

Summary of the Evolution from “Dialectics of Nature” to “Philosophy of Science and Technology”

Zhuoxuan Lv

Inner Mongolia University Nei Monggol Hohhot Municipality 010000

Abstract: Dialectics of Nature has always been an important part of Marxist philosophy, which can not only help people find the essence through phenomena but also explore the objective laws of nature, society and thinking. Philosophy of science and technology is the continuation and result of the development of dialectics of nature, which not only combines materialism but also combines natural laws, human knowledge, science and technology, and so on. It can not only help people find the law of natural and social development, but also find the law of scientific and technological development and new trends so as to promote the harmonious development of socialism. Therefore, the philosophy of science and technology is the inevitable trend and result of the development of dialectics of nature, which should be paid attention to.

Keywords: Dialectics of Nature; Philosophy of Science and Technology; Difference; Evolution

Dialectics of Nature belongs to speculative natural philosophy and is a continuation of natural philosophy, which not only reveals the objective laws of nature, but also reveals the objective laws of society and thinking, and is the core content of materialism theory. Materialism is the main content of Marxist philosophy. Therefore, dialectics of nature has become an important part of Marxist philosophy. In dialectics of nature, human society is constantly progressing and developing and it influences and promotes each other with the natural environment. All production activities should be carried out in combination with the objective laws of nature to ensure the harmonious development of human society and the natural environment. Philosophy of science and technology is a new philosophy formed by dialectics of nature with the development of modern science and technology, and it is also a continuation of dialectics of nature, which can reflect the objective laws of natural science and technology. Therefore, this paper summarizes the evolution from “Dialectics of Nature” to “Philosophy of Science and Technology” according to relevant literature.

1 Difference

Philosophy of science and technology is based on the development of dialectics of nature, with a close relationship between them, that is, philosophy of science and technology has continued the tradition of dialectics of nature, and it is a new philosophy formed by constantly incorporating new scientific and technological elements under the promotion of social development, which leads to certain contradictions between philosophy of science and technology and traditional dialectics of nature. Dialectics of Nature is an integral part of the Marxist philosophy system, the essence of which is to study natural science. It originated from German classical philosophy and is an orthodox philosophical ideology in China. The whole dialectics of nature pays more attention to the study of social reality development and natural laws. Although “philosophy of science and technology” evolved based on dialectics of nature, it pays more attention to the development of science and technology, which is quite different from traditional German classical philosophy in terms of ideological tendency and thinking level. Some speculative natural philosophy also rejects ideology and emphasizes that science and technology become the independent development direction. Compared with dialectics of nature, it has a more convergent research scope and more specific research content^[1].

The relationship between the dialectics of nature and the philosophy of science and technology is complicated, but it is undeniable that dialectics of nature cannot be replaced by other philosophical systems. The same to Philosophy of science and technology that it can't replace the dialectics of nature. Literature shows that “philosophy of science and technology” is understood as a new paradigm of dialectics of nature, which is a new natural philosophy theory based on Engels' philosophy theory and scientific and technological elements^[2]. But in fact, there are many differences between the philosophy of science and technology and dialectics of nature, which are mainly reflected in the following two points: First, the basic connotations are different. Dialectics of nature belongs to the category of “dialectics”, which is a special philosophical system and mainly studies objective laws. Philosophy of science and technology is a component of a philosophical system and a comprehensive embodiment of world outlook and methodology; Second, the research objects are different. Dialectics of Nature focuses on the objective laws of nature, society, and thinking itself. Philosophy of science and technology is to expand natural philosophy and deeply study natural science and technology, the relationship between man and nature, etc.

2. Evolution (History)

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“Dialectics of Nature” is a systematic theory and belongs to the theoretical system category of Marxist philosophy, which not only reflects the Marxist view of nature but also the Marxist view of natural science so it can unify Marxist philosophical world outlook, epistemology, and methodology. Dialectics of nature will gradually reveal the dialectical relationship, the objective law of nature and the objective law of harmonious coexistence between man and nature driven by the development of nature and science and technology. With the gradual enrichment of human activities, the gradual acceleration of social development and the improvement of natural transformation, the research direction of dialectics of nature has gradually expanded from natural laws and social laws to the relationship between man and nature, science and technology, and other fields, making the research field of dialectics of nature more and more extensive, and the research content is more and more abundant. Then it develops into a more comprehensive theoretical system of the philosophy of science and technology [3].

“Dialectics of Nature” originated in Germany and was put forward by Friedrich Engels (German philosopher), who successfully expressed the theory of dialectics of nature. After his death, Marxist philosophy and Engels’ thought were deeply studied. With the development of science and technology, the limitation of studying only natural laws, social laws and thinking laws has been broken that the integration of social development, natural science and science and technology has been realized [4]. The evolution from “dialectics of nature” to “philosophy of science and technology” not only reflects the present social development but also reflects the law of human development and natural change. It is concluded that “natural law” is the main influencing factor of the development of human society, that is, only by finding the objective law of nature and the objective law of society can we find a road suitable for the harmonious development of human society and natural environment.

Dialectics of Nature was introduced into China as early as the last century. However, the academic environment was poor with few related scholars at that time, which led to the lack of remarkable academic achievements in the study of dialectics of nature. However, since the reform and development, China’s science and technology, political culture, and social economy have entered rapid development, which has created a suitable cultural, technical and economic environment for the academic research of dialectics of nature, and promoted the rapid evolution of dialectics of nature to the philosophy of science and technology.

After China moves towards international development, the research on dialectics of nature is becoming more and more mature, which has passed the dark ahead of the prosperity of economic development and ushered in the dawn. As a result, the research on dialectics of nature in China has gradually improved the corresponding philosophical theoretical system after absorbing a large number of excellent foreign construction experiences. Based on the country’s situation, the philosophy system of science and technology, which conforms to the law of social development and the demand for scientific and technological development, has formed and played a positive role in promoting the harmonious development of socialism in our country [5]. Philosophy of science and technology spans natural science and social science, including natural philosophy, philosophy of technology, philosophy of science, and other scientific projects. Its research scope will continue to expand with the development of society.

3. Conclusion

Philosophy of science and technology is closely related to dialectics of nature, that is, dialectics of nature is the foundation of the philosophy of science and technology, while the philosophy of science and technology is the result of the development of dialectics of nature and the key to the harmonious development of nature and society. Therefore, they not only attract the attention of philosophers and thinkers but also lead the attention of people from all walks of life. Although the philosophy of science and technology evolved from dialectics of nature, there are still many differences between them, that is, philosophy of science and technology is integrated with modern science and technology, while dialectics of nature is natural philosophy, and the combination of German classical philosophy and Marx’s materialism lacks a philosophical theory of science and technology. Comparatively, “Philosophy of Science and Technology” is more in line with the requirements of the development of modern science and technology society, but it cannot be separated from the support of dialectics of nature. Both are very important to the harmonious and healthy development of society. Therefore, the above briefly analyzes the difference between dialectics of nature and philosophy of science and technology and based on which how dialectics of nature evolved into “philosophy of science and technology” is analyzed.

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