

# **Discrimination between Philosophy of Science and Technology and Dialectics of Nature**

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**Abstract:** Dialectics of Nature is now interpreted as Philosophy of Science and Technology, which has become a fact. As far as the scientific system is concerned, the viewpoints and contents of Philosophy of Science and Technology are in accordance with Marne's Dialectics of Nature. There are great differences between the Chinese and the western Philosophy of Science and Technology. Dialectics of Nature directs the humanistic culture of human and society, pays attention to the internal observation of human itself and social life, and has certain research on the value and significance of human life and the way of existence.

## **1. Introduction**

Philosophy of Science and Technology, which mainly studies the laws of science and nature, explains the phenomena of science and describes natural laws. In the construction of Philosophy of Science and Technology in our country, it is applied on the basis of Marxist natural philosophy, and at the same time absorbs the advantages of foreign countries. The advantages of critical philosophy and positivist philosophy have formed an independent system with Chinese characteristics. However, it is not enough for China's Philosophy of Science and Technology to absorb the ancient philosophical elements. There is still a great room for further improvement. Therefore, this paper makes a concrete analysis of the dialectical relationship between these two from the perspective of Philosophy of Science and Technology.

## **2. Dialectical Relationship between the Dialectics of Nature and Philosophy of Science and Technology**

There is a kind of dialectical and unified relationship between Philosophy of Science and Technology and Dialectics of Nature <sup>[1]</sup>. It is found that Philosophy of Science and Technology originated from Dialectics of Nature. On this basis, it developed and presented some particularities. It mainly studies the natural view, science and methodology, method and technology view, society and science. The natural view is formed on the basis of Marxism combined with the development and changes of the times. The description of its basic form has been further improved, including the natural view of the times and the Dialectics of Nature. In the Dialectics of Nature Science, the Philosophy of Nature, Science and Technology has been formed as well as the natural view in different times. Scientific methodology and scientific view emphasize the characteristics of natural science. Due to the historical particularity of Philosophy of Science and Technology and Dialectics of Nature, it is believed that they have a certain role in promoting science and technology in production. Methodology is closely related to the technology view, which can be analyzed from the actual role and specific functions, and can objectively evaluate the methodology and technology.

The Dialectics of Nature originated from the nebula theory. The natural laws of celestial bodies have been shown and formed the school construction. In the 19th century, scientists put forward the theory of cell, revealing the historical construction and development of nature. Dialectics of Nature inherits the idealistic philosophy and is the organic combination of nature and science. Since material movement and material thinking were put forward and the materialist system of natural science was constructed, the dissemination of Dialectics of Nature has been widely disseminated in China.

### **3. Transformation from Dialectics of Nature into Philosophy of Science and Technology**

The development process of ancient dialectics such as the Materialist Dialectics, Engels believed, is closely linked with the development of natural science <sup>[2]</sup>. More than 100 years ago, the dialectical nature of social and historical materialism and three phenomena of nature were put forward. A preliminary materialist dialectics was then formed. With the revolution of physics, more dialectical thinking has been triggered. Naturalists have begun to study this topic in depth. They have studied the relationship between things and found the changes in them. Through repeated reforms, almost every technology has been greatly improved, for instance computer technology, biotechnology, new energy technology, marine technology, electronic technology and technology. This research also has a great impact on people's social outlook and understanding, which makes people change from paying attention to nature itself to understanding and reforming nature.

### **4. Difference between Dialectics of Nature and Philosophy of Science and Technology**

Philosophy of Science and Technology is separated from and is essentially different from Dialectics of Nature. As a new subject, it is concluded from Engels' achievements in natural science <sup>[3]</sup>. Starting from nature and human beings, it mainly studies the laws of nature, science and technology, and philosophical and dialectical problems in development, involving the interaction between society and science. Dialectics of Nature is the exploration and observance of the meaning and way of people's survival value and the humanistic relationship and humanistic culture between society and people. Whether from the external or from the connotation, there are obvious differences between the two. One is different objects of study and the other is different connotations. Dialectics of Nature studies the laws of nature, thinking and society. While Philosophy of Science and Technology has a relatively small scope of study. It only studies the application and understanding of science and technology of natural science and technology, which is applicable to the relationship between man and nature. They are different in connotations. Philosophy of Science and Technology is an organic combination of world outlook and methodology while Dialectics of Nature is a kind of dialectics which mainly studies the laws of natural thinking in society and the application method.

### **5. Differences between Chinese and Western Philosophies of Science**

Many people support the view that Dialectics of Nature and Philosophy of Science and Technology should be separated. Because there is a lot of integration between them. Both adopt a philosophical perspective to study science, which is not confined to Marxist philosophy. Through the study, we can see that there are principled differences between the two. The research direction of Philosophy of Science and Technology is to take the view of nature as an important component. Western philosophical sciences resolutely oppose the violation of natural sciences. Western natural scientists, who study scientific theories and concepts based on human experience and perception, have not proved whether they conform to the nature. Chinese Philosophy of Science and Technology is based on Marxist Materialist Dialectics while the western philosophy of science resolutely opposes it. Popper's Marxism can be regarded as pseudoscience. By comparing the western and China's Philosophy of Science and Technology, we can see that the former is not based on Marxist theory, while China is. Marxist philosophy, with an important special significance in China, is the basis of Chinese Philosophy of Science and Technology. The two theoretical systems of Marxism are materialistic view of world and dialectical view of nature. Dialectical view of nature belongs to the scope of philosophy of science. Natural science can carry forward and disseminate Marxist thoughts. The difference between the eastern and western philosophy of science lies in the unity of China's Philosophy of Science and Technology and Dialectics of Nature. Dialectics of Nature in Engels' era share the same views as Marx's Philosophy of Science and Technology in the 19th century. Today's Philosophy of Science and Technology is the manifestation of Marx's Dialectics of Nature. China's Philosophy of Science and Technology and Dialectics of Nature

represent the western philosophy of science.

## **6. Philosophical Development of Science and Technology in China from the Perspective of Dialectics of Nature**

Science and technology have a direct impact on the formation of productivity theory and scientific view, which is put forward in Marxist thought. Science and technology improve production efficiency, and play a huge role especially in modern science. They are closely related to productivity, which can have a great impact on the overall development of productivity and productivity factors, playing an important guiding role in China's modernization construction and the development of science and technology. Nowadays, Dialectics of Nature takes science and technology, society and technology as the core contents and studies the development of science and technology in the world which summarizes the understanding of natural law by human beings. The philosophy of Dialectics of Nature is quite different from the research of science and technology. Dialectics of Nature is a summary of existing scientific achievements. The philosophical science which understands and improves nature embodies the principle of dialectical materialism, its application in science and its manifestation in nature. From a philosophical point of view, the development of science is summarized and the theoretical basis is provided through methodology and epistemology. It is of great guiding significance for the development of human science and technology, the coordination of the relationship between nature and human, and the relationship between society and science. Moreover, it provides a solid theoretical basis for the scientific world outlook and has great theoretical significance for Marxist philosophy.

## **7. Diversity in the Two-story Structure of Philosophy of Science and Technology**

Dialectics of Nature is a relatively large topic with pluralism. It has been defined as the Philosophy of Science and Technology. However, this topic sometimes increases but sometimes decreases and changes greatly. In recent years, the diversity of Philosophy of Science and Technology belongs to a two-storey structure. One is pluralism and represents the teaching theory system, including the teaching system of Dialectics of Nature. It mainly talks about public politics to graduate students, which belongs to the nature of Marxism. The textbooks are centered on the Dialectics of Nature of Marxism and Engels' thoughts. Meanwhile, it always absorbs the latest ideas of Philosophy of Science and Technology as well as the concept of science. It also helps graduate students understand Marxist scientific and technological concepts and natural concepts, as well as the relationship between society and science and technology. In the teaching system, including the teaching material, it can also be used for undergraduate and postgraduate students as an optional course. Dialectics of Nature is basically the same in contents. In arrangement, it is more flexible. The other storey is the research system, in which there are various fields and disciplines, such as philosophy of science, engineering philosophy and history of scientific and technological thought.

The Western Philosophy of Science and Knowledge Science studies philosophical problems in the natural sciences, philosophy of science and culture, science and technology, and macro-factors in the society, research technology policy, management theory, the western social sciences, history of scientific and technological thought, and the scientific and technological problems arising in the society. It belongs to a history subject. However, in philosophical thinking, Philosophy of Science and Technology can not be separated from the history of the development of science and technology, as well as the understanding of practical experience. Some philosophers study the history of scientific and technological ideas full-time or part-time. Through the internal connection of two storeys, as well as the external unity and the introduction of Dialectics of Nature, the teaching system of Philosophy of Science and Technology shows the framework, mature achievements and research scope. There is a far-reaching relationship between the two storeys. Philosophy of Science and Technology is strengthening the characteristics of Marxism. We can start from two aspects and speed up the study of Marxist philosophy of science. This time, we should

adhere to the Marxist viewpoint, stand and method. Therefore, the diversified structure form under the two storeys is very reasonable for a young discipline. The mutual promotion and dependence between the two storeys, as well as the common development and common restriction promote the development of the discipline. Dialectics of Nature has been transformed into philosophy of science as well as is an important part in the education of Philosophy of Science and Technology. From its name, we can see that Dialectics of Nature is the Philosophy of Science and Technology.

## **8. Conclusion**

Philosophy of Science and Technology and Dialectics of Nature are both philosophical theoretical topics based on science and technology and nature. There are great differences between them and there is a very precise relationship. Philosophy of Science and Technology is the present manifestation of Dialectics of Nature. Dialectics of Nature is a summary of between man and science, between man and nature, and the application of Marxism. While Philosophy of Science and Technology inherits and develops the Dialectics of Nature, and studies the external factors of human and society on the basis of philosophy and technology, which is also the inevitable trend of social development.

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