### Marx's Scientific and Technological Ethics and Its Contemporary Value

DOI: 10.23977/avte.2021.030204

ISSN 2523-5834 Vol. 3 Num. 2

#### Deng Ruoyu, Wang Jingpeng

Chengdu Technological University, Chengdu, Sichuan, 611731, China

Keywords: Marx, Scientific and technological ethics, Content, Value

Abstract: Science and technology are the primary productive forces, and while pursuing technological innovation, we should also pay attention to technological ethics. Marx's scientific and technological ethics also gave us corresponding enlightenment. By interpreting and grasping its scientific and technological ideas, on the basis of clarifying its essential requirements, using it as a guide for scientific and technological innovation and social development, a systematic demonstration of technological changes can be done, and greater technological innovation can be achieved in the practice of technological innovation. breakthrough. While interpreting Marx's ethics of science and technology, this article is more based on the contemporary, with the focus on technological innovation, exploring the contemporary value of Marx's ethics of science and technology, so as to realize the steady advancement of human science and technology civilization and ecological civilization.

#### 1. Introduction

Marx's ethics of science and technology has rich connotations. Its systematic discussion on ethics of science and technology is of great value even today. In particular, its attention to and reflection on ecological civilization is essentially related to the current ecological civilization construction and social sustainable development Consistent, it is practically necessary to strengthen the interpretation of Marx's scientific and technological ethics and accelerate its practical guidance in China's scientific and technological innovation. The study of Marx's scientific and technological ethics is an inevitable requirement for standardizing scientific research activities and promoting scientific and technological innovation, and it is also a guarantee for the implementation of the concept of sustainable social development.

#### 2. The Connotation, Characteristics and Functions of Science and Technology Ethics

Technology is the primary productive force. The purpose of technological innovation is to promote social development and serve mankind. The process of technological innovation will inevitably involve relationship processing, especially the processing of the relationship between man and nature, the relationship between man and society, and the relationship between man and man. The handling of relationships, etc., and the handling of relationships needs to rely on social morality, which also makes the handling of relationships rise to the height of ethics. Each class and

each industry corresponds to specific moral requirements. If technology is an invisible ideology, its impact on people is from the inside out. It realizes the externalization of human behavior through the cognitive adjustment of people's subjective world. Technology serves human development. It naturally involves relationship processing. There must also be corresponding moral and ethical constraints.

Interpretation of science and technology ethics from a broad perspective has three meanings. One is professional ethics, which is mainly the ethical responsibility of the science and technology community, the communication relationship between the scientific community and society, and the ethical constraints of the application of science and technology to the society. The second aspect is social ethics, which is mainly related to the corresponding policies and regulations of the country and region, as well as the ethical and moral constraints on scientific and technological personnel and members of society. The third is the personnel level, which is mainly aimed at scientific research talents and technical talents, and is the professional ethics and behavioral norms that they must abide by in their work.

Scientific and technological ethics plays an extremely important role in scientific research and social development. Scientific and technological ethics can promote the development of social economy. As the guiding ethics of scientific research and innovation, scientific and technological ethics makes scientific and technological research behaviors more standardized, prompts scientific research results to serve human society and improve the quality of human life. The existence of scientific and technological ethics also perceives the possible risks of scientific and technological innovation, and warns people to avoid or minimize risks by observing scientific and technological ethics. Science and technology ethics can promote the free and comprehensive development of people. Scientific and technological ethics is not only concerned with the current development of human beings, but not only with the temporary convenience of production and life brought about by technological innovations. Scientific ethics focuses on the overall situation and future of human development, looks at technological innovation with a long-term perspective, guides technological innovation, and makes In the process of scientific and technological innovation, people continue to reflect and think about the long-term development of people, realize the free and comprehensive development of people in continuous thinking, and guide people's creative activities for a better future. Science and technology ethics promote the construction of human political and institutional civilization. Science and technology ethics is a value orientation, which focuses on people's correct analysis and evaluation of the nature and function of science and technology, and is based on the original intention of strengthening human care and being responsible for the future. The ethics of science and technology alleviate the social problems and contradictions arising in the process of technological innovation, and guide people to calmly analyze the mistakes in retrospect, take a warning, and take ethics as the guidance to drive the construction of new political systems and promote the development of human society, To achieve a higher level of development of human society and promote the evolution of human civilization.

### 3. The Connotation of Marx's Scientific and Technological Ethics

Marx's ethics of science and technology is developed on the basis of traditional ethics of science and technology. Compared with the previous traditional ethics of science and technology, it is richer, more dialectical, and more comprehensive. Marx's ethics of science and technology is also regarded as the current mainstream ethics of science and technology. It mainly includes the explanation of the dialectical relationship between science and technology and ethics, the specification of science and technology ethics for science and technology practitioners, the ethics of science and technology in the alienation of science and technology, and the value of science and technology ethics. We discuss

in detail.

# 3.1 Explaining the Dialectical Relationship between Science and Technology and Science and Technology Ethics

In dealing with the relationship between science and technology and ethics, Marx adheres to the dialectic view. He expounds the dialectical relationship between the two from an economic perspective. All past morals and ethics are in essence a sign of the social and economic conditions of their era. The economic foundation determines the superstructure. Nature determines technology and ethics of technology, and the impact of technology on morality is subjective. Technology and ethics of science and technology are interdependent, and they develop on the basis of the interdependent relationship, and they complement each other. The explanation of the dialectical relationship is mainly in two aspects. On the one hand, science and technology play a role in morality. The development of technological innovation promotes the perfection of moral cognition. Science and technology as productivity are primary, while morality is the product of the development of the superstructure and secondary, which is obviously affected by the development of science and technology. Of course, the development of science and technology is also contrary to morals and ethics. On the other hand, morality also has an effect on science and technology. People's moral cognition and value orientation will affect the development of science and technology. Only technologies that conform to the correct moral concepts of most people are recognized, valued, and do not conform to human moral cognition. Naturally, technological innovation is ignored and supported.

#### 3.2 Ethics and Ethics of Scientific and Technological Personnel

Marx is also very concerned about the ethics and ethics of scientific and technological personnel, and believes that scientific and technological ethics must be paid attention to. It summarizes the ethics and ethics of scientific and technological personnel. If the spirit of devotion to science is bound to encounter setbacks and hardships on the road of technological innovation, researchers must have the spirit of dedication to science to achieve major technological breakthroughs. Such as the spirit of scientific and technological innovation, scientific and technological innovation requires researchers to constantly deny themselves, deny the past, and introduce new scientific and technological achievements in constant reflection. The quality of seeking truth from facts. Both natural science research and historical science research must proceed from facts. Such as the quality of unity and cooperation. With the full cooperation of the team, we can break through the scientific research problems in the shortest time and maximize the benefits of scientific research results. Another example is the quality of humility and diligence. For scientific research personnel, they must be humble, diligent, tireless and persistent on the road of scientific research in order to achieve scientific and technological innovation. These good spiritual qualities are necessary for scientific research personnel and are also the content of Marx's scientific and technological ethics.

#### 3.3 The Ethics of Science and Technology in the Alienation of Science and Technology

In scientific and technological innovation, we should also be aware of the problem of technological alienation, which specifically refers to the situation in which technological creations enslaves and oppresses people in turn. The alienation of science and technology is used as a specific division and explanation. Among them, the alienation of man and nature is the tension between man and nature, which is mainly caused by the unrestricted access to natural resources by man in the early stage, the destruction of the natural environment, and in turn, natural revenge. The alienation

of people and society is a threat to human life safety with advanced technology, such as the challenge of cloning technology to the traditional ethical order, and the diminishing of parent-child relationship caused by artificial reproduction technology. Alienation of people or people themselves. The main technological capitalism makes the social class phenomenon obvious and makes class oppression more serious, as Marx said: contradictions and confrontations are inspired by the capitalist use of machines.

#### 3.4 Value Goals of Science and Technology Ethics

In Marx's ethics of science and technology, the value goal of ethics of science and technology cannot be ignored. Marx believes that science is not a self-interested pleasure. Science and technology must serve human development and promote social progress. This is naturally the value goal of science and technology ethics. The ethical value goal of science and technology is to care about the whole mankind and the whole society, and it does not serve certain people, nor does it serve a certain group.

#### 4. Contemporary Value of Marx's Scientific and Technological Ethics

#### 4.1 Use It as a Guide to Clarify the Main Responsibility of Science and Technology Ethics

Technological innovation is a systematic project, involving many subjects. Technological ethics enlightens us that if we want to ensure the smooth development of technological innovation activities, we must clarify the subject's responsibilities and make them consciously abide by the technological ethics. For scientific and technological employees, they must abide by scientific and technological ethics, ensure that every link of scientific and technological activities is loaded with value, serve the innovative application of scientific and technological achievements, and focus on the free and comprehensive development of mankind. The ethical responsibility of the government and other decision makers is to positively guide and provide corresponding support for scientific and technological activities, mainly support for scientific and technological funds, resources, etc., to optimize the allocation of resources, and to assist with economic and legal means to achieve scientific and technological Positive guidance and macro-control of activities. The ethical responsibility of the public in science and technology The public's ethical responsibilities for science and technology must also be fulfilled by participating in scientific and technological innovation decision-making, rationally consuming scientific and technological achievements, and actively disseminating positive scientific concepts, such as dialectically treating scientific and technological innovation, and strengthening the protection of resources and ecology. In the activities of scientific and technological innovation, each of us can't be involved in things and must bear corresponding responsibilities.

## 4.2 Adhere to Humanistic Thinking and Pay Attention to the Construction of Ecological Civilization

In the innovation and development of science and technology, we often pay more attention to the social and economic benefits it brings, to a certain extent, we ignore its negative impact on the development of human society, and the analysis of scientific and technological achievements is not comprehensive and dialectical, which makes the phenomenon of technological alienation more and more. The more serious. Therefore, based on Marx's scientific and technological ethics, we must strengthen the penetration of humanistic concepts and actively pay attention to the construction of ecological civilization. The alienation of science and technology is caused by the irrational use of

science and technology by capitalism. But as far as our country is concerned, in the socialist modernization drive, the improper use of scientific and technological achievements has also caused contradictions between scientific and technological innovation and social ethics and ecological civilization construction. Analysis and processing of the relationship between human beings, lack of human care, and lack of human value orientation in technological innovation. Its enlightenment for us is to realize the enhancement of ecological civilization education based on education. Strengthen people's awareness of ecological value, let ecological civilization education enter the classroom, cooperate with extracurricular practical education activities, and build ecological civilization education bases, so that the idea of ecological civilization can be deeply rooted in the hearts of the people. To strengthen environmental legislation. It is required to actively transform government functions, strengthen the government's public service functions, increase attention to social management and public services, and allow the construction of ecological civilization to advance steadily. It is necessary to establish an ecological compensation mechanism to guide people to correctly view the relationship between technological innovation and nature, rationally use resources, and take the road of sustainable development. They should not sacrifice the environment because of the acquisition of economic benefits. It is necessary to start to establish an environmental risk assessment mechanism to realize the avoidance of adverse effects on the ecological environment through specific and comprehensive risk assessment. Require the implementation of environmental supervision and law enforcement. Clarify the responsible party, increase environmental law enforcement, and combine the external supervision of the public with the internal supervision of the enterprise to improve the effectiveness of environmental protection. Continuous attention to the issue of ecological civilization must be combined with the building of integrity. Honesty itself belongs to the content of ethics and morality. Under the guidance of Marx's scientific and technological ethics, it is required to pay attention to the construction of honesty in order to achieve positive public opinion guidance. Among them, government honesty is the core of honesty construction. Laws must be abided by, law enforcement must be strict, and supervision rights of the masses must be guaranteed, so that ecological supervision can be implemented. Among them, corporate integrity is the focus of integrity building, strengthening corporate integrity building, forming a good market atmosphere, reasonable and legal competition, and giving consideration to both corporate economic and social benefits. Personal integrity is the foundation of integrity building. Being honest, making ecological protection a personal conscious behavior. The main responsibility is clear, and consciously pay attention to the construction of ecological civilization, so as to realize the landing of Marx's scientific and technological ethics in the construction of ecological civilization.

#### 5. Conclusion

Marx's science and technology ethics is the guiding ideology or principle that guides the handling of the relationship between man and society, and man and nature in scientific research. It is the multiple ideological guidance of social science and technology workers' values, social responsibilities and behavioral norms. In contemporary times, we must attach importance to the interpretation and study of Marx's scientific and technological ethics, practice Marx's scientific and technological ethics in practice, let science and technology promote the development of society, bring about the evolution of human civilization, and realize the reasonable avoidance of the risk of scientific and technological alienation.

#### Acknowledgement

Research on the construction of the teacher team for the key topic "Situation and Policy" in the

Ministry of Education Model Marxist College and Excellent Teaching and Research Team Construction Project in 2019 (No. 19JDSZK007), 2020 National College Student Innovation and Entrepreneurship Training Program (No. 202011116003X).

#### References

- [1] Hu Dongyuan, Li Chong. On Marx and Engels' scientific and technological ethics thoughts and their main sources [J]. Journal of Nanjing University of Science and Technology (Social Science Edition), 2010, 23(06): 82-88.
- [2] Ma Bailian. On the theoretical innovation of China's Marxist science and technology ideological system [J]. Research on Marxist Theoretical Disciplines, 2020, 6(01): 34-45.
- [3] Deng Daqi. The dual variation of law and ethics in the development of science and technology: case, logic and construction[J]. Ethics Research, 2019(06): 73-80.
- [4] Ding Jintao. Research on ethics of science and technology in the era of artificial intelligence--Based on Marxist philosophy[J]. Comparative Research on Cultural Innovation, 2019, 3(25): 46-47.