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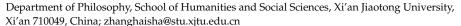
Differentiation Mechanism of the New Human Form and Its Collaborative Development Relations with Natural Person †

Haisha Zhang 🔟

Department of Philosophy, School of Humanities and Social Sciences, Xi'an Jiaotong University, Xi'an 710049, China; zhanghaisha@stu.xjtu.edu.cn
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Abstract: The essence of differentiating the new human form is the substitutability of information carrier and the variability of material information. The existing system is the result of collaborative development, and the balance and stability of the system in the future still need to be maintained through collaboration. Therefore, natural persons and the new human form were, are, and will be in collaborative development in the future, which basis is the intelligent ecosystem jointly created by various human forms. Only the establishment of social institutions suitable for the intelligent ecosystem is the institutional basis to ensure the symbiosis.

Keywords: natural persons; new human form; collaborative development; intelligent ecosystem

1. Introduction

After the natural person has realized the transformation from pure naturalness to sociality, humans have begun to gradually evolve and upgrade themselves or create new forms through various scientific and technological means, and continue to create their own new essence. New human forms such as superhuman, robot, cyborgs, etc., generated through human enhancement technology may become the mainstream of human forms in the future, and the development of this situation will inevitably make natural persons face the problem of relationship with new human forms. There has also been a heated discussion on this problem in academic circles: One view is the AI threat theory represented by Hawking, which holds that the new human form will rule or even destroy mankind in the future. The second view is optimistic about the future development form, and this view believes that the development of AI and the emergence of new human forms are for natural persons to serve rather than destroy. It is a manifestation of social progress, which will make it possible for everyone to develop freely and comprehensively. The third theory holds that natural persons have irreplaceable nature. The essence of the relationship between AI and natural persons is technical ethics. Whether AI serves, replaces, or destroys natural persons mainly depends on the use of technology by humans.

When we are not tired of making various assumptions and conjectures about the future human survival relationship, the first question we need to understand is how the new human form came into being. What is the essence of human morphological differentiation? Only by understanding the origin and development of human morphological evolution can we make a reasonable hypothesis about the future existence state. Based on this consideration, this paper attempts to reveal the nature of the differentiation of human form from the material and information dimensions, and further clarifies the relationship between the process mechanism of new human form and natural persons from the perspective of historical development, so as to provide a new perspective for thinking about the relationship between new human form and natural persons.

2. The Essence of the New Human Morphological Differentiation

2.1. The Existence Essence of Life: Dual Existence of Material and Information

To explain the differentiation essence of human form, we first need to understand the essence of life.

From the perspective of molecular biology, genes, functional nucleotide sequences, control the traits of organisms, determines the basic structure and function of organisms, serves as the command and control center of organisms, and is also the main existence mode for life to extend itself. As a result, biologists represented by Richard Dawkins even regard genes as the true intrinsic nature of life's existence and evolution; humans and all other organisms are just containers, machines, and servers created by genes for temporary shelter and replication [1] (p. 3).

However, both the early logoi spermatikoi (seed rationality) represented by Stoia and Augustine, Mendel's "genetic factors" and Morgan's "genes" all have a microscopic substantive characteristic, that is, they merely extend the essence of life from macroscopic entities to microscopic entities, so that information features of genes have not been reflected. Additionally, if we say that the essence of life is genes on this basis, it cannot explain the predevelopment stage of life evolution, because genes do not exist in the whole process of life development.

It is more reasonable to say that the essence of life is the dual existence of matter and information. In the evolution path of life forms, there must always be the dual existence of matter and information, that is to say, there is no isolated information which is the property of matter itself, and no matter without information. All beings are both material and information bodies [2] (p. 39).

The existence essence of a life system is the dual existence of matter and information, that is, the dual existence of a life material system and a life information system. The material system is the objective reality that guarantees the functional operation of the whole living system. The information system includes two parts: one is to guide the objective indirect existence of material system operation, evolution, and heredity, such as DNA, RNA, etc. The second is the subjective indirect existence of the subject's objective display and reflection, such as spirit. The unity of the two produces the intelligent behavior of the material system and ensures the stability and continuity of the living system.

2.2. Nature of Differentiation of New Human Form: Replaceability of Information Carrier and Variability of Material Information

Because of the universality of material interaction, the universal interaction is inevitably accompanied by the generation, transmission, exchange, and transformation of information. The same information can be carried by different material carriers, that is to say, the material carrier of information has the characteristics of replaceability—the material information is constantly updated and transformed in the assimilation and alienation of interaction, so the information of material carrier has the characteristics of variability.

The differentiation of new human form is essentially based on the replaceability of material carrier of information or the information variability of material carrier. The differentiation of new human form basically goes through three paths: the first is the self-enhancement of natural persons, which is realized by changing human physiological information, such as gene editing. The second is the human–machine combination. This way is to change the physiological structure and information characteristics of a human by integrating inorganic material into human body, and to act on the purpose information of a human on inorganic material to make it play a certain function. The third way is to apply human information to inorganic objects, so that inorganic objects can produce human-like or superhuman intelligent behavior. The specific process of morphological differentiation from natural persons to new human can be represented by the following models:

1. The generation of human information and intelligent behavior. Through the interaction with the objective environment, the natural person receives, stores, accumulates, and creates the information from the objective environment to form their own in-

formation group (in-itself information, for-itself information, reprocess information, social information) and produces intelligent behavior.

2. Human intelligent behavior creates two kinds of existence: new information (such as the new information generated by gene editing), new carrier (the essence is the reconstruction of material structure, such as the material structure of robots carrier and the material structure of cyborgs carrier).

3. A part of the new information acts on the natural person and combines with the carrier of them to produce a super human, The original human information group is superimposed with new information, and a part of them is transformed into the original information corresponding to the new carrier, and then combined with the new carrier in a certain way to form a new human form (robots, cyborgs, etc.) and generate intelligent behavior and new information (the change of material structure are necessarily accompanied by the generation of new information).

4. Superhuman and environment continue to interact with the environment to produce new information; the original information of new human forms is constantly updated on the original basis, and its own new information is constantly updated and upgraded in assimilation and alienation with environmental information and produces intelligent behavior.

Each human form influences and restricts each other, and its intelligent behavior is constantly changing the objective environment, so information and material are always in dynamic change.

3. The Collaborative Mechanism of the Existence and Development of the Natural Person and the New Human Form

Every stage of development of intelligence is also an evolutionary stage. It needs to constantly break all kinds of crises to achieve its own qualitative leap, and the way to break the crisis is the progress of science and the development of technology. The development of the agent follows roughly these stages:

The first is the intelligent stage of a pure natural person. Humans make simple wooden and stone tools as aids for both hands. The crisis faced at this stage is the practice. The overcoming of the practical crisis is mainly a series of practical activities conducted by man and nature.

The second stage is the combination of the intelligence of natural persons and the simple mechanical tools. The first of the crisis that needs to be overcome in this stage is the complexity crisis, and then is the energy crisis. The lifting of this crisis starts from the invention of the steam engine in the First Industrial Revolution, and then to the construction and development of power science and electromagnetism in the Second Industrial Revolution. Thus, intelligence is upgraded to the third stage.

The third stage is the complex mechanical. The overcome of the information crisis existing in this stage is based on the revolution and development of computer technology, quantum mechanics, relativity, and so on. Since then, intelligence has been upgraded to the fourth stage.

The fourth stage is the machine–electric integration stage. At this stage, the problem that AI is not intelligent enough is what human beings need to do their best to conquer. Therefore, intelligence is the main crisis to be overcome at this stage.

The fifth stage is the development from special robots to general robots, biochemical people, and so on. After that, the crisis is survival. To overcome the survival crisis, we need to coordinate the relationship among various human forms and establish a social system to ensure their symbiotic relationship in the same time.

From the perspective of functional development, AI may eventually reach or even surpass the level of human intelligence, that is, AI can design, repair, and improve itself, and even design more advanced AI than itself. Many pioneers in scientific and technological circles, including Hawking, have warned the world that the creation of AI is closely related to the survival and continuation of human civilization. The establishment of strong AI may

not only bring positive impact to mankind, but also lead to the destruction of mankind itself. Furthermore, in 1993, the computer scientist Vernor Vinge proposed Technological Singularity, predicting that within 30 years we would have the technological means to create superhuman intelligence, and not long after that the human age would come to an end [3].

However, the more probable future for natural persons and AI should be that the development of AI can be infinitely close to human intelligence, but it will not be equal to or even exceed human intelligence. Therefore, only by combining human characteristics with AI characteristics can we promote the development of the whole AI and human beings to the greatest extent, that is, to realize the effective connection between "AI" and "human intelligence".

In fact, the essence of such questions that "AI threatens human civilization?" and "Will AI destroy human beings?" is whether human beings have the ability that cannot be replaced by agents, in other words, whether human beings have traits and whether the self-limiting problem in the development of AI exists.

Many scholars have answered the question of whether human beings have traits. They believe that free will, imagination, creativity, and intentionality are unique to people [4,5]. "AI will not practice" [6]. "The theoretical basis or premise supporting the 'AI threat theory' is untenable" [7]. "The cognition of intelligence is only and will always be based on the cognitive level of nonstatement" [8]. These statements show that the development of AI has self-limiting characteristics.

From the traits of human beings and the self-limiting characteristics of the development of AI, we can further demonstrate a more likely future model of natural persons and AI; that is, the intelligence of natural persons and new human intelligence will continue to maintain the relationship of mutual correlation and coordinated development.

4. Intelligent Ecological System: Coordinated Development of Natural Person, New Human Form, Intelligent Information Environment, and Natural Environment

Among human forms, their intelligent information environment, natural environment and new human forms, and material structure reorganization and information flow are constantly active, and they are in the dynamic balance of interaction, thus forming an intelligent ecosystem. In the whole ecological chain, they have different advantages of their own existence and play different roles, occupy a different niche, and thus play their own functions. There will always be a coexistence relationship between human forms and their intelligent information environment and natural environment. Only by coexistence can self-development be maximized. Wu Kun believes that in the process of the intellectualization of the social environment, it also urges human beings to change themselves and create their own new essence. Human beings continue to break through the old single essence and develop toward the richness, diversity, and complexity of their own essence, making it possible for everyone to develop comprehensively and freely [9].

However, for human society, with the deepening and breadth of human practice, it is increasingly more difficult to realize spontaneously the stability and balance of an intelligent ecosystem. Therefore, only the establishment of a social system compatible with the intelligent ecosystem is the institutional basis to ensure collaborative symbiosis. Therefore, the question of whether the new human form will destroy the natural person becomes the question of who will play the leading role, who will make the rules, and who will supervise the implementation in the future world. To maintain and ensure their own existence, the natural person must become the leader, rule maker, and supervisor of the intelligent ecosystem, and needs to formulate a series of policies to protect the power of natural person.

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