

Ethical Dilemmas and Philosophical Reflections in the Development of Artificial Intelligence

Ruixin Kong, Qian Qian

Shanghai University of Political Science and Law, Shanghai 201701, China

ABSTRACT

Artificial intelligence technologies such as ChatGPT have revealed their wide applicability in daily applications. By virtue of the technological advantages of ultra-large-scale algorithms, numerous model parameters, and excellent scalability, they have partially replaced the work of the human brain, but they have also raised a number of ethical dilemmas, such as the weakening of human subjectivity, interpersonal tensions, algorithmic bias, and the leakage of users' privacy, and so on. These dilemmas have prompted people to seek ways to cope with the ethical crisis and shape a new type of human-computer relationship. Based on Marx's concept of science and technology and the idea of science and technology ethics, this paper analyzes the ethical problems of the rapid development of artificial intelligence, probes the root causes of ethical dilemmas from the dimensions of capital logic, technological composition, and technological application, and puts forward corresponding countermeasures. In order to promote the benign development of AI in the new era and properly solve the ethical dilemma, we should uphold the concept of science and technology ethics under the guidance of Marxist theory, strictly abide by the ethical bottom line of scientific and technological innovation, break through the ethical bottleneck, set up a platform for exchanges between scientific and technological developers and scholars of humanities, so that humanistic concepts can be deeply integrated into the process of scientific and technological development, and promote the benign interaction between human beings and science and technology.

KEYWORDS

artificial intelligence; ethics of science and technology; ethical dilemmas

At a time when technology is changing rapidly, artificial intelligence, as a representative of cutting-edge technology, is profoundly changing the way of production and life of human beings. From the Industrial Revolution, when mechanical devices gradually replaced manual labor, to the 20th century, when artificial intelligence began the process of replacing part of human intelligence, every technological leap has been accompanied by the highlighting of ethical issues. The ChatGPT series products launched by OpenAI, especially ChatGPT-4, which will be released in March 2023, with its significant enhancement in the scale of the model parameters and functionality, has achieved bi-directional input and output of text and images, deeply changing the way humans acquire knowledge. However, this technological advancement has also triggered in-depth reflection on the ethical dimension of AI generation technology. The subversion of the established ethical and moral system latent in AI makes the fate of human beings face unprecedented challenges. In today's digital age, we should not only embrace the development trend of the times, but also be highly alert to the ethical issues raised by technological development, so as to ensure the benign development of science and technology.

1 Ethical Dilemmas under the Rapid Development of Artificial Intelligence

In March 2023, OpenAI officially launched its latest achievement, ChatGPT-4. Compared with previous AI versions, GPT-4 has achieved a significant improvement in the scale of model parameters, and also possesses more powerful functions with more humanized qualities. While previous AI models were mainly limited to processing text input and output, GPT-4 successfully breaks this limitation, not only being able to accurately understand the deeper meaning of text, but also being able to efficiently convert from text to image, thus realizing the bidirectional input and output functions of image and text. The introduction of ChatGPT humanization function marks a turning point in replacing human brain work, revolutionizing the way human beings acquire more knowledge and opening a whole new chapter in the development of artificial intelligence technology. While enjoying the convenience brought by scientific and technological progress, human beings should also quickly reflect on science and technology. Therefore, it is particularly necessary and urgent to reflect on the ethical dilemmas brought about by the development of science and technology.

(i) The rapid development of artificial intelligence has led to the loss of the human subject position

On the one hand, the technological capability transcendence and role dislocation. "As soon as the means of labor appear as machines, they immediately become competitors of the workers themselves" Artificial Intelligence in many fields to show beyond the human ability, such as diagnosis and treatment robots, legal robots and other efficient performance in the professional field, so that human beings, consciously or unconsciously, will be more belonging to the nature of the machine, so that the machine instead of the human to think, judge, choose, the human nature of a part of

the essence of human activism by the machine intelligence to replace the machine's subjectivity is more and more obvious, the human subjectivity gradually weakened, subject human and object Intelligent artifacts show an obvious status dislocation relationship, and people are increasingly hollowed out.

On the other hand, human self-cognition has been impacted. At present, the big model technology has the ability of natural language interaction and carrying out professional tasks, and can further learn and improve according to the feedback, and the difference between human beings is further narrowed, and the cognition of the value of human beings is facing an impact. Human beings are different from machines due to their learning ability, creativity, individual diversity, and full of emotions, etc., but with the development of AI technology, these differences are gradually blurred, and human self-perception and value are challenged.

(ii) The development of artificial intelligence may lead to a crisis in human relations.

First, generative artificial intelligence may disrupt the order of human relations. Its working principle is based on pre-trained large-scale language models, forming its own large language model through deep learning of existing data, and learning the laws of question and answer with the help of the training model, so that it can utilize the existing model to answer new questions when faced with them. Therefore, in the process of utilizing this technology, although the AI is able to communicate, what it expresses may not be true and reliable.

Second, the development of AI may also trigger a major change in the ethical relationship between humans and machines. Under the previous ethical framework, human beings always occupied the main position, while animals and machines were only regarded as passive recipients of ethics. However, with the continuous advancement of AI technology, this traditional human-machine ethical relationship is facing unprecedented challenges. Take ChatGPT 4.0 as an example, its superior text and image generation capabilities are gradually blurring the ethical boundaries between humans and machines.

Finally, it will bring the dilemma of responsibility attribution. The autonomous behavior of AI brings about complex ethical and responsibility division issues. For example, when a self-driving car is involved in an accident, the definition of responsibility becomes blurred, making it difficult to clarify whether it is the responsibility of the manufacturer, the software developer, or the user. This dilemma of responsibility attribution not only affects the application of the law, but also has an impact on the responsibilities and obligations in human relations, making it difficult to find a clear subject of responsibility when facing problems caused by artificial intelligence.

(iii) Artificial intelligence development may lead to a lack of fairness and justice

First, it will generate data and algorithm bias. The learning and decision-making of AI systems rely on a large amount of data, which often originates from human society and inevitably carries various biases. For example, in a hiring scenario, if employees of a certain gender or race are overrepresented in certain positions in the training data, the AI hiring system may be inclined to select candidates with characteristics similar to those, leading to unfair treatment of other genders or races. The designer of the algorithm may inadvertently introduce bias when constructing the model.

Second, it will produce an unequal distribution of employment and wealth. The widespread use of AI will lead to the replacement of many traditional jobs by automation, especially those that are repetitive and regular, such as factory assembly line workers and data entry clerks. This will make a large number of middle- and low-skilled workers unemployed, while high-skilled technical talents and experts in related fields will be more popular, thus exacerbating the polarization of the job market and forming a "dumbbell" employment structure, i.e., an increase in the number of high-skilled, high-income and low-skilled, low-income jobs, and a decrease in the number of intermediate-level jobs.

Finally, it will lead to ambiguity in the definition of responsibility. The decision-making process of AI systems is often complex and difficult to understand, just like a "black box", and even developers can hardly fully explain its internal logic and mechanism. When AI systems make mistakes or cause undesirable consequences, it is difficult to determine where responsibility lies.

2 The Roots of Ethical Dilemmas in the Development of Artificial Intelligence

This paper focuses on the ethical problems caused by artificial intelligence technology, and analyzes the background of the technology, the construction of algorithms and the big data learning process in depth, aiming to explore the causes of ethical dilemmas, and to provide useful ideas and directions for the construction of ethical norms in the process of technological development.

(I) The Roots of Ethical Dilemmas under Capital Logic

First, the utilitarianization of value orientation. Driven by the logic of capital, scientific researchers often regard scientific research as a means to make a living, and are oriented to utilitarian purposes such as title promotion, high salary and high academic status. This utilitarian motivation for scientific research makes some researchers prone to take improper means, such as academic plagiarism and data falsification, when facing the pressure of scientific research results, thus triggering the crisis of science and technology ethics. On the other hand, the pursuit of profit maximization

by capital has prompted science and technology enterprises to push new technologies to the market quickly to gain economic benefits, while ignoring the social and ethical risks that may be brought about by the application of science and technology.

Secondly, the alienation of human-nature and social relations. On the one hand, the relationship between human beings and nature is tense: the development of science and technology under the logic of capital is often at the expense of the massive consumption of natural resources and the destruction of the ecological environment. In order to pursue higher profits, capitalists unreasonably utilize science and technology to over-exploit and plunder nature, leading to frequent ecological crises. On the other hand, the alienation of human-society relations: the alienation of science and technology has led to the alienation of human-society relations. Under the domination of capital, science and technology have become the tools for capitalists to extract surplus value, and laborers have been alienated into the appendages of machines, with their labor time lengthened and labor intensity increased, while their remuneration is relatively reduced, thus aggravating the social gap between the rich and the poor and the class contradiction.

Finally, the lack and lag of ethical statutes. On the one hand, the ethics of science and technology are not sufficiently embedded. Pulled by the logic of capital, the science and technology industry favors the updating and iteration of technology, and does not exert enough efforts to embed the ethics of science and technology. On the other hand, regulation and supervision lags behind, the rapid development of science and technology makes the relevant laws and regulations and regulatory policies relatively lagging behind, and it is difficult to carry out effective constraints and standardization of capital-driven scientific and technological activities.

(ii) Sources of ethical dilemmas under algorithms and big data

First, the lack of ethical governance. On the one hand, there are differences in the ethical stance of the designers. Different ethical stances of algorithm designers may lead to different ethical tendencies in algorithm design. On the other hand, low public participation. The complexity and specialization of algorithms make it difficult for the public to understand them. This lack of participation makes the lack of public supervision and feedback in the process of algorithm design and application, making it difficult to fully reflect the pluralistic values of society. In addition, the regulatory system is not perfect.

Secondly, commercial interests drive. On the one hand, profit maximization and ethical neglect. Under the logic of capital, enterprises often take the pursuit of profit maximization as their primary goal, which may lead to the neglect of ethics in the application of algorithms and big data. On the other hand, there is a lack of effective regulation. Currently, the lack of regulation of science and technology ethics is partly due to the paradox between ethical bottom line and economic interests, as well as the misconception of "no ethics, just legal". This lack of regulation makes it easier for enterprises to ignore ethical norms when pursuing commercial interests, leading to the frequent occurrence of various ethical problems.

3 The path of ethical regulation of the development of artificial intelligence

The ethical dilemmas caused by artificial intelligence mainly involve the logic of capital, algorithms and the development of big data. We must keep abreast of the times, solve the ethical problems of AI in a timely manner, and guide the development of AI in a better direction.

(I) Constructing an ethical system with Chinese characteristics

Public perception plays an important role in regulating technology ethics. In order to cope with this crisis, it is necessary to let people understand science and technology ethics first, so that science and technology ethics can penetrate into people's life bit by bit, so that people can act according to the standards of science and technology ethics and realize the unity of knowledge and action. Specifically, it is necessary to provide courses on ethics of science and technology in primary and secondary schools, and to create an environment and atmosphere of ethics of science and technology on campuses and in society, so as to promote the development of ethics of science and technology through cultural environment.

Secondly, the relevant scientific and technological personnel should also enhance their scientific and technological awareness, scientific and technological ethics is a combination of science and technology and ethics, it is difficult to realize effective governance only by scientific and technological personnel, if we want to enhance the effectiveness of scientific and technological ethical governance, first of all, colleges and universities should actively open the courses of scientific and technological ethics, so as to let the students understand the boundaries of scientific and technological ethics, so that the students will have a strong interest in scientific and technological ethics. On the other hand, it is necessary to break down the professional barriers between science and technology workers and ethics scholars, and promote in-depth exchanges between the two, so that science and technology workers have a deeper understanding of ethics, so that the relevant personnel of ethics have a deeper understanding of science and technology-related knowledge, so as to realize the integration of the two.

Finally, to strengthen the guidance of Marxism, to build a science and technology ethics system with Chinese characteristics, need to start from various aspects.

At the same time, rooted in the excellent traditional Chinese culture, we should innovate and inherit the wisdom of traditional science and technology ethics and ethical governance, such as the philosophical concept of “the unity of heaven and mankind” and the technological ethics of “mastering technology through Taoism”, in order to enrich the ideas and methods of contemporary science and technology ethical governance.

(ii) Integrating humanistic concepts into technological research

First of all, enterprises must integrate humanistic concepts in the development process. The integration of the two is an important path to exclude alienation and solve problems. The integration of the two is not so simple, and it has to go deep into the production and exchange of enterprises. Enterprises as the key link in the design of artificial intelligence, enterprises should integrate the humanistic concept into artificial intelligence, so that artificial intelligence has certain “emotional attributes”, so that artificial intelligence better serve the people.

Secondly, scientific and technological personnel must reflect on the development of science and technology from a humanistic perspective in a timely manner. Scientific research is fundamentally to ultimately serve the general public, in order to better benefit the people, science and technology workers should always reflect on the development of science and technology from a humanistic point of view and take truthfulness and innovation as the principle, so as to enhance social trust and sense of responsibility.

Finally, to realize value leadership and goal orientation. The humanistic concept emphasizes people-oriented, takes the value and significance of human existence as the highest criterion for understanding and practice, pays direct attention to the purpose and significance of human development, and manifests itself in the understanding, maintenance and pursuit of the existence of human life and human dignity and value. Incorporating humanistic concepts into the study of science and technology ethics can provide value leadership and spiritual support for scientific and technological innovation, and ensure that scientific and technological innovation develops in the direction of human well-being, rather than simply pursuing technological progress and economic benefits.

(iii) Setting ethical boundaries for technological innovation

First, respect the principle of life first and respect for the individual. It is crucial to respect the autonomy and privacy of individuals.

Taking artificial intelligence technology as an example, in the process of data collection and application, companies often have access to massive amounts of users' personal information. Strict norms for data collection, storage and use should be established, requiring companies to follow the principles of lawfulness, legitimacy and necessity when acquiring user data, and clearly informing users of the use and scope of their data. Second, uphold the concepts of sustainable development and fairness and justice.

Science and technology innovation should take the responsibility of promoting sustainable development of society and avoid irreversible damage to the environment and resources. In addition, fairness and justice are important cornerstones of science and technology ethics. The fruits of scientific and technological development should benefit all human beings, rather than being the exclusive property of a minority group. This requires us to focus on balanced inter-regional development in the process of scientific and technological research and development and promotion, to increase scientific and technological investment in and support for backward regions, and to formulate preferential policies to encourage enterprises and scientific research institutions to carry out scientific and technological projects in impoverished regions.

4 Conclusion

The ethical issues brought about by artificial intelligence have become the focus of all countries, the development of artificial intelligence will not stand still, then the ethical issues brought about by it should also keep pace with the development of science and technology, the revision of the law, and the enhancement of the ethical awareness of scientific and technological workers should keep up with the pace of development. Science and technology is one of the important driving forces for the development of all countries, therefore, it is necessary to create a reliable ethical safe house for science and technology, which is the ultimate goal of all mankind. For our country, we have to adapt to local conditions, according to our national conditions, learn from the experience of various countries, take the essence, first to enhance the scientific and technological workers' awareness of science and technology ethics as a starting point, and humanistic concepts throughout, the field of scientific and technological ethics for effective governance, so as to better serve the public. AI's ethical challenges demand global attention. As AI evolves, so must legal and ethical frameworks. For China, tailored solutions—enhancing ethical awareness, integrating humanistic values, and effective governance—are vital to serving societal needs.

About the Author

Ruixin Kong (born January 1999), female, Han Chinese, from Yuncheng City, Shanxi Province, is currently pursuing a master's degree at Shanghai University of Political Science and Law. Her research focuses on Ideological and Political Education;

Qian Qian (born February 2001), female, Han Chinese, from Tongling City, Anhui Province, is currently pursuing a master's degree at Shanghai University of Political Science and Law. Her research focuses on Ideological and Political Education.

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