

The Alienation of Science and Technology from the Perspective of Labor Alienation Logic: Taking the Creation and Application of Metaverse as an Example

Jieping Tan

School of Marxism, South China University of Technology, Guangzhou 510641, China

Abstract

As a new science and technology, the development and application of Metaverse will inevitably lead to the alienation of science and technology, the important manifestation of which is the deprivation of human subjectivity at multiple levels. Scientific and technological productive labor is alienated from labor products, laborers are alienated from scientific and technological labor production, human nature is alienated from scientific and technological laborers, and scientific and technological practice activities cause the alienation of interpersonal relations. Therefore, the creation of Metaverse should keep examining and alert to the possible alienation of science and technology, and enhance the coupling with the real society.

Keywords

Metaverse; Alienation of Technology; Subjectivity.

1. Introduction

In 1992, the concept of Metaverse appeared in the foreign science fiction work *Avalanche*. In 2002, Han Minqing, Shandong Academy of Social Sciences, put forward Metaverse from a philosophical point of view, which refers to the more primitive background universe level than the universe level we live in. In the second half of 2021, with the opening of the global Metaverse research and development boom, China's academic circles actively launched the study of Metaverse and achieved relatively rich results. Around Metaverse, scholars have studied the concept and characteristics of Metaverse, and explored its application in human production, life and learning. In terms of production, Metaverse can be integrated with economy and finance. In terms of life, Metaverse can be integrated with the media and the protection of cultural relics. For example, Metaverse can be applied to the virtual reality construction of museums. In terms of learning, Metaverse can be integrated with library information, education and teaching. In the era of digital intelligence, the introduction of library and information science into Metaverse can change the library form and user experience. Finally, Metaverse is also a double-edged sword, scholars predict the social risks that may arise in the development of the Metaverse scientifically and put forward supervision and governance measures. Professor Xie Xinhui believes that the government, as the guide of the construction of Metaverse, should maintain the publicity of Metaverse which may be weakened by capital and technology through legal and ethical paths. Specifically, experts and scholars have also put forward pertinent opinions on the problems and governance that may arise in the industrial development of Metaverse.

According to the views of scholars, the development and application of new science and technology in Metaverse will bring some new hidden dangers and produce the phenomenon of alienation of science and technology. These alienation phenomena make the new science and technology of Metaverse challenge the subjectivity of human beings to a certain extent. This reminds me that Marx expounded the four-fold provisions of the alienation of workers' labor in capitalist society in *Paris Manuscript*. Science and technology, as labor, also shows the nature

of alienation with the alienation of labor. However, at present, few scholars explore the phenomenon of scientific and technological alienation in the creation and application of Metaverse from the perspective of Marx's labor alienation logic. Therefore, I want to promote the research in this area.

2. Labor Alienation and the Loss of Human Subjectivity

When man's material production, spiritual production and their products become forces beyond his control, and in turn dominate and manipulate man, alienation occurs. In 1844, Marx pointed out in Paris Manuscripts that under the condition of capitalist private ownership economy, the activities that should embody human freedom and consciousness fell into a dilemma, which was mainly reflected in the opposition between labor process and workers. By investigating the living conditions of laborers under the capitalist mode of production at that time, Marx expounded the four situations of alienated labor in capitalist society, that is, the four situations of the loss of human subjectivity: First, the alienation of laborers and labor products. In the capitalist employment relationship, workers are separated from the means of labor, the product of labor objectification does not belong to the workers as the main body of labor, the main force of workers can not be confirmed, and their lives are derogated. Second, the alienation of labor behavior itself. Marx found that the labour of the workers became alien and destructive. Third, the alienation of human and its nature. Under the condition of capitalist private ownership, alienated labor demonizes people's free and conscious life as a means of maintaining their livelihood. In production activities, people fail to give free play to the will of the subject and lose their basic spiritual life. Fourth, the alienation of the relationship between people. In capitalist society, capitalists also have alienation. Alienation exists in every field of social life.

Labor is the most fundamental practical activity of human beings, and the alienation of labor will inevitably bring about the alienation of other practical activities and social relations. As the product of labor, science and technology also shows the nature of alienation with the alienation of labor. Marx believed that within the capitalist system, science and individual freedom and liberation are antagonistic, "the capitalist's science, realized on the machine, as capital, is antagonistic towards the worker,,". Marx also specifically analyzed the negative side of technology, science and technology, for workers, manifested as "alien, hostile and dominant power,,". Furthermore, Marx believed that workers lost their dominant position under the mode of large machine production.

As a subject, the quality and ability of autonomy, initiative, initiative and freedom displayed in the process of practice are the basis of subjectivity. The combination of the primitive Metaverse with productive labor and capital in the embryonic stage of development also contains certain risks when it benefits human society. It may change from a tool to assist human development to an alienated force that suppresses and even devours individuals. The important form of the alienation of science and technology is that the subjectivity of human beings is deprived at many levels, and human beings lose their subject status. The labor alienation of science and technology also has four essential rules of labor alienation.

3. The Alienation of Metaverse Science and Technology and the Loss of Human Subjectivity

3.1. Alienation between the Scientific and Technological Production of Laborers and the Products of Labor

When Marx analyzed the alienation of laborers and labor products, he pointed out that under the condition of capitalist private ownership, the higher the degree of scientific and

technological production of machines, the stronger the degree of enslavement of laborers by capital and machines. The alienation of laborer's scientific and technological productive labor and labor products is manifested in the alienation of people and products caused by the combination of science and technology through products and wealth, which is mainly reflected in the digital subject crisis in the Metaverse. The first is the identity crisis. The industry believes that the individual digital avatar also has subjectivity, and can even replace the human body to directly participate in social life. As the main body of social life, human beings are constructed as digital subjects by highly developed digital intelligent technology, which will inevitably make people encounter multiple crises of identity, emotion and cognition. If technology can make a virtual human exactly like a real person, how can I prove that I am me in the future? Individuals who use digital avatars for social interaction may be troubled by multiple digital identities and find it difficult to identify themselves. The Metaverse can easily make us lose ourselves, difficult to identify our true identity, and even encounter visual deception, let alone prove the main power of workers. The second is that in Metaverse, the laborer himself is unable to control his own will and freedom. In Metaverse digital environment of virtual and real interaction, highly intelligent digital avatars take the place of us to work, communicate with us, and even think and make decisions instead of us, which will have a great impact on our psychology. Big data and cloud computing, the core technologies of Metaverse, show the characteristics of overcoming and surpassing human weaknesses in the process of analysis and decision-making, which may make individuals lose the ability of self-determination in the face of massive data information. Especially when the virtual digital man in Metaverse and the people in real world have different wills, the core technology of Metaverse replaces the people in real world to make decisions, which will cause people to have mental pressure and ideological burden, and feel that they are "arrogated," and "replaced,". With the digital technology deeply involved in people's daily life, while people passively agree to accept technology, excessive technology restrictions and deprivation of citizens' basic social freedoms and rights occur from time to time. Therefore, while enjoying the convenience brought by technology, human beings have gradually become "slaves," controlled by technology. On the contrary, Metaverse that human beings have worked hard to develop has become an obstacle and shackle to their own activities.

3.2. Alienation between Scientific and Technological Workers and Scientific and Technological Labor Production

In Marx's view, labor is a process in which people affirm themselves and realize their subjectivity, and workers should feel enjoyment and self-realization in labor. Metaverse is a high and new technology, in the process of research and development and application, workers will inevitably find that their productive labor shows alienation with their own behavior. First of all, in the process of scientific and technological innovation such as the Metaverse, many scientific and technological workers are non-stop and devote their efforts. Some of them died because of excessive labor intensity, and some were depressed because of too cruel competition, which aggravated tension and anxiety. This process is alienated from itself for scientific and technological workers.

Then, I think that Metaverse has the risk of breaking away from reality to emptiness. The laborer work in the virtual world designed by Metaverse, and their labor lose its real meaning. Metaverse creates a pluralistic virtual society, which provides more labor places and opportunities for workers. In this way, Metaverse will make the real social business quickly transfer to the virtual Metaverse business, bringing about the virtual of the real industry. Labor is the way of human existence, and material production activities are the basis of social life. If the laborer work in the real society replicated by the model and algorithm of the Metaverse, then the laborer's labor is not free and conscious, but designed by the algorithm, and the laborer fails to give full play to his initiative and creativity; Moreover, the laborers' labor does not

produce real significance to social life, labor does not produce social value, it is meaningless, and the laborer can not talk about self-realization in the process of labor. Furthermore, if the Metaverse leads human labor to the virtual world, instead of basing itself on the real society to contribute to social life, then our society will stop moving forward. Therefore, from the perspective of social equity and common prosperity, the development of Metaverse industry should give priority to promoting the recovery of real economy, promoting employment and paying attention to vulnerable groups, and carefully choose the entry point without positive social value.

Finally, the all-weather digital labor monitoring and the acceleration of digital consumption in Metaverse have put workers into a sense of scarcity and unstable reproduction mechanism, in which they will feel self-torture. Due to the different degree of digitalization, individuals at different production and consumption rates suffer a huge time gap in the fields of physical and mental status, economic production, cultural construction and so on, which brings about such problems as the generalization of depression and overwork, the disconnection between finance and production and consumption, and the lack of cultural innovation. To a certain extent, these problems disturb the sense of order in life and reduce people's sense of acquisition.

3.3. Alienation between Human Nature and Scientific and Technological Workers

Marx believes that conscious initiative and production activities constitute the essence of human life. Today, workers engaged in Metaverse innovation will be driven and controlled by capital. Some scientific and technological workers carry out scientific and technological innovation activities for utilitarian purposes, taking scientific and technological innovation activities as a means of obtaining high salaries or higher material returns, that is, taking scientific and technological labor as a means of making a living. Some people even use their own scientific and technological inventions to engage in criminal activities. In this way, scientific and technological innovation is no longer a free and active creative activity.

Secondly, Metaverse redefines the nature of man, thereby profoundly changing social patterns. In the age of Metaverse, all agents are unified as agents. As a living body, human beings have highly intelligent abilities such as behavior, consciousness and emotion. If interaction and VR equipment are added, people will become a highly intelligent agent. In this way, the attributes of human beings have changed, and the Metaverse is equivalent to denying the essential things such as subjectivity, will, emotion and self-consciousness of human beings. With the development of artificial intelligence technology and the change of human social attributes, according to Kurzweil's Singularity Theory, human society will usher in a historic moment when AI surpasses human beings. At that time, pure human civilization will come to an end, and human-machine-object hybrid agents will become the main species of society. Professor Yu Feng once pointed out that when the civilization in the Metaverse comes into being, coupled with the defect of the stagnation of knowledge in Metaverse, the traditional civilized world that we can control ourselves will be greatly squeezed and impacted.

Finally, when human civilization falls into the virtual trap of Metaverse, the Metaverse will not bring real development to human society, and the free and conscious labor of workers will be limited and bound by science and technology, which will be difficult to benefit the real society we live in. On the Dialogue column broadcast by CCTV, Zhou Hongyi, chairman of 360 Company, expressed his doubts bluntly when talking about the topic of Metaverse. He said that Metaverse envisioned by Facebook would not bring real development to human society. If everything in life can be digitized, what is the meaning of life itself? Therefore, when we explore and apply Metaverse, we should consciously promote its real connection and embedding with the real world, so that people can gain experience in the material world and promote the free and all-round development of human beings.

3.4. Alienation of Interpersonal Relationship Caused by Scientific and Technological Practice

Marx and Engels believed that under the condition of capitalism, the essence of the enslavement of science and technology to human beings is the enslavement of human beings. And the relationship between scientific and technological workers and exploiters of scientific and technological labor is an alienated interpersonal relationship. In the end, the governance of the digital world is still the rule of man. In addition, in the post-modern consumer society, people have lost part of their free and conscious will in front of the scientific and technological products created by scientific and technological workers, and the relationship between people is separated by scientific and technological innovation.

When our body, spirit and emotion may be algorithmized, Metaverse may be the ultimate form of human exploitation and inequality. Metaverse seems to be a free space open to all, but in it, the gap between rich and poor among people becomes more obvious. For example, "the holographic twin universe," can, to a large extent, satisfy people's desire to roam nine days and settle down in the universe in advance with high truth. But this is likely to be a rich man's game. Metaverse has an inherent monopoly gene, from the perspective of producers, only a few Internet giants have the strength to lay out Metaverse industry, which will bring monopoly, monopoly brings control. A few manipulators behind the data hold everyone's thoughts, and the digital divide eventually becomes an intellectual divide.

The virtual communication in Metaverse occupies the time and space of real communication, and the face-to-face presence of interpersonal communication can not be realized, so people are increasingly alienated from themselves and others. The real personality of people in the real interpersonal communication is replaced by the virtual personality shaped in the virtual communication of the Metaverse. When individuals shape virtual personality, they close the real self. Compared with traditional society, the virtual social interaction of individuals in Metaverse is the transformation between cold strings. This lack of sense of identity and authenticity will lead to the individual's indifference to their own social relations and the cooling of emotional exchanges with the people around them. And virtual communication is mostly a kind of "fast food," and soulless communication. Although people constantly make new friends in the virtual world, but in real life there are rare friends with real intersection, in the long run, social relations are distorted and weakened.

4. Remainder

There is no doubt that Metaverse is an advanced technology that can bring benefits to mankind. But, so far, it is still invisible business model and product form. The phenomenon of alienation of science and technology is inevitable in the development and application of high and new technology in Metaverse, and the important manifestation of alienation of science and technology is the deprivation of human subjectivity at multiple levels. Today, the creation and development of Metaverse is still in its infancy, and its commercial value can be imagined heartily, but we should keep an eye on the possible alienation of science and technology and the violation of human subjectivity. Marx emphasized that the capitalist application of machines brought about alienation, and the root of workers' labor alienation was capitalist private ownership. According to Marx's theory of labor alienation, the social system that promotes the all-round development of human beings can sublimate the drawbacks of science and technology in the original universe and realize human freedom and liberation. It is hoped that the formation and development of the future Metaverse will enhance the coupling with the real society and become a useful supplement to the real society under good law and good governance, further extend the ability of human beings to explore and transform nature, and accelerate the progress of human civilization.

Acknowledgments

I would like to thank my graduate tutors for their careful guidance on my thesis writing and the predecessors who studied the Metaverse for their fruitful achievements. It is standing on your shoulders that I can go further on the road of academic research!

References

- [1] Han Min-ching: The Hierarchy of the Universe and the Metaverse, *Philosophical Studies*, (2002) No.2, p.28-34.
- [2] Jian Shengyu: Metauniverse: The Future Concept at the Stage of Basic Technology, *Journal of Shanghai University (Social Science Edition)*, Vol. 39(2022) No.2, p.1-16.
- [3] Ma Fei Cheng: Library and Information Science and the Metauniverse: Consensus and Progress, *Journal of Library Science in China*, (2022) p.1-3.
- [4] Xie Xinshui: The Metauniverse as an Artifact: Constructivist Dynamics, Weak Publicity, and Enhancement Strategies, *E-government*, (2022) No.5, p.44-55.
- [5] Yu Hui, Liu Xiaopeng: The Context, Connotation and Practical Enlightenment of Marx's Theory of Alienated Labor --Based on the Interpretation of Economic and Philosophical Manuscripts of 1844, *Journal of Theoretical Guide*, (2021) No.8, p.93-100.
- [6] Hu Yiming, Yao Quan: Meta-Universe: The Singularity of Meta-Media, Involuntary Interaction and Subjectivity Evolution, *Culture and Arts Research*, (2022) No.1, p.56-64.
- [7] Hao Haihong: On the Education Path of Scientific and Technological Labor for College Students--From the Perspective of Marx s Theory of Scientific and Technological Alienation. *Beijing Education (Moral Education)*, (2021) No.1, p.43-48.
- [8] Tu Yili, Zhang Lei, Zhai Zhenming, Cheng Sumei, Chen Long, Du Junfei, Wang Tianfu, Cheng Boqing, Cao Gang, Zeng Jun, Xia Deyuan, Peng Feng, Jiang Yuhui: Understanding the Metauniverse: Culture, Society and the Future of Mankind, *Exploration and Contention*, (2022) No. 4, p.65-94 + 178.
- [9] Lv Peng: Metauniverse Technology--Promoting the Free and All-round Development of Human Beings, *Industrial Economics Review*, (2022) No. 01, p.20-27.
- [10] Jiang Yuhui: Meta Universe as the Experience of the Future: a Critical Perspective Based on Media Archaeology, *Contemporary Cinema*, (2021)No.12, p.305-307.
- [11] HuZhenyu, ShangXiao Cheng: Presence and Alienation in Inter personal Communication—Reflection on the Concept of Meta-universe, *ChinaMedia Technology*, (2022)No.1, p.24-27.
- [12] Marx, Engels: *Collected Works of Marx and Engels* (Beijing People's Publishing House, China 1979), p.567.
- [13] Marx, Engels: *Collected Works of Marx and Engels* (Beijing People's Publishing House, China 1972), p.421.
- [14] Pei Shaoxue: *An Analysis of the Subjectivity Thought in Marx s Economic and Philosophical Manuscripts of 1844* (MS., Shandong University, China 2013), p.1.
- [15] Information on: https://www.thepaper.cn/newsDetail_forward_15512735.