

The Thought of Marx and Engels on Science and Technology and Nature

Lu Li^a, Leifeng Wang^b

School of Marxism, Jingdezhen Ceramic University, Jingdezhen, 333403, China

^a2369522845@qq.com, ^b1625283070@qq.com

Abstract

Xi Jinping's important discourse on promoting ecological civilization is not a water without a source or a tree without roots. It is also developed on the basis of absorbing the advanced ideas of our predecessors. Generally speaking, Marx and Engels' thought on the relationship among science and technology and nature, the thought on science and technology and nature among the main leaders of the Communist Party of China since the founding of China, and the thought on the relationship among science and technology and nature in the Chinese traditional culture are the most important theoretical sources. This paper analyzes the content of the relationship between Marx and Engels on science and technology and nature in four aspects.

Keywords

Marx; Engels; Science and Technology; Nature; Analysis.

1. Introduction

Marx and Engels' life is in the first period of science and technology revolution, in human history, the first time get such rapid development, the science and technology played a very important role in the improvement of social productivity, marxx marveled at "the bourgeoisie in its less than one hundred class rule created in the productivity, more than all the productivity, and big". [1] machines, ships, railway, telegraph and many other inventions have been made. At the same time, although the development of science and technology has deepened people's understanding of nature to a greater extent and made better use of nature, it is also at the cost of a certain natural environment. Although the development of science and technology is more conducive to the development of human society, the problem of natural environment has begun to emerge. The development of science and technology damage to the natural environment also gave attention, Marx and Engels formed the ideological system, specifically, Marx and Engels' content of science and technology and nature is the expression theory of the relation alienation of science and technology and nature, the cause theory of relation alienation, the methodology of relation alienation solution, and the value theory of relationship harmony of four aspects.

2. The Expression Theory of the Alienation of the Relationship among Science and Technology and Nature

In the early capitalist society, the development of science and technology was more conducive to the development and utilization of natural energy. Therefore, in this period, the problem of energy shortage did not exist, and the main natural environmental problems were more reflected in environmental pollution. Engels, in " The State of the Working Class in Britain, revealed the serious air pollution problem in London, Britain."The air in London will never be as fresh as country and oxygen." [2] This phenomenon exists not only in big cities like London, but also in all industrialized cities, and the large consumption of coal has become one of the

important causes of air pollution. Engels in "Letters from the Wupper River Valley" revealed the pollution of the river water due to emissions from factory dye. The reason the Wupper River was dyed red "entirely from many dyeing workshops using Turkish red paint".[3] In addition, Marx focused on the influence of the development of science and technology on the fertility of the land, and put forward the famous theory of material cycle fracture. Marx believed that although the development of science and technology has improved the fertility of land, but this phenomenon is temporary, in the long run, is a kind of damage to land fertility. Because the division of labor generated by scientific and technological development leads to the separation of urban and rural areas, the separation of the two leads to the materials provided by rural areas for urban consumption cannot be returned to the countryside, thus leading to the rupture of the material circulation between rural areas and cities.

3. The Reason of the Alienation of the Relationship among Science and Technology and Nature

Marx and Engels believed that although the development of science and technology caused some natural environmental problems, the reason was not the science and technology itself, but the improper use of science and technology by capitalism. From the perspective of the development of human society, it is crucial to whom and serve science and technology, which to a large extent determines the proper application of science and technology. In the capitalist society, science and technology is occupied by the capitalists to create surplus value for the capitalists, which fundamentally determines the inappropriate application of science and technology, so it has become the fundamental cause of natural environmental problems. Marx pointed out in *Das Kapital* that capitalism "opposed the intelligence of the process of material production as the property of others and the power of the ruling workers".[4] "A piece of land may be fertile for food, but market prices can drive farmers to turn it into artificial pasture and become unfertile."[5]

4. The Alienation of the Relationship among Science and Technology and Nature

The methodology of solving the relationship between science and technology and nature. Marx and Engels believed that the unreasonable use of capitalism for science and technology is the cause of the alienation of the relationship among science and technology and nature. Therefore, to solve this problem, it is fundamentally necessary to start from the capitalist social system. Many of the problems existing in capitalist society are caused by the social system itself, and the emergence of natural environmental problems is also one of them. "Therefore, it is necessary to realize the reform of the capitalist system, and on this basis, let the general proletariat have the ownership and the right to use science and technology, so as to better serve the proletariat. Engels proposed in "On Housing", "this phenomenon, together with its various effects on health and so on, can only be eliminated when the whole social system which produces this phenomenon has been fundamentally changed".[6]

5. The Axiology of Harmonious Relationship among Science and Technology and Nature

Marx and Engels mercilessly criticized the alienation of the relationship among capitalist science and technology and nature leading to the separation of the vast proletariat and nature, and put forward that science and technology and nature should be in a harmonious relationship to ensure that the proletariat should possess and enjoy the rights of nature. Marx and Engels focused on the capitalist industrial mode of production makes the working class under the

condition of the natural environment destruction in production labor, dirty air, bright sunshine these as animals should enjoy natural conditions, for the working class has become a luxury, "the inorganic body is the nature was taken".[7] At the same time, Marx and Engels believed that the value purpose of the harmonious relationship among science and technology and nature was to realize the liberation of nature and human beings. The analysis of natural environmental problems must be placed in the process of social development, that is, it must be analyzed from the relationship among nature, society and people. As the intermediary and tool of human action on nature, science and technology is to realize the liberation of nature and the liberation of man. "The complete essential unity of man and nature is the real resurrection of nature, the realized naturalism of man and the realized humanity of nature".[8]

6. Conclusion

To sum up, Marx and Engels paid great attention to the impact of the development of science and technology on the natural environment in the capitalist society. They keenly found that although the development of science and technology played an irreplaceable role in the development of social productive forces, it also had a bad impact on the natural environment. The root cause is that under the capitalist system, science and technology are not owned by the proletariat, but became a tool for the bourgeoisie to earn surplus value, so that the proletariat lost the right to enjoy a good natural environment. It should be said that relevant thoughts of Marx and Engels are rich in connotation and are a complete system, which has become the main theoretical source of Xi Jinping's important discourse on promoting the construction of ecological civilization by science and technology.

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