all phenomena. The present paradigm shift of modern science from the Newtonian mechanical model, which dissected the universe into separate parts, to a holistic model, which emphasizes the interrelationship of all levels of reality, accords with the Buddhist worldview, which sees the universe as a process—a complex of causal relationships.

Not being based on revelation, Buddhism has no divine commandments to be obeyed. Buddhism has a free and open spirit of enquiry and encourages the search for truth in an objective way. This religion therefore invites reasoned criticism and objective analysis of its truths and verification of them by personal experience. The Buddhist system of meditation is offered as a means of such verification by enabling the meditator to discover truth by him- or herself or, in Buddhist words, to see truth “face to face.” It is, perhaps, this free and open spirit of enquiry and the emphasis on verifiable truth that have attracted many intellectuals, including scientists, to Buddhism. Albert Einstein wrote that if there is any religion that is acceptable to the modern scientific mind it is Buddhism.

The Buddhist method of enquiry leads to the adoption of tolerance as a principal value for the seeker of truth. This spirit of tolerance enables Buddhism to be open to the discovery of truth by other means. In fact, there are many similarities between Buddhist concepts and scientific discoveries, particularly with regard to the evolution of the universe and life, the nature of physical reality, and the dynamic relationship between space and time. The scientific revolution, therefore, does not call into question the Buddhist belief as much as it has the beliefs of other religious traditions. In the encounter between Buddhism and modern science, science is more often found to be an ally than an enemy. Most modern scientific discoveries provide reasonable ground for the truths of Buddhism.

Buddhism departs from science in the kind of truth it searches for. The purpose of science has always been to investigate the physical world and to discover the laws by which it operates. Buddhism prefers to investigate the inner life, the realm of moral phenomena, and to find the moral and spiritual laws that humans can make use of for their spiritual development. While scientific discoveries help unlock the mystery of physical reality, the Buddhist investigation shows that the realm of moral and spiritual phenomena is open to human discovery, one in which the law of cause and effect operates as in the physical world. Inherent in the cosmic order are different causal laws (*dhammaniyama*) varying according to their spheres of operation. These laws are physical laws (*utuniyama*) in the material domain, biological laws (*bijaniyama*) in the domain of living beings, psychological laws (*cittaniyama*), and moral and spiritual laws (*kammaniyama*)

in the realm of morality. In the moral law Buddhism lays great emphasis on the law of *kamma*, or moral retribution. This law states a correlation between action and its accompanying consequences: one reaps what one sows. The knowledge of this moral law enables us to discover the cause of suffering and the release from it. The root cause is one's own ignorance (*avija*) of the true nature of existence, conjoined with dispositions of hatred (*dosa*) and greed (*lobha*), from which arise other human evils. It should be clear, then, that Buddhism is not concerned with the search for truth for its own sake, as pure science is, but with the kind of truth that can have a practical effect in the release from suffering and in the transformation of humankind. Of course, applied science also strives to lessen human suffering and to transform the external aspects of human life. But science as science can do nothing to change the human heart or to release it from the suffering that is caused by human moral failure.

Buddhism commends science as a promoter of knowledge and a benefactor of humankind. It is obvious that science has greatly increased our understanding of life and the world, and applied science, technology, has provided the means for better living—the cure of diseases, comfort, and convenience. No one can deny these benefits. But these benefits in many cases have been outweighed by the unintended perils science has introduced. Modern science has an optimistic belief that all human ills can be eliminated and all human problems solved. But this optimism is unrealistic. Despite scientific progress, human life will continue to be imperfect, darkened always by the shadows of grief, disappointment, and uncertainty.

It is here that Buddhism can make contributions to science. It can remind the scientist that scientific knowledge is not the only knowledge humans need and that scientific explanation cannot deal at all with questions about human spiritual and moral life. Just as the great religions recognize that they do not have absolute truth about ultimate reality, the scientist should be humble about his or her ability to attain the whole truth. Buddhism can help engender mindfulness in scientists to make them aware of the fact that science is not an end in itself. Therefore they have to be concerned with the effects of their discoveries, which may be harmful to the environment and to human life. Such concern for future effects is rather weak among modern scientists. Without this concern, science will not be a benefactor to humankind, as it has claimed, but a destroyer; certainly, it cannot be an ally to Buddhism.

Buddhism, which has long studied the psyche and has gained great knowledge about the nature of the mind and the craft of the heart, can perhaps contribute to the modern quest for understanding the psychosomatic unity of the human being and the working of the mind as well as to the development of techniques and practices that help relieve anxiety and transform destructive emotions into positive ones. This aspect of Buddhism is useful

for psychologists and psychiatrists in the treatment of psychosomatic sickness, neuroses, and mental disorders in their patients. Buddhist psychotherapy can restore calm and inner harmony in men and women living in our turbulent and disturbed world—and without the use of tranquilizing tablets.

On the intellectual side, Buddhism does not accept the view of scientific materialism, which reduces all phenomena including the mental to the physical and thereby makes the mind a by-product of matter (the brain). The objection is made on the ground that such a view rejects the relationship between humans and transcendent reality, in Buddhist terminology, the Unconditioned, which lies beyond finite conditioned existence. This relationship with transcendent reality is the *summum bonum* of all religions. Without it, total release from suffering and inner transformation are impossible. Buddhism, like most modern scientists who are aware of the complexity of different levels of existence and their interaction, rejects any simplistic reductionism, especially that which would eliminate human moral and spiritual freedom.

Science cannot contribute much to Buddhism, for most of its discoveries are only supportive of the truths of Buddhism, which were discovered some 2,500 years ago. The contemporary scientific stress on wholism, the interconnectedness and mutual influences of all planes of reality, and the insubstantiality of matter are all implicit in Buddhist teaching. Most scientists today agree that they have discovered indeterminism in the cosmic order, including life itself, as evidenced in quantum physics, thermodynamics, and neo-Darwinian evolution theory. In the light of this discovery, the scientific law of causality is modified. Before the discovery of quantum physics, for example, scientists believed that they understood the nature of the atomic process so well that, if the relative position, direction, and forces of all atomic units in the universe at any given moment were known, every future event in space and time could be accurately predicted. It was only a question of obtaining the data. With the discovery of quantum physics it was found that, although predictability held true of large numbers of atomic particles, it was not valid for individual atoms. The scientific law of causality was not absolute. It could be applied only statistically or qualitatively, where large groups of atoms were being dealt with. This new concept opened the way to what is called the uncertainty principle. And this principle made room for the idea of free will, which had necessarily been absent from the classical scientific worldview with its idea of the universe entirely determined by causal laws that admitted no variation.

The Buddhist law of causality, as already mentioned, is not a rigid causal law. It only states the interconnectedness or the conditionality of all phenomena, that is, that each being is dependent on the others. The law therefore makes room for free will, without which liberation from the life cycle is impossible. Buddhism does not deny that humans are conditioned

by their circumstances and environment; but the conditioning is not absolute. It may almost amount to determinism, and the margin of free will may be very slight, but it is always present. Without it, life would be without meaning, and it would be absurd to seek any meaning. Because of this inherent element in humans it is impossible to predict with any degree of certainty the expression of the free will of any individual in a given situation. For example, from the course of events it is possible to predict that Thailand will be at war by a certain date. But it is not possible to predict of any individual Thai that he will actively participate in the war. He may be a conscientious objector, or he may not be physically fit.

It is not of great importance whether all scientific discoveries are consistent with Buddhist beliefs, for Buddhism and science each has its own boundary of investigation. If the discovery of uncertainty and of random elements in the evolutionary process is accepted scientific truth, then Buddhism may have to modify the way it talks about physical laws to give room to the amount of indeterminacy in physical reality. This modification has no adverse effect on the fundamental Buddhist teaching, which is concerned with suffering and the release from it, and its conviction of human freedom in an open universe.

On the other hand, a scientific outlook can assist the Buddhist in weeding out the pre-Buddhist magico-animistic elements that have become entwined with Buddhist teaching and tend to distract the Buddhist from following the Buddhist path to wisdom and compassion. A scientific outlook is therefore considered necessary not only for a truly moral and religious life but also for the continual self-examination that such a life demands.

In conclusion, for the Buddhist, science reinforces the Buddhist belief in the importance of critical investigation and personal experience in morality and religion. The Buddhist also commends science for its ability to expand our knowledge of physical reality. But when scientists trespass on the domain of morality and religion, they must fail to provide adequate explanations, for science is not competent to deal with value questions. The Buddhist therefore rejects the claim made by some sociobiologists that genetic makeup directs human morality. Moral and spiritual growth in humans is not merely a matter of genes but of freely following moral and spiritual laws. However, the Buddhist admits that in the realm of physical reality scientific discovery needs to be taken seriously by every religion, for its accepted truth is the basis of modern knowledge. Every religion has to adapt itself to the accepted knowledge of its time if it is to remain a living religion and be able to communicate meaningfully to the modern mind, which finds it more and more difficult to believe in dogma unsupported by reason and personal experience. Buddhism, throughout its long history, has been able to reinterpret and to adapt itself to different

cultures and new historical circumstances. Today, this adaptability is apparent in the dialogue between Buddhism and modern science that is taking place in the East and the West—dialogue that gives witness that Buddhism is more an ally than an enemy. The positive interaction and cooperation between science and Buddhism will help humankind in its search for an understanding of reality and for release from human suffering.