

The Value of Freedom Virtue for Science and Technology Ethics towards Post-human Society: Wang Jinkang's Science Fiction as an Example

Le Song, Wenqing Wu

School of Philosophy and Social Science, Shanxi University, Shanxi, China

Abstract

In Wang Jinkang's science fiction: *Humanoid*, the "biofacts (humanoid)" are special subjects with both artificial and natural attributes. They have brought many ethical problems to the post-human society. However, the binding code of ethics and the mandatory rules of law have not been satisfactory. Therefore, in the situation of post-human science and technology, turning the traditional paradigm of scientific and technological ethics research to virtue ethics may be an effective way to solve problems. The "Overlapping Consensus" of Chinese Confucian ethics and Western virtues shows that the virtue of freedom is not only the prerequisite for "biofacts" to become the subject of post-human society, but also the basis for the cultivation of other individual virtues; the virtue of freedom is not unlimited freedom, but taking goodness as the essence of value.

Keywords

Post-human; Biofacts; Humanoid; Virtues of Freedom; Ethics of Science and Technology.

1. Introduction

Technologies such as synthetic life have greatly changed the natural course of life evolution, [1] and technological development has also created all possibilities for human beings, making the plot in science fiction works gradually become a reality. However, Francis Fukuyama believes that "the most significant threat posed by contemporary biotechnology is the possibility that it will alter human nature and thereby move us into a posthuman stage of history". [2] However, "post-humanity" is on the horizon, and human descendants are constantly surpassing their "parents".

Nicole Calafelis collectively refers to these existences that are purposely designed by humans and have growth characteristics as biofacts. [3] We should rationally treat future life that originated from technological means, criticizes anthropocentric thinking, and accept those who possess human genes, physiological characteristics, and identity with human culture, recognizing them as social subjects with moral attributes and free-living individuals.

It is undeniable that the entry of biofacts into human society may trigger profound reflection on established morality and law, and even subvert the traditional understanding of the nature and value of human beings. At present, we can't say when biofacts will arrive, but the rapid development of science and technology has made it very clear to us that post-human society is already a necessary stage in the long journey of human beings. Biotechnology is quietly developing under solidarity and condemnation, and we should indeed think about how to ensure the security of humanity in the future. The normative ethical research paradigm has shown obvious limitations at the moment and cannot provide satisfactory answers to the ethical questions of posthuman technology involving biofacts.

Aristotle once regarded morality as the criterion for distinguishing man, beast, and god, so as biofacts with rational ability, it should have the moral attributes of social subjects. Therefore,

we must not simply equate biofacts with "man-made things", and while giving them life, we should first identify with their status as social subjects and make them accept human culture and morality. To adapt biofacts to human ethics and social order as much as possible, it should be a new path for the study of scientific and technological ethics that the shift from normative ethics to virtue ethics in the study of scientific and technological ethics. [4]

2. The Connotation of the Virtue of Freedom for Biofacts

The concept of modern freedom is often thought to have originated from Augustine's free will and is subsumed within the modern Western system of moral philosophy. However, through screening, it is not difficult to find that although the word "freedom" does not appear in traditional Chinese Confucianism and the ancient Greek thought of Aristotle virtue, there are a large number of concepts of freedom hidden in the theories of the two, which not only highlight the value connotation of freedom, but also highlight the meaning of the virtue of freedom. The Confucian concept of freedom is implicit in "choice", and "choice" embodies the free choice of people for good, which not only requires the subject to have independent behaviour ability and free choice ability, but also must have the moral cultivation of goodness. At the same time, Aristotle believed that "virtue is about feelings and actions, so those who act voluntarily should be praised." "Voluntary choice" implies the consciousness of a free subject, the free behaviour of a conscious and knowledgeable subject that is not coerced, which is both commendable and good virtue. It follows from this that although the two treatises on the concept of freedom are different, freedom is regarded as a basic virtue of the subject.

As a post-human social subject, biofacts should have a variety of virtues, and the virtue of freedom is the basis for establishing its social subjectivity, and the virtue cultivation of biofacts should also start from the cultivation of free virtues. The "overlapping consensus" on freedom in Chinese and Western ethical thought shows that the value connotations of free virtues should include: individual freedom (the identity of the subjectivity of free virtues), freedom of will (the self-establishment of free virtues), and freedom of goodness (the intrinsic value of free virtues).

2.1. Individual Freedom

Since western classical liberalism, freedom (especially individual freedom) has become an important part of ethics. On the one hand, freedom as the natural power of the individual is positively affirmed, and the right to ensure the freedom of the individual becomes the primary purpose of the establishment of the state; on the other hand, the basic task of the sovereign is to preserve the natural power conferred on everyone.

On this basis, Nozick argues that everyone is his absolute owner, and that we all have the right to choose to do anything. Individual freedom is also absolutely supreme, and that interference in individual freedom in any form or for any reason is not allowed. Rawls's views on the right to individual liberty are in line with Nozick's. They all regard individual freedom as the most fundamental prerequisite for human beings, and insist that the individual is free and independent, and that the purpose of law and morality is to ensure that everyone is a free individual. It follows from this that modern freedom is fundamentally individual freedom. Because the fundamental quality of modernity lies in the subjectivity of the individual.[5]

Zhang Junli believes that the establishment of the dominance of the Confucian mind is an objective guarantee for the subject's freedom of will, and the metaphysical free subject further establishes individual freedom. Guo Ping also put forward the concept of "source freedom", believing that the Confucian "birth" is freedom in the most primitive sense, which is not only the "source freedom" as the source of the freedom of all subjects,[6]but also the objective guarantee of individual freedom or the will of the subject. Therefore, first of all, the subject is

an objectively living subject, and the objectivity of life contributes to the emergence of the subject's will, and the living subject will also be aware of the freedom as an individual.

2.2. Subjective Freedom

John Mill argued that the only freedom that is called its name is the freedom to pursue our own good according to our path,[7]and that the essence of freedom is freedom of choice and action. In the context of reality, the act of voluntary choice of the subject is an indirect expression of the subject's free will, which presupposes the individual freedom of the chosen subject. That is to say, when a person can choose from multiple goals or act voluntarily, he has logically predetermined the premise of his individual freedom and the freedom of the subject's will.

Aristotle believed that since virtue is about feelings and actions, it praises and rebukes those who do voluntarily, and forgives and sometimes even pities those who do not. Then, voluntary behaviour is the subject's expression of the inner feelings of the self, and the subject's free choice is premised on the subject's freedom of will, which should be praiseworthy and good virtue. The freedom of the subject's will is also the basis of voluntary behaviour, which not only establishes the subjectivity, but also is the external representation of the virtue of the subject's freedom.

Similarly, the concept of freedom is implicit in the Confucian discussion of the subject of choice. "Choice" not only contains the will of the subject to have free choice, but also implies the objective conditions for the subject to have free choice. When Confucius talked about his ambitions. Tsze-lu said, "I should like, having chariots and horses, and lightfur clothes, to share them with my friends, and though they shouldspoil them, I would not be displeased." Yen Yuan said, "I should like not to boast of my excellence, nor tomake a display of my meritorious deeds." TheMaster said, "They are, in regard to the aged, to give them rest; in regard to friends, to show them sincerity; in regard to the young, to treat them tenderly." (The Analects Chapter 5) Although the choices of the three people are different, Tsze-lu values feelings, Yen Yuan values morality, and Confucius values virtue, they all express the subject's freedom of will. Thus, although neither Aristotle nor Confucianism mentions the word "freedom", voluntariness or choice has the hidden meaning of freedom and indirectly expresses the connotation of the virtue of freedom.

2.3. Freedom of Goodness

The virtue of freedom is freedom for goodness, and goodness is also the intrinsic value of the virtue of freedom. Aristotle made "goodness" the highest purpose of virtuous behaviour, the fundamental form of the human being. In his view, those who cannot control themselves act according to desire but cannot choose,[8]and man can act under desire and passion, but this behaviour is not truly voluntary or free behaviour. Although these seemingly coercive acts can sometimes bring honour and glory, it is commendable only if the subject voluntarily chooses the good before the coercive act, or if the subject's behaviour has pre-contained free choices. Each person is the supreme master of his own life, will and body, that is, we have ourselves, we can freely control them, and the freedom of goodness also fulfils the freedom of the subject, pointing to the facts and actions of goodness.

When Confucians discuss freedom of choice, they do not pay much attention to the act of choice itself or the option, but more to the goal or effect of the choice. Confucianism says that the purpose of choice is to realize the intrinsic value of goodness, more clearly expressing the goodness of freedom, embodying the freedom of the individual to aim for goodness, and even the freedom of the supreme good as the highest level. The Master said, "When I walk along with two others, they may serveme as my teachers. I will select their good qualities and follow them,their bad qualities and avoid them." (The Analects Chapter 7) In the Confucian view, the fundamental purpose of choice is to be good, and goodness is also the goal, will, and motivation

of free choice. That is to say, goodness is the metaphysical basis of an individual, freedom is an abstract expression of goodness, and goodness and freedom embody the subject's perception of its own goodness; the choice is both the concrete act of freedom and the concrete manifestation of the subject's choice in the form. Therefore, the choice is not only the purpose of the subject's free will, but also the sufficient condition under which the subject can establish itself, or the result of the subject's will being governed by goodness.

3. Circumstances Where Biofacts Lack the Virtues of Freedom

Humanoid is a masterpiece of Wang Jinkang's new series of human novels, based on today's scientific and technological development, a reasonable imagination of the future world: scientists have created "humanoids" with the purpose of serving human beings through scientific and technological means, and to avoid "humanoids" from destroying the established rules of human society, legislators have formulated many legal provisions and moral laws against "humanoids"; "humanoids" have to fight to obtain human social recognition and individual freedom. Throughout the novel, although humans create "humanoids", they raise a series of social problems, the root of which lies in the lack of cultivation of the virtues of freedom in "humanoids".

3.1. Human Society Does Not Identify the Subjectivity of Biofacts

The basis for the realization of the free virtue of biofacts is the establishment of human society as its subject, and while human beings defend their supremacy, they also deprive biofacts of their individual freedom and limit their premise for cultivating free virtues.

In the novel humanoid, the staunch anthropocentric Yoshino-chan argues that serving people is the innate duty and existential meaning of "humanoids", and they are nothing more than artificially manufactured products. However, "humanoids" are not ordinary commodities, they are both artificial and natural attributes, and they are no different from natural people in physiology, and even have more perfect physical functions than humans. However, anthropocentrism has always been arrogant, rejecting the freedom of "humanoids" to have subjectivity and branding them as "alien".

Moreover, the human legislator in the novel restricts the freedom of "humanoids" through laws and norms in order to preserve human dignity and racial purity, but this is precisely a barbaric deprivation of the free virtues of "humanoids". For example, the law of the Humanoid's Law stipulates that "a type B person with natural fingerprints who appears outside the factory of the humanoid can only be legally considered a natural person".[9]Therefore, the "human factory" is full of the atmosphere of imprisonment freedom: high-strength carbon nano-protective networks, high-intensity gamma-ray scanning, artificial intelligence full-line monitoring, computers and artificial dual detection systems and other harsh measures are to prevent "humanoids" from blending into human society; the human police department has also set up a B system specifically responsible for "humanoid" cases to achieve the "double standard" of law enforcement.

3.2. Biofacts Lack the Subject's Self-identification

Biofacts lack self-identity and are unable to establish their own free will at the subject level. The vast majority of "humanoids" in the novels have no desires, loves, dreams, and dignity, but are replaced by restraint, bleakness, cringe, and humiliation, but the "humanoids" are born no different from human babies, and they lose themselves in the "human-like nursing home": "Closed feeding grounds, with hive-like crowded beds, monotonous meals, stereotyped life, and the sound of the daily recitation of the Humanoid Commandments".[10]In the "human-like precepts" and the "moral command" to do their duty for mankind, the "humanoid" gradually

fell into the tragedy of "fatalism", losing the courage to aspire to a free subject, and lacking the will to self-identify with the value of life and the virtues of freedom.

In the novel, there is a "humanoid" who has served the "humanoid factory" all his life, he has never left the "cage" from birth to death, and when he completes his mission, he very calmly enters the "reincarnation" (the destruction procedure after the "humanoid" loses its value). "They treat death very calmly, like a normal sleep" .[11]What is even more amazing is that when he is about to enter reincarnation, although the "humanoids" who bid farewell to him show a solemn and solemn look, they have no sadness at all, and they have taken "reincarnation" as the inevitable end of their lives. In the view of He Buyi (the father of the "humanoid"), they are not afraid of death, and their lives come directly from the elements, not from God. Humanoids who have passed the strong period automatically choose to die and never covet life".[12]However, the purpose of biofacts is not to be "human-like", they should become one of the subjects of post-human society as human "successors" and subjectively identify with the subjectivity of the self.

3.3. Biofacts Lack Recognition of the Good Value

In the "human-like" world, human beings generally believe that if the "humanoid" is not restricted, it will inevitably touch the human bottom line and pose a great threat to the survival of human beings, thus depriving them of their freedom. The theory of the social contract has fully proved that freedom is the most fundamental natural virtue of the subject, and that "humanoids", as rational subjects, should have innate freedom regardless of the way they were born. But freedom is not infinite, it should be a virtue rooted in goodness, and without goodness, the connotation of the virtue of freedom will change. Just as in the Humanoid novel, the "humanoid" Yajun and the human Qi Hongdegang used technical means to challenge the legal bottom line in order to obtain free love; after the "humanoid" identity of the police officer Jianming was exposed, in order to win freedom, he did not hesitate to make enemies of human law; "humanoid" Keane violated the law and the precepts of humanoid in order to prove his value.

The arrival of biofacts will inevitably lead to human reflection on the nature of human beings and human rights, and cause human moral norms and legal provisions to be in trouble. As the novel says, the world government has been careful to guard the dike between humans and B-men, but this is made of floating sand, extremely unreliable, and can be washed away by a little wind and wave.[13]But fundamentally, technological development stems from human needs, and biofacts arise from the need for human self-preservation, which is the result of human exploration of the future and striving for its own completeness. In post-human society, we should first establish the social subjectivity of biofacts and cultivate them in the virtue of freedom, with a view to realizing the vision of building a better home together.

4. Construction of the Free Virtue to Biofacts

The virtue of freedom is not only the ontological basis of biofacts, but also the primary prerequisite for humans and biofacts to achieve a better life. In the face of the established fact that human beings precede, the free virtues of biofacts show a distinct particularity. Based on the connotation of the free virtue of biofacts in the preceding article, and a series of social problems arising from the lack of free virtues of biofacts in the novel "Humanoids", the free virtues of constructing biofacts should first establish the subjectivity of biofacts in human society for the cultivation of its free virtues; and then, through the cultivation of free virtues of biofacts, enables them to realize the moral response and behavioural consciousness of the goodness of free virtues while identifying with the connotations of self-subjectivity and free virtues.

4.1. Other Subject Identification with the Individual Freedom of Biofacts

The inherent thinking of human beings is the greatest obstacle to the realization of biofacts subjectivity, and other social subjects should identify with biofacts subjectivity at the same time, starting from individual virtues, to realize the free virtue cultivation of biofacts, the key is to break the human biofacts population bias, legal norms and ethical constraints.

Aristotle believed that all technology, all planning, and all practices and choices were aimed at certain goodness.[14] However, our world still follows the global capitalist order,[15] and capital will pounce on any place where there is increment and where there is room for profit.[16] Regardless of which area biofacts may be applied in the future, they have potential commercial value and will attract a lot of capital to enter, and scientists and the scientific community will become the focus of capital competition. Therefore, while manufacturing biofacts, scientists should establish a scientific research concept with goodness as the value, uphold the correct scientific research goals, and identify with the virtues of wisdom, patience, honesty, courage, and conscience [17]. The purpose of life and social subjectivity should also take human well-being and happy life as the starting point and foothold of scientific research, rather than being controlled by capital. In the novel "Humanoid", the "father of humanoids" believes that "artificial life and natural life have equal rights".[18] It is precise because of his unremitting efforts that "humanoids" are smoothly integrated into human society.

To view biofacts from the standpoint of human supremacy is to disrespect their lives themselves. The public should abandon anthropocentrism, rationally treat the existential value of biofacts, and identify with their social subjectivity. At the beginning of his birth, the "humanoid" in the novel is like a human baby, and even has the potential to surpass human physical functions and rational abilities, and has the potential to cultivate virtues: "humanoid" He Jianming has been recognized by his family, lovers, colleagues and friends, he has always regarded himself as a member of human society, and dedicated his talents to human society in the police station. However, when his "humanoid" identity was exposed, He Jianming was not only regarded as a foreigner, but also suffered unfair treatment, so he embarked on the road of seeking freedom. Therefore, the public must not only recognize biofacts as one of the main bodies of society, but also have the virtues of tolerance, kindness, love and sympathy, so that biofacts can obtain the virtues of freedom and cultivate other virtues while working with human beings to build a cohesive society of beauty and commonality.

Montesquieu believed that in a country, in a society where there is a law to follow, freedom is simply to do what he should want and not be forced to do what he should not want to do; freedom is the right to do everything permitted by law. In the "Humanoid" novel, the "humanoids" who should be the subjects of the free society have become alien races without fingerprints, cannot be married, and cannot have children, but these are not the natural attributes of the "humanoids", but the compulsory deprivation carried out by human beings through legal provisions and technical means. The root cause lies in the fact that legislators do not agree with the subjectivity of biofacts, which leads to the injustice of legislation and thus to the antagonism between the two social subjects. Therefore, the justice of individual virtue is fundamental, and justice as an institutional virtue is an analogy of justice as individual virtue .[19] Justice and empathy are the individual virtues that the legislator has first, and the justice of the law should originate from the legislator who has the virtues of empathy and justice. Providing that biofacts are social subjects, the law of justice should define biofacts as: (1) life produced by scientific and technological means; (2) having the ability and power to reproduce offspring; (3) having the freedom of the individual and not being attached to any natural person; (4) having the same basic rights as natural persons and being recognized and protected by law; (5) their guardians (both family and collective) have responsibility for their supervision and education. If the law proceeds from the above concepts, biofacts may become independent and

free social subjects like natural persons, and have the basis for building a home with natural persons.

4.2. The Self-establishment of Freedom By Biofacts

The subjective identification of biofacts by other subjects in post-human society is only a prerequisite for ensuring that they can achieve self-identification, and biofacts, unlike other technological products, have the potential to realize subjectivity and the ability to understand the nature of goodness and the value of life. The establishment of the self and subjective identification is the key to the cultivation of free virtues by biofacts, and only when the subject has the will to acquire free virtues can he further self-identify with the value of existence, choose good behaviour, and achieve moral consciousness.

Biofacts should identify with the ego as the highest purpose of existence and not as some other purpose. In Kant's view, if you want to achieve freedom of will, you have to act in such a way that whether it is the humanity in your personality or the humanity in the personality of any other person, you use it at all times as an end, not just as a means. Biofacts, like human beings, are rational beings, and if their existence is purposeful, then they are the highest aim of existence, and they cannot make themselves the means to achieve some human target, and at any time biofacts should all treat themselves as social subjects. In the novel "humanoid", Jianming grew up in a human family since childhood, and he not only has legitimate human rights, but also has the subject's identification with himself. As a "humanoid", Jianming was born with physical functions beyond ordinary human beings, and he became the best police officer in the country with continuous efforts, and obtained an enviable high education and high position. Jianming's outstanding talents in human society have proved that "artificial and natural people are exactly the same, whether it is the sexual ability, psychological quality and sense of identity with human beings"[20]. It is because Jianming has received the social recognition of his subjectivity since he was a child that he can consciously regard himself as one of the subjects of human society and fulfil the value of a social subject. Therefore, biofacts have an innate sense of self and the potential to contribute to society, and the key to the establishment of subjectivity is the self-identification of the subject.

Biofacts are "living" subjects who are born with the basic qualities of human beings and have free subjects of their own will. Kant argued that freedom must be presupposed as an attribute of the will of all rational beings, and as the will of a rational being, it must be regarded by himself as free.[21]The fundamental difference between humans and animals is that people have brains that can carry out advanced thinking activities.[22]In this regard, biofacts are modelled on the human genome, and even if they are not born in the same way as natural people, they are living, rational beings, with organs capable of performing higher-level thinking activities and the ability of rational beings. They are able to realize their own will in life and embody the freedom of choice and action in life. In the "Humanoid" novel, "Humanoid" Yajun was adopted by human parents at the age of 7, and she not only received the love poured out by her "parents", but also obtained the "human identity card" - fingerprint (the symbol of social subjects) through carving technology, and the "humanoid" Yajun gradually realized herself. After the death of her "parents", she volunteered to become a hair designer as a natural person, and she ran a well-known business. After meeting with Qi Hongdegang (human), she decided, "Not only to love each other, but also to marry with dignity and have children".[23]40 Yajun's choice attempts to cross the forbidden zone where humans and "humanoids" cannot intermarry, and in that tragic world, it is doomed to fail to achieve a celebratory ending. However, such a choice is a full manifestation of the free will of her subject, as Yajun believes, "regardless of the outcome, whether she will be destroyed by bad tendencies or not, she will never regret it".[24]

4.3. The Consciousness of Biofacts for the Inherent Good Value of Freedom Virtue

If you want to be a "good person", you must first be a potential, kind "person". The establishment of the social subjectivity of biofacts is only a prerequisite for cultivating their free virtues, and it is also a condition for biofacts to be "adult" and consciously become moral subjects. In addition, freedom has important ethical value for biofacts, but the construction of the virtue of freedom is not the same as the supremacist freedom. After establishing subjectivity, biofacts should achieve the identification with the intrinsic value of the virtues of freedom, that is, the realization of Aristotle's highest goal of virtue as a virtuous act, and the intrinsic value of goodness related to Confucianism, so that biofacts have ontological goodness and moral consciousness.

The fundamental purpose of cultivating the free virtue of biofacts is to achieve "goodness", and the ultimate goal is to achieve "supreme goodness": to break through the constraints of external moral principles, to express the knowledge and understanding of "goodness", and to realize the self-conscious goodness of the subject. After the self-identified moral subject fully understands the connotation of the virtue of freedom, the freely chosen behaviour is the external expression of the goodness of the virtue of freedom. In the "Humanoid" novel, when the "humanoid" Keane learned that Yoshino-chan had a brain disease, in order to continue Yoshino's life, he decided to gradually transplant his brain to Yoshino-sung in the case that Yoshino does not know. This incident fully demonstrates the freedom virtues of "humanoid" Keane. First, Keane identifies with the subjectivity of the self, and although his actions may lead to the end of his own life, "Keane uses this self-sacrifice to prove his worth, to prove the value of the B-type person".[25] His choice also shows the willingness of "humanoids" to be identified by other subjects of society. Second, "humanoid" Keane knows that such behaviour has seriously violated the rules of human society, but he still insists on his own behaviour and consciously bears the consequences that may come from it. The voluntary behaviour of "humanoid" Keane is based on the subject's identification with the self, which fully expresses the free choice of the subject. Third, the behaviour of "humanoid" Keane may have been influenced by the "humanoid mission", which he believes, "As long as the owner is healthy, I will laugh and walk into the gasification room".[26] But for whatever reason, "humanoid" Keane is a self-identifiable subject, and he makes a free choice between the lives of the two, a choice that embodies the virtues of freedom.

According to the principles of deontology, the actions of "humanoid" Keane do not conform to the established social rules of mankind, his actions must be improper. But if we proceed from human nature, there is no reason to say that the actions of "humanoid" Keane are evil, instead, they must be evaluated as good, because his actions realize the self-realization of the goodness of the virtues of freedom. Therefore, the purpose of cultivating the free virtue of biofacts is to enable biofacts to have freedom, and then to enable biofacts to acquire freedom virtues based on the subject's full knowledge of goodness, to achieve the recognition of the goodness of freedom virtues, and finally to realize their moral response and moral consciousness to the goodness of freedom virtues.

5. Conclusion

Through the "overlapping consensus" on the virtues of freedom in Chinese Confucian culture and Western virtue thought, this research further argues that the premise of the construction of freedom virtues of biofacts lies in the establishment of subjectivity by other social subjects and biofacts themselves, and further explores the good connotation of freedom virtues, taking goodness as the endpoint of their freedom virtue cultivation. It makes the biofacts achieve moral responses and moral self-consciousness in the ontological sense of goodness after

cultivating the virtue of freedom. The freedom virtues of biofacts are only the basis for establishing social subjectivity and cultivating other virtues; constructing the freedom virtues of biofacts in the post-human era of science and technology within the framework of virtue theory is only a preliminary exploration of the ethical construction of scientific and technological virtues.

Emerging technologies have not only transformed human life, but also made our world more efficient, convenient and comfortable, but with the fears and hazes that lurk in science fiction, as well as those things that may subvert traditional human cognition and moral concepts. The rapid development of technological capacity and productivity has also brought about rapid economic stagnation, the depletion of land resources, and the growing problem of ecological destruction. In the future, the challenge for mankind is no longer the possibility of technological innovation or the expected realization of technology, but the coordination of our overall control ability of technology and the future society of mankind. Or, how should we use an emerging technology after it is implemented and ensure that it continues to evolve for the good of humanity?

The ultimate aim of ethics is to cultivate a noble, superior man who acts spontaneously out of their noble, superior character. The scientific and technological ethics with normative ethics as the research paradigm often lacks attention to the moral feelings and behavioural motivations of the subjects, and the research of scientific and technological ethics within the framework of the rule ethics has shown obvious limitations, and its "universal values" are difficult to be equated with human happiness and personality shaping. Therefore, shifting the study of science and technology ethics to virtue ethics is to provide a new exploration and attempt to solve the possible ethical risks posed by contemporary and future science and technology to mankind, and it is also a reasonable way to return the ethics of science and technology to its original meaning. Future research on the ethics of science and technology should shift to the cultivation of other virtues for scientific people, the scientific community, the public, regulators, and biofacts. How the "beautiful world" imagined by science fiction writers and the "good life" expected by ethicists complement each other has become the ethical essence and value essence of science and technology.

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