

## On *Ba* Theory

Masayuki Ohtsuka (Waseda University)

### I. *Ba* theory

*Ba* theory is an idea existing from ancient times in the Eastern world, and its characteristics are reflected in Buddhism and Japanese philosophy. In short, it can be characterized by the idea of non-separation of subject and object, and non-separation of the self and the other. In modern society, we usually think that the subject and the object are separated, and that the self and the other are entirely differentiated. However, in the East, the subject and the object are not clearly separated; even the self and the other have not been considered as clearly separated. There is thus *ba*, in which we encompass both the subject and the object and both the self and the other. *Ba* can be the place to include them. It can be said that we have been living in a place like this. It does not assume that the object and the subject are present in completely different places or the other and the self live separately. *Ba* theory is therefore based on the idea that life is a part of nature and that these things are connected to one another.

Professor Emeritus Hiroshi Shimizu, a biophysicist, figured out that living organisms live in the *ba* of non-separation of the self and the other, and he named this study of how the activities of living organisms are practiced in this *ba* “the relational study of biological self organization.” His idea is the application of self-organization in the science dealing with complex systems. It means that the living organism is self-organizing in the *ba*. In other words, it can be said that the individual cells and the organism constituting a living entity are not divided but present in a single *ba*, and that they interact with each other. Similarly, the life of the whole of nature and individual life cannot be separated, but rather interact with each other. It is *ba* theory that assumes man and nature and the self and the other integrate themselves by interacting in *ba*.

### II. *Ba* theory and contemporary physics

Modern science, which has been based on reductionism up to the present, is now said to have come to an impasse. It is because of this that modern science is considered to lack consistency with nature. Modern science assumes that human consciousness (subject) and the object (material) are completely independent of each other, and it has the perspective of looking at objects from the outside. But in a precise sense, modern science fails to realize the aspect

that human object and subject are not clearly separated, and that the self and the other are not clearly separated. Such associations have been ignored in modern science.

*Ba* theory is born out of natural systems, and it is thought to be consistent with our view of nature that contemporary physics presents. Contemporary physics does not consider that things are away from *ba* and self-exist independently. In that sense, the concept of *ba* can be more than modern scientific thinking, and thus can be called post-modern science.

Physics developed from Newtonian physics into Quantum Field Theory in the twentieth century, and a new science dealing with complex systems appeared at the end of the twentieth century. Since reductionism is based on Newtonian mechanics, it is not compatible with the post-modern science. *Ba* theory is consistent with Quantum Field Theory and Complexity Science, and has been studied as a basis for Complexity Science.

*Ba* theory, as mentioned earlier, focuses not on the entity but on the *ba* in which the entity is located. Contemporary physics considers the entity not to be present on its own, but to be present in the field/*ba* where collection and distribution are repeated. It is only after the kinetic energy and its position are determined that the entity is confirmed as existent. However, contemporary physics (Quantum Field Theory) reveals that we cannot ascertain the position and momentum simultaneously. Only when it is placed in the field/*ba* is the presence of the entity revealed. Modern scientific research, in which the reductionism was the way to approach the entity, disconnected the entity from the field/*ba*. However, the entity that is far from the field/*ba* does not exist.

The science of complex systems is a scientific way of thinking that deals with the area beyond modern science. Modern science tries to deal with all the phenomena of nature. But, in fact, with regard to social and biological phenomena in particular, they frequently face unpredictable results—e.g., a big difference motivated by slight differences in initial conditions. The science of complex systems handles this unpredictable consequence.

In complex systems, there is a phenomenon called “entrainment.” This phenomenon has a function that while two things pull each other, they induce and fit each other under certain conditions (called constraints), and that during this function some new creation is likely to emerge. The idea of evolution revealed by Darwin is that evolution is not due to certain objective intentions but rather due to a self-organizing of nature. Such an idea under the science of

complex systems enables us to explain the mechanisms of evolution. The relational study of biological self-organization calls this mutual induced fit “entrainment” and holds that something new comes out from the fit “emergence.” Emergence is the way complex systems and patterns arise out of a multiplicity of relatively simple interactions. Emergence is central to the theories of integrative levels and of complex systems. There is always something unpredictable about what new things will come into being. Since there is no pre-determined scenario, *ba* theory can explain this by illustrating it with improvisational theater. Such an unpredictable phenomenon is also often seen in our language activities in daily life.

### III. *Ba* theory in brain science and the study of animal behavior

As mentioned earlier, *ba* theory has characteristics such as non-separation of subject and object and of the self and the other. In other words, in *ba* theory, it is considered that *ba*, including the self, involves both the subject and the object, not that the object is separated from the subject. In addition, it is regarded not as that the self and the other are separated from one another, but as that they integrally co-exist in *ba*. Such an idea is reflected in the contemporary neuroscience and animal behavior.

By separating the self from the other, Descartes places the most importance on the individual subjectivity (*cogito*)—i.e., “I think therefore I am”—and claims that one’s subjectivity differs from the other’s. Modern science has been made based on this assumption. Modern society makes individuals separate from others, and works based on the idea of differentiating the subject from the object. However, brain science reveals that the activity of human consciousness (subject) is not separated from the brain as the object, and that objects regarded as objective entities do not accurately reflect the outside world. They are, in fact, selected, processed, transformed, and ordered through the brain. That is to say, to be exact, the subject and the object cannot be separated from one another, and this is in accord with *ba* theory.

It may be regarded that human beings are able to control their bodies with their consciousness as they want. However, the human consciousness controls only some part of human behavior. It is clarified that in many cases there are sensory inputs without our awareness, and that the command is issued to make the muscles contract prior to our awareness, since it takes several hundred milliseconds before we realize that consciousness. (*Mind Time: The Temporal*

*Factor in Consciousness* by Benjamin Libet: 2004, Harvard University Press). The belief that our free intention moves our body is not necessarily true. Rather, we have a subconscious sense of co-existing that has relevance to *ba* theory.

In addition, humans have empathies, and the feelings of caring for others. Such consideration combines the self and the other and creates an attitude of mutual cooperation between humans. The study of animal behavior reveals that such empathy and cooperation are not typical only to humans. Even for nonhumans, there is something called empathy, and it has become clear that nonhumans take concerted actions to care for each other (*The Age of Empathy: Nature's Lessons for a Kinder Society* by Frans de Waal: 2009). It implies that both humans and nonhumans have their own internal mechanism to maintain their own lives in the environment of the greater whole. This is supported by the idea of non-separation between the one and the others, which relates to *ba* theory.

To conclude, we may say the following. In order to understand living organisms as being with non-separation of subject and object, and with non-separation of the self and the other, it is necessary not to consider the object by separating it from the subject, and the other by separating it from the self, but to understand that the object or the other is non-isolated from the subject or the self, and that they do co-exist in their relativity. This idea is the heart of *ba* theory.

#### IV. Context and *ba*

According to Dr. Mey, "Context is a *dynamic*, not a static concept: it is to be understood as the continually changing surroundings, in the widest sense, that enable the participants in the communication process to interact, and in which the linguistic expressions of their interaction become intelligible." (*Pragmatics: An Introduction*, Second Edition, by Jacob L. Mey, 2001: 39). This viewpoint is very close to the concept of *ba*; however, some aspects are different from *ba* theory. The following discussion deals with what differs from the perspectives of *ba*.

First, although the context is understood as the "environment" existing between the speaker and the listener, in *ba* theory "environment" as *ba* includes both the speaker and the listener. In addition, this theory considers that there is a shared ground beyond a mutual body perception held by both the speaker and

the listener. The concept of *ba* shows that they are mutually induced, and there are emergent relations located between them.

Second, *ba* theory considers that in the “environment,” considered as the context, the speaker and the listener are non-isolated. Conversations emerge as a result when both the speaker and the listener relate to one another and share their contexts. This integration or oneness lies not only between humans, but also between lives of all kinds of animates. For instance, there may be some emotional ties between owners and their dogs and horses. However, humans involve a level of emotional empathy that is much stronger than the animals. Slight changes in facial expression may provide much information beyond words. The activities may be practiced in an integrated language that is enough to eliminate the distinction between the speaker and the listener. *Ba* as the non-separation of the self and the other is the place in which the unity of the self and the other is born, and it is believed to exist at the subconscious level.

#### V. The philosophy of the Japanese, Buddhist thought, and *ba* theory

Underlying *ba* theory are the Buddhist thought and the Japanese philosophy. In the West, subject and object are completely separated from one another, and the self and the other are understood as being opposed. However, in the East, subject and object are not considered separately, and the self and the other are not differentiated from one another. This shows fundamental differences between Eastern and Western perspectives. Buddhism significantly expresses this oriental philosophy. In Buddhism, all life is connected, and the subject and the object, the self and the other are not separated from one another. All are connected with each other by a causal relationship (Japanese *engi*: Sanskrit: *pratiitya-samutpaada*, meaning a causal relationship).

There exists a concept that all things such as substances and spirit are not originally separated, and the concept is considered as *mufunbetsu* (meaning “considered not separated”). We consider things by separating life from death, existence from nothingness, animals from human beings, men from women, fools from sages. In Buddhism, however, everything is connected in the chain of cause and effect, and continues to change. Each is neither divided, nor remains the same. What I am is always changing and is never the same. Everything is changing in the chain of connectedness. Thus, I am just me at the same time I am you, and you are just you at the same time you are me. If you and I are different from each other, I was in my yesterday but today am not. Because I am

you, I and you are not in dispute. Because we belong to some of the same nature, you and I are not fighting.

It is Mahayana Buddhism and Jodo Shinshu Buddhism that believe in this worldview. In addition, the concept of *ba* occurs as a word to represent a phenomenon that is not being divided. In other words, it does not mean that things are independently self-existent. Rather, it is the reality that things exist interacting and connected to each other. This is the basic idea of Buddhism.

Daisuke Suzuki names this the “logic of *sokuh*” (meaning “immediate non-logical” or “the logic of sive / non: logic of  $A = \text{non } A$ ”). In this logic, he says that the reality is *mufunnbetu* apart from the wisdom of separated status by language. But, we cannot see the structure of the world only in this *mufunnbetu*. He further states that when you have confirmed *mufunnbetu* behind the wisdom of separated status by language, you should come back again to the world of separation. If you have done this, you can see significant difference in the foundation of worldview between the narrow view trapped by the separation and the sensible view of the world based on the understanding that separation does not exist.

The separate worldviews are not absolute. By recognizing the existence of *mufunnbetu* and then relativising various kinds of knowledge segmented through language, we can be free from *funbetsuchi* (meaning the wisdom of being separated by language). Then, we come to the stage where we can relativize the way of segmentation by language. It is in this way that we can relativize life and death, and the self and the other. Obsessions with life as opposed to death and with the ego as opposed to the other are therefore unlikely to appear. If we separate life from death and the self from the other, obsessions with life and the self come out. However, once we realize that there is non-separation, we are unlikely to obsess about such things. This is the way of thinking of Zen Buddhism and the Jodo Sect of Mahayana Buddhism that is representative of the religious belief of the Japanese people.

Behind *ba* theory, there is the wisdom of *mufunnbetu*. What exists are *ba* and its function, and it is in this *ba* that language is formed by segmentation of reality, but language is only relative. What exists is *ba* that cannot be divided into an individual entity. Ego is not a principal, but one position with a boundary of obscurity in *ba*. “I” as the subject does exist independently, but it also exists dependently with the other. This is the heart and essence of the idea of *ba* theory.