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The Integration of Artificial Intelligence Revolution and Philosophy

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Abstract

In the past 20 years, with the development of emerging technologies such as the Internet, cloud computing, the Internet of Things, big data and artificial intelligence, intelligence developed on the basis of informatization is in the ascendant, and the revolution of big data, pervasive computing, interconnection of everything and intelligent machine intelligence is about to emerge. Regardless of whether the intelligence explosion nurtured by singularity can become a reality, intelligence will inevitably promote the integration and accelerated development of cutting-edge technologies such as information, life, cognition, and nanotechnology with quantum technology. Although the process of technology moving towards human beings has been ongoing since modern times, the impact of the intelligent revolution is not only speed and breadth, but is also pushing humanity towards a new era of increasingly deep technological advancement - intelligent perception and control based on data and computing will enable technology to intervene in human life, behavior, cognition, consciousness, emotions, and morality at various possible scales. Faced with these disruptive changes of the times, the question is no longer whether humanity should promote

the intelligent revolution and deep technological process, but how to assess its profound impact and possible prospects, explore the acceptable prospects of the intelligent revolution and deep technological process for humanity, and then conduct in-depth philosophical analysis, value questioning, and ethical construction on it.

Key words: artificial intelligence; technological revolution; philosophical fusion; information age; ethical construction

1. The Impact of Technological Revolution on Philosophical Thought

Dell's "The Future of Philosophy" published in 1999 provided a good outlook for philosophy in the 21st century. Dell believed that philosophers of science in the 20th century had not been able to digest quantum mechanics, which he considered a shameful thing for philosophy of science. It also demonstrated that philosophical problems can constantly be transformed into scientific problems, and summarized that some of the impacts on philosophy brought about by the emergence of the Second Scientific Revolution have not been digested. Further discussion was made on the lack of differentiation between early science and philosophy, and the subsequent development process of science and philosophy. From this, it was demonstrated that experiments not only became evidence of scientific development, but also evidence for testing science. The transformation of philosophy from complete abstraction to experimental nature in the 19th and 20th centuries was also demonstrated. Several specific examples were given to illustrate that we increasingly rely on machines, and the development of artificial intelligence highlights the importance of experimentation. The development of artificial intelligence makes experiments more convenient. Afterwards, it was discussed that the development of science and philosophy in the 19th century showed opposite directions. Science became increasingly concrete, and some disciplines became independent from philosophy, becoming branches of science. As a result, philosophy developed towards a more abstract direction, with Hegel as the mainstream.

With the emergence of the second scientific revolution, science and philosophy once again

intersected. Einstein proposed the wave particle duality of light based on its wave nature, and discussed the contribution of philosophy to science from the perspective of philosophical questioning, which can deepen the understanding of science. He also proposed that the research field of new philosophy of science should focus on cognitive ability, practical understanding, and scientific innovation. Continuing with a detailed discussion on the intersection of the Fourth Technological Revolution and science, the rise of industrial civilization, and summarizing that replication technology emerged only after the Fourth Technological Revolution and is a change in machine autonomy.

The natural sciences of the 19th century developed towards concretization and became completely independent from philosophy. It was precisely because philosophy developed towards abstraction that philosophers with a scientific background were repulsed. The philosophical movement at the beginning of the 20th century changed the way philosophy was trained. Philosophy training, like scientific training, was limited within a certain school or branch of philosophy, and research interests were also limited to philosophical research within this tradition, resulting in philosophical differentiation. Logical empiricism, which imitates the research of the Academy of Sciences, launched a Copernican style philosophical revolution, deposed the speculative philosophical system as the "mother of science", established an anti metaphysical methodology and scientific worldview, and made philosophy a logical and linguistic analysis of the fundamental problems of empirical science, abandoning cognitive functions and pursuing the service of science. They believe that the ultimate goal of philosophers is to express truth clearly through logical analysis, rather than to discover truth and exclude the process of scientific discovery from the field of philosophy of science. Logical empiricists have a scientific background, Schlick was a student of physicist Planck, Carnap had a background in physics, Reichenbach had a background in physics, mathematics, and philosophy, and Frank was a professional physicist who received scientific training in classical physics in the early 20th century. Logical empiricists have witnessed the development of quantum mechanics, influenced by its ideas, but they have also grown up within the mature conceptual framework and ideological system of classical physics, inevitably inheriting or assuming the traditional understanding of observing facts as "experience blocks". For example, Reichenbach

believed that philosophy would not make any contribution to the content of knowledge, and there was no independent field of knowledge that existed before science. The intersection of contemporary science and philosophy once again, Einstein clarified the meanings of concepts such as time, space, particles, simultaneity, force, and field, analyzed the underlying inconsistencies in the basic conceptual system of classical physics, clarified "inertial mass" and "gravitational mass" in the law of universal gravitation, and established special relativity and general relativity. The intersection of the fourth technological revolution and philosophy, the steam engine marked the beginning of the transition from agricultural civilization to industrial civilization, electricity marked the rise of industrial civilization, computers marked the development of industrial civilization, and artificial intelligence ushered in a new transformation. The fourth technological revolution mainly involves the transformation from empowering technology to intelligent technology, from exogenous autonomy to endogenous autonomy. During this process, a new ontology emerged, namely intelligent robots, which are related to a series of changes in the entire conceptual framework, thinking mode, social organization, institutional arrangements, and so on. The Fourth Industrial Revolution is not about replicating technology. The emergence of robots has strengthened the autonomy of machines, and after humans use technology, technology dominates them. For example, with the emergence of mobile phones, humans rely on them, and ethical issues arise due to technological changes. At the same time, endogeneity has led to the emergence of bio technology hosts and human-machine integration technology, which has strengthened the perception ability of machine learning and led to the emergence of intelligent robots. Intelligent robots will bring a series of impacts to humans, destroying all previous ethical and legal achievements and a series of civilized achievements. The series of problems that have arisen cannot be solved. At the same time, the changes that occur in the human-machine relationship may lead to the emergence of fusion relationships in the future. The speed of technological development exceeds the existing conceptual speed, and the existing conceptual tools already have great risks. Therefore, the development of this technology is not conducive to social development. Therefore, enriching the conceptual framework is a question that philosophers should consider.

The rapid development of technology makes it difficult for people to adapt to the development of society, such as big data inferring avian influenza but unable to infer the cause of this phenomenon. How to integrate rationality and relevance into the fourth industrial revolution is the expected result of our social development. The immortality of human beings is achieved through enhanced technological variants, using brain computer interface technology to enable one person to control another part of the technology. Can technology be used to control infants? Of course not allowed. This makes the ethical issues of ancient Greece a problem caused by contemporary technology. How to deal with robots and mathematical humans, whether the human mind can be attached to a technological and networked machine, and whether human language and life can be replicated on a virtual person through technological means, and whether our society can use robots to replicate life, of course not. Because in this way, the mind is no longer an organ but a capability. After the disappearance of the human body, the replication robot achieves immortality. I can think about what a complete person is. In fact, this problem exists in the philosophy of science and technology. The intersection of science, technology, and philosophy makes the problem even more difficult to understand. The search engine has become a machine that provides observation and perception technology to humans, but also changes human cognition. In this way, human cognition is jointly determined by oneself and the search engine. Search engine tools have a guiding role in human cognition, and they participate in human cognition. Meanwhile, the emergence of another type of network scientist. Introduced software robots, which participate in human cognition, indicating that robots have influenced the way science works. At the same time, the metaverse makes people tools of the internet, and technological development needs to be synchronized with regulation. Technological development also requires humanistic literacy. In the period of civilization transformation, we need to hold ourselves accountable and combine ethical responsibility studies.

Nowadays, due to the development of technology, the problem of alienation also needs to be analyzed. Digital transformation has reversed the relationship between humans and the environment. Big data enables people's information to be delivered, their hobbies to be induced, and their selection criteria to be influenced. Human civilization should be the

accountability mechanism for reconstructing society discussed in the philosophy of science and technology. We should pay attention to philosophical issues during the transition period of civilization, cutting-edge issues in disciplinary development, digital issues, and networked topics, and strive to promote the development of social civilization.

2. Measures taken to address the challenges brought by the technological revolution

From the evolution history of human civilization, science and technology have always developed in the direction of anti natural selection. They not only continuously endow humans with the power to conquer and transform nature, but also constantly improve their ability to rescue the weak. At the same time, they have also changed the way humans survive, produce, and even understand to varying degrees. In this historical process, as the development of science and technology, relying on its own strength, gradually permeates into all human activities and constructs its own advantageous system, becoming the foundation of human survival or reshaping the environment of human life, they will in turn dominate human thinking and concepts, becoming a new perspective for judging other human activities, leading to profound changes in human values. This requires us to rethink ourselves, redefine the relationship between humans and technology, and impose appropriate ethical constraints and even legal regulations on technological research and industrial development.

2.1 Integrating the values of truth, goodness, and beauty into artificial intelligence

The deepening development of the fourth technological revolution has put us in a new historical stage of interacting with various intelligent devices. However, as these high-tech innovations become an essential part of our daily lives, our lives and even culture begin to evolve from relying on natural objects to relying on intelligent artificial objects, thus forming a artificially created cultural atmosphere and artificial world. In this context, artificially created cultural implications and value inducements not only change our understanding of the living world, but also profoundly alter our attitude towards technology.

From a philosophical perspective, on the one hand, with the continuous development of

technologies such as gene editing, brain computer interfaces, neural engineering, and artificial intelligence, the ability of humans to utilize and transform nature has expanded from only transforming external nature (nature) in the past to being able to transform human internal nature (body and mind) today. This inevitably brings about questions about the technologization of human body and mind; On the other hand, when the convergence and integration of hard technology groups composed of these technologies and soft technology groups composed of various algorithms provide a realistic possibility for stakeholders to layout and promote new industrial systems, we will usher in a digital world that integrates all element simulation and virtual real interaction, and can provide immersive perceptual experiences. The so-called "metaverse" is like this. This digital world is both an ideal world of perceptual "feeding" and a gamified pleasure world. When we become addicted to immersive perceptual experiences, we may unconsciously lose our ability to think independently.

Beauty is an abstract and enduring concept that transcends the trivialities and disputes of our daily lives. Truth, goodness, and beauty are the three fundamental concepts in philosophy that form the cornerstone of human morality. Truth, goodness, and beauty are three interdependent concepts. They permeate and influence each other, and cannot be understood in isolation. Truth refers to the recognition of the authenticity and essence of things, which requires people to explore the truth of facts rather than relying solely on subjective biases. Goodness refers to the correctness and adherence to moral principles of behavior, aiming to have a positive impact on others and society. Since ancient times, people have been pursuing the essence of truth, goodness, and beauty, and striving to apply it to real life. We can only think about truth, goodness, and beauty from a philosophical perspective and translate their ideas into practice. If artificial intelligence can be highly integrated with the concepts of truth, goodness, and beauty, humanity will usher in a new future.

2.2 Integrating excellent ethical ideas into artificial intelligence

In terms of the technologization of the human body, the "Book of Filial Piety" regards "the body and skin, to be taken care of by parents, and not to be destroyed" as the beginning of filial piety. However, when humans have the ability to technologically modify or design their bodies, whether we should adhere to this traditional moral code has become a fiercely

debated topic between conservationists and transhumanists. The essence of these debates lies in the extent to which humans should allow their lives to evolve from biological and cultural shaping to technological design stages, such as gene editing before birth and aesthetic plastic surgery after birth. Transhumanism advocates the use of technology to overcome human biological defects, expand human abilities, and even pursue eternal life. The technologization of the body has brought us a renewed understanding of issues such as human natural rights, fairness, and justice.

In terms of the technologization of human spirit, the tangible technologization of spirit refers to obtaining spiritual comfort through emotional drugs or technology; The intangible technologization of spirit refers to perceiving spiritual pleasure and obtaining spiritual satisfaction through intelligent devices and environments. The intangible technologization of spirit brings more potential and hidden problems than the tangible technologization. We need to learn to live a healthy life in the order of intelligent artificial objects when designing and creating smart devices and environments. Our reflection on the extent to which humans should accept artificial emotions will put forward new ethical requirements for the development and promotion of social and nursing robots, explore whether human focus and perception should be commodified, and impose ethical constraints on the industrial development of artificial worlds such as the metaverse.

Technological development comes first with ethics. The ethical challenges brought about by the development of contemporary technology are not only major issues related to the future of human civilization, like the problems caused by global climate change, but also transform profound philosophical questions such as "what is human", "what kind of person should be", and "what kind of human civilization should be shaped" into practical issues of how contemporary technology ensures the healthy development of human civilization. When the human-oriented concept of technological ethics governance becomes the "perspective mirror" for people to view problems, our living environment shifts from the "technological environment" to the "humanistic environment". Although this process still has a long way to go, this effort will inevitably prove to have profound significance for future human civilization.

2.3 Integrating Marxist principles into artificial intelligence

The position of Marxism is to take the liberation of the proletariat and the liberation of all mankind as our responsibility, to achieve the beautiful goal of comprehensive development of human freedom, to put the people at the center, to adhere to everything for the people, to rely on the people, and to wholeheartedly seek happiness for the people. Science and technology are the primary productive forces and the core driving force for the development of modern society. The development of artificial intelligence must be aimed at meeting the fundamental interests of the broadest masses of people, always meeting their needs, and bringing the most practical and tangible benefits to the people.

The Marxist viewpoint holds that the world is unified in matter, matter determines consciousness, and consciousness is an active reflection of matter. To approach the development of artificial intelligence in a scientific manner, it is necessary to recognize that artificial intelligence is a special manifestation of human consciousness and agency. It is the objectification and realization of human essential power. Even the most powerful and advanced intelligent machines cannot reach the level of human intelligence, truly possess human consciousness, and cannot replace or surpass human intelligence.

The Marxist approach holds that people must adhere to the method of dialectical analysis in order to understand and transform the world. To approach the development of artificial intelligence scientifically, it is necessary to recognize that artificial intelligence has a dual effect. Since the emergence of artificial intelligence in various industries of people's lives, there has been a significant improvement in work efficiency in various fields.

3. Conclusion

Artificial intelligence not only lays a very solid material foundation for people's lives, but also liberates a large amount of manpower from simple and tedious repetitive labor, allowing us to complete more things more freely, which promotes the development of productivity. However, the rapid development of artificial intelligence technology has also brought many social or ethical issues.

At present, artificial intelligence is still developing, and it can be foreseen that it will have greater development in the future. We need to integrate excellent ethical ideas and values of

truth, goodness, and beauty into artificial intelligence from the perspective of Marxism, viewpoint, and methodology, and observe, think about, and grasp the future development of artificial intelligence and its impact on society with an open and objective attitude. While fully utilizing the convenience brought by artificial intelligence, attention should be paid to strengthening the risk assessment and prevention of improper application of artificial intelligence, guiding and regulating the development of artificial intelligence towards a direction more conducive to human survival and development.

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