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The Value of Aesthetic Education of Technical Aesthetics under the Contemporary Social Background

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Abstract: As one of the three applied disciplines of aesthetics, technical aesthetics, like literary aesthetics and aesthetic pedagogy, has its own unique disciplinary value and research significance. Nowadays, the main research fields of technological aesthetics can be summarized into three aspects, namely, the relationship between technology and human (including human development and social development), the relationship between technology and nature and the relationship between technology and art. The reason why the development of technology and human (society), nature and art have internal harmonious resonance is precisely because they all have “beauty”. Technology, man (society), nature and art meet, accompany and know each other in the process of seeking beauty. Generally speaking, the study of technical aesthetics is to solve many disharmonious facts and phenomena caused by the alienation of science and technology caused by the rapid development of science and technology and the great expansion of capital power in modern times, so as to bring it back to the right track and rebuild harmony from the height of aesthetic research. This is precisely the value of the study of technical aesthetics.

Keywords: Technological Development; Technical Aesthetics; Human All-Round Development; Aesthetic Education

1. Introduction

In modern times, with the rapid development of science and technology and the great expansion of capital power, the large-scale industry and large-scale factory production mode came into being. This modern mode of production has greatly improved the level of human productivity and greatly enriched the material needs of human beings. Just as Marx said in the Communist Manifesto, «the productive forces created by the bourgeoisie in its less than a hundred years of class rule are more and greater than all the productive forces created by all the generations in the past.»^[1] However, with the mad pursuit of profit maximization by the capitalist forces, people, who originally were active subjects, have gradually become tools of capital expansion. In the day after day of boring work gradually lost self, and gradually away from the existence of the myriad world as a whole. In terms of the natural environment, which was originally the objective material basis for human survival, has become the object of human conquest, and more closely, the endless exploitation of nature has become a means of capital expansion. The natural environment that people depend on for survival is being gradually eroded by the disorderly expansion of capital and human greed. In the field of culture and art, although the material needs of human beings have been enriched unprecedentedly, the spiritual field seems to be increasingly scarce. Either humanism criticizes science, technology and industrial civilization only from the human perspective or scientism negates all non-scientific cultures from the standpoint of reason and logical positivism. "The confrontation between humanism and scientism makes it difficult to communicate and understand each other between science and technology culture and humanities culture"^[2] and deepens the estrangement between technology and art, making the two become completely opposite.

2. The integration of technical aesthetics with the comprehensive development of human education

In modern times, a new round of industrial revolution, represented by emerging technologies such as information, Internet, bioengineering and nuclear energy, has brought tremendous changes to traditional production modes. Production is highly digitized and automated; The division of labor is becoming more specialized and detailed; Product types are diversified and standardized. These changes have led to an exponential increase in social productivity, and people's material needs have reached an unprecedented level of satisfaction. But behind this flourishing production activity, there is a huge crisis, that is, the loss of «man» caused by the alienation of science and technology development. As an active subject, people play their subjective active role in the social production practice all the time. People will continuously put their ideas and creations into the practical production practice, and integrate their wisdom into the iteration of technology. It is precisely because of this that social productive forces and science and technology can continuously develop and progress, at the same time, the essential power of human beings has also been manifested in the promotion of science and technology and productivity, and the value of human beings

has been greatly affirmed.

2.1 Dissimilation of the relationship between man and science and technology

Science and technology is not only the material force that regulates and changes the relationship between man and nature, but also the intermediary that communicates man and society. It is in this sense that science and technology have become the primary productive forces. With the continuous development of human society, the relationship between man and science and technology is also changing constantly. The instrumental rationality at the beginning gradually develops technology dependence, and the original relationship between technology and man appears alienation. "Man is no longer the master of controlling technology, but has become a tool forced to adapt to the requirements of science and technology society."^[3]

The production mode of modern big factories is the most concentrated embodiment of the alienation of science and technology. With the continuous development of science and technology, people have shifted from traditional manual production to modern mechanical production. It is in this kind of repeated and simple labor production that the subjective initiative of workers is gradually reduced. What workers pay in labor production is not the essential force of people such as wisdom, inspiration, creation, but the simple and repeated mechanized operation. In this passive process of labor production, the laborer cannot see his own labor value in the labor he does, and labor is only a mechanized repetition, only to satisfy the operation of survival. Labor therefore loses its special value as "human" "labor" and makes it no different from the "labor" of animal survival day by day. Therefore, the progress and development of science and technology is not necessarily able to make people get an all-round development, on the contrary, it may make most of the grass-roots workers fall into the dull "labor" that loses the essential power of human. Looking back on the development course of human society, it is not difficult to find that the development of science and technology and the development of people can be harmonious together, and from the overall process of historical development, science and technology and the development of people are synchronized, they are accompanied by each other and promote each other's harmonious and unified relationship, rather than either or the contradictory relationship. Therefore, the core reason for the alienation of science and technology exists today does not lie in the development of science and technology, but in people's attitude towards science and technology. Today, with the rapid development of science and technology, people have a blind pursuit of the actual benefits brought by the development of science and technology. It is in this ultimate pursuit of efficiency, economic benefits and rationality that people gradually exclude those seemingly unable to improve the actual benefits from their vision. Even works of art have become commodities with clear price tags and are counted as material property.

2.2 Human and technological development under technological aesthetics

Technological aesthetics is the product of large-scale industrial production since the modern industrial revolution. Technological aesthetics has a close relationship with industrial labor production, industrial products, labor management and even labor environment. Technical beauty in a broad sense can be said to be the beauty created by people in the industrial production activities, so technical aesthetics can also be called labor aesthetics, industrial aesthetics or production aesthetics. It is not difficult to see that a major concern of technical aesthetics is the labor production of laborers in the production process of industrial products, that is, the loss of "self" of laborers caused by the alienation of science and technology. Labor aesthetics or production aesthetics aims to solve the problem of the alienation of human labor caused by the alienation of science and technology. It advocates that the alienation of science and technology and the resulting alienation of labor should be corrected from the perspective of aesthetics. It advocates that human value should be fully displayed in the labor process and the objectification of human essential power should be fully reflected in the fruits of labor. The labor value of laborers should be seen in industrial products, and the laborers should be able to find their own unique existence value in their own labor practice. In general, the essential cause of the alienation of labor production caused by the alienation of science and technology lies in the neglect of human beings, the neglect of human sensibility, that is, the neglect of beauty. As a kind of perceptual cognition of human beings, beauty does not need rational thinking in many cases. It has no fixed form or concept, but it can be perceived by everyone. From the standpoint of complete rationality, beauty seems to have no practical effect. On the surface, it is only a kind of satisfaction for people's spirit. However, with the continuous development of aesthetics and science, people gradually find that the pursuit of beauty is not a seemingly useless spiritual enjoyment, but a spiritual activity that will have a positive impact on production efficiency and technological progress. Therefore, the marriage of technology and aesthetics is the combination of sensibility and rationality in the level of thinking, and the combination of the development of science and technology and the all-round development of human beings in the level of reality. Technical aesthetics is the bridge connecting the development of science and technology and the all-round development of human beings.

3. The combination of technical aesthetics and natural environment protection education

The second major problem brought about by the development of science and technology is the destruction of the natural environment. In the traditional handicraft era, because of the limited understanding of nature, people were still in a state of awe for nature on the whole, and

because the development of traditional handicraft industry did not improve people's ability to transform nature to a large extent, there was no outstanding contradiction between the development of traditional society and the natural environment. However, since the Industrial Revolution, people's use of fossil fuels and the rapid increase of population have made human beings have a more urgent need for natural resources. With the progress of science and technology, people's understanding of nature is becoming more and more comprehensive, and their attitude toward nature has changed from the traditional society's awe to blind demand. With the great development of production tools, human's ability to transform nature has been unprecedentedly improved. It is not difficult to see that the development of science and technology is a double-edged sword, which can both improve the living environment of human beings and enable people to destroy the natural environment with it. However, a little deeper investigation will reveal that it is not the science and technology itself that determines whether science and technology is «good», but people's choices. In the actual social production practice, because of people's ultimate pursuit of efficiency and profit, on the one hand, human beings have created a splendid modern civilization. But at the same time, because of the unlimited abuse of science and technology, human beings have made a variety of behaviors regardless of the environmental cost, regardless of intergenerational justice, which has caused unprecedented damage to the natural environment. With the passage of time, these behaviors of human beings will eventually make themselves pay a painful price. The development and progress of science and technology make human society onto the road of modernization, but this modernization is a comprehensive modernization, not a one-sided modernization at the cost of destroying the natural environment. As Mr. Li Zehou pointed out, the modernization of our society must «avoid the alienation of technology and people brought about by Western modern industry and modern society. The estrangement of human relations, the pollution of nature, the destruction of ecological balance, etc.»^[4] Today, there are already many measures and laws to restrict human's blind exploitation of nature, and people have a basic consensus on the use of science and technology and a common ethical and moral boundary.

4. Technical aesthetics and art education complement each other

Technology represents the logical creation of rational thinking, and art represents the flash of inspiration of perceptual thinking. Technology and art seem to be independent fields of non-interference on the surface, but in fact, there are inextricably linked between technology and art, and they are by no means independent parallel Spaces. With the continuous development of science and technology, more and more applications of science and technology have gone beyond the simple practical purpose of production, but are more inclined to the higher psychological pursuit beyond people's basic production needs. While making continuous breakthroughs in technology itself, human beings have also launched a brand new exploration of the application scope and value of science and technology. The integration of technical science with sociology, art, philosophy, aesthetics and other disciplines is also one of the signs of technological progress. Therefore, it is not difficult to see that the integration of technology and art has already happened and will continue to develop. The development of science and technology will provide new ways of expression or media for art, just as the development of camera technology makes the birth of film art possible. Similarly, the development of art will also bring new inspiration and inspiration to technological innovation, just as people's pursuit of immersive aesthetics and art in movies has promoted the unprecedented development of 3D technology and virtual reality technology. Therefore, in real life, there is no clear division between technology and art. Technology contains the inspiration of artistic creation, and artistic works also contain the objective basis of technological development. Technology and art complement each other and promote each other. So the famous scientist Qian Xuesen once said: «The main topic of technical aesthetics is to study the harmony and unity of technology and art and these two things. Therefore, it cannot be separated from aesthetics, nor can it be separated from technical science, of course, the emphasis is different.»^[5] Qian also expresses the view that technology and art will gradually merge.

5. Conclusion

In general, as a new aesthetic category, technical aesthetics still needs to be continuously enriched and improved, but the realistic value and significance of technical aesthetics are increasingly prominent, especially in the development of science and technology and human development, the development of technology and the protection of natural environment, and the exploration of technology and art.

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