Ethical reflections on the emergence of intelligence-generating artificial intelligence: The case of ChatGPT

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Abstract: The emergence of ChatGPT has promoted a new round of technological revolution. The emergence of this kind of generative artificial intelligence has its internal mechanism.

With all kinds of ethical risks brought about by the use of artificial intelligence technology, we conduct ethical reflection on it. The Chinese government has always adhered to the principle of putting people first in smart technology governance and promoted the use of technology. We hope to provide Chinese wisdom and solutions for countries around the world to realize a harmonious society in the smart era.

Key words: Generative artificial intelligence; Emergence; Ethical reflection

In late 2022, OpenAI launched ChatGPT, a massive language model that would spark a new round of technological revolution. Under the interaction of technology and economy, consumer demand and social development demand have exploded, and generative intelligent technology is in the process of "emerging". ChatGPT is a typical technology emergence with its original internal mechanism.

I. The mechanism of generative artificial intelligence emergence

The concept of emergence dates back to Aristotle's idea of an "arrangement of elements" and was revived in the 1970s through the discovery of non-linear complex systems (O'Connor, 1994). ChatGPT is a prime example of the emergence of technology, enhancing the interaction between man and machine. Its ability to self-learn and generate creative, trusted content has significantly made it popular.

1. Goal orientation: the traction of human social needs

Demand is constantly evolving, and consumer demand plays a crucial role in the creation of new technologies and the direction of technological development. According to Maslow's hierarchy of needs theory, the highest human need is the need for self-realization, while the arrival of technology provides more possibilities for human beings, and the evolution of technology is closely related to human social needs. The artificial intelligence technology represented by ChatGPT can have a more comprehensive understanding of human language intention, and can integrate a relatively comprehensive database of human life, work and learning. It acts like a rich thinktank expert, filtering and integrating the most relevant answers to the user's questions as best it can.

2. Cumulative integration: The dynamics of a multi-technology matrix

The integration and grafting of multiple technologies is essential for the emergence of new technologies that lead to qualitative changes. The emergence characteristics of technologies are determined entirely by the characteristics of the lower levels. Knowledge characteristics, such as complexity and modularity, are external manifestations of technical knowledge and reflect general technical characteristics. These knowledge characteristics directly affect the technological innovation of enterprises, and promote the technological evolution through knowledge integration, involving the activation of existing knowledge and the creation of new knowledge networks. Therefore, knowledge integration is crucial to technological innovation. Ai is the materialization of human intelligence, however, the emergence of ChatGPT poses a major challenge to human intelligence. ChatGPT's ability to understand and interpret human language makes it a valuable tool for programming and composing text. It has shown great power in generating high quality content, including articles, summaries, and product descriptions. In addition, the development of ChatGPT and other natural language processing technologies is of great significance to search engines and information retrieval systems.

3. Functional evolution: endogenous drive of complex systems

The theory of technological evolution proposed by Mayr and Basalla emphasizes the similarities between technological evolution and the evolution of organisms. They argue that technological evolution is influenced by human initiative and objective material conditions, and that new technologies are built on the foundation of previous technologies. The emergence of ChatGPT and other advanced technologies marks a new era of technological evolution that is guided by human initiative, and the continued development and refinement of these intelligent technologies will require ongoing analysis and reflection to ensure their ethical and responsible integration in our society. As the development of artificial intelligence continues to expand, all major and assistive technologies will be technologically innovative around the direction of processing natural language. In the complex structure of these technological systems, each subsystem interacts in a way that is not simple, often in a hierarchical structure. Each new level of the organization reflects new principles and capabilities, with strong goal-orientation and technical support, driving the functional evolution of large language models and their supporting technologies.

In addition, the development of ChatGPT and other smart technologies is influenced by various external and internal factors. Understanding the internal mechanisms can provide a clearer understanding of the motivations behind these technologies and provide guidance for ethical reflection on their value. Analyzing these factors is essential to ensure the responsible use of these technologies in our society, and to prevent any negative effects of technological evolution.

II. Ethical Reflection on the generation of AI under Chinese Wisdom

The emergence and widespread adoption of ChatGPT has raised many ethical issues and sparked debate among experts in different fields. Some experts believe that technology plays a valuable role, while others believe that it is the human brain that makes decisions. As smart technology continues to evolve and transform, ongoing ethical and policy discussions are needed to guide its development. To address the ethical risks brought about by the development of AI, the Chinese government has issued the Opinions on Strengthening the Ethical Governance of Technology, always upholding the principles of giving priority to ethics, abiding by laws and regulations, flexible governance, based on national conditions, and open cooperation to promote the development of technology in a good direction.

1. Widespread application exacerbates the risk of data leakage

Ai features such as permanent memory, instant comments and data roaming have brought unprecedented experiences to humans. As intelligent technologies continue to emerge, machines are becoming more adept at understanding complex contexts, enhancing the pleasurable experience for humans. This proliferation of human-machine interaction is shaping a unique society.

ChatGPT presents itself as a transcendent tool beyond traditional conversation bots, endowed with unlimited potential by its superior natural language understanding. Its integration into everyday life will enable users to program their needs into intelligent machines in the home and rely on ChatGPT to improve their quality of life. However, this thoughtful personalization of service comes at a cost: a huge amount of training data flows into the technical context of AI. If a data breach occurs, personal privacy will be at risk. Therefore, it is essential to raise awareness of self-protection and strengthen relevant regulations. To this end, the Chinese government has issued a series of policy documents, such as the Regulation on the Management of In-depth synthesis of Internet Information Services and China's Position Paper on Strengthening the ethical governance of Artificial Intelligence. The Chinese government supports innovation in AI technology, encourages priority to be given to secure and trusted software, and emphasizes bottom-line thinking and increased risk awareness. The Chinese government earnestly protects personal privacy and data security in the use of AI products and services, strictly supervises relevant online platforms, and opposes the illegal collection and use of personal information by individuals or collectives.

2. Deep intelligence will change the pattern of human society

ChatGPT's ability to learn and evolve autonomously makes it a valuable tool to aid text writing and code development, paving the way for the replacement of more human jobs and even the transformation of entire industries (Rudolph et al., 2023). The industry has described the emergence of ChatGPT as a revolutionary turning point in the field of artificial intelligence that will ultimately transform human society.

As early as the 2019 National People's Congress, delegates submitted a proposal on the systematic assessment and governance of AI's impact on employment supply and demand in response to the wave of technological unemployment. China has strengthened dynamic monitoring of jobs, issued timely risk warnings and adjusted governance policies, and strengthened knowledge and skills education for the whole population to ensure that people can effectively cope with the impact of smart technology on employment issues. The Chinese government and enterprises have actively responded to national policies and strengthened assistance and attention to the unemployed, which has not only improved the overall work efficiency of artificial intelligence, but also replanned the organizational structure and created a large number of emerging jobs, such as computer trainers. In a world saturated with information technology, the AI-oriented social operation mechanism has imperceptible influence in controlling various fields such as policing, business, medical care and education through the collection, filtering, sorting and classification of digital information. While harnessing AI to increase economic benefits, it is equally important to focus on social benefits. In the future, society will need to protect the rights and interests of low-skilled workers through government policies and laws.

3. Technological abuse undermines human innovation

Smart technology has powerful creative capabilities that enable it to generate text and images. In areas of creative and innovative work that traditionally require human thinking, AI can replace human labor for tasks such as marketing plans and academic papers. Unfortunately, foreign students and scholars are using the technology to complete academic tasks and develop mental inertia. In the long run, this will weaken human ability to think and innovate, leading to inaccuracies in knowledge acquisition and strengthening of intellectual inertia. There are currently no tools to successfully detect academic plagiarism, and scholars rely on self-discipline to maintain the quality of their academic research results. In April 2023, the Cyberspace Administration of China issued the Measures for the Administration of Generating AI Services (Draft for Comment), requiring that the content generated by generating AI should reflect core socialist values, be truthful and accurate, and respect the legitimate interests of others, and requiring providers to be responsible for the legitimacy of the data used for pre-training and optimized training.

Ai technology has led to calls for change in education, but education is not a simple and straightforward mechanical process. Intelligent technology can provide learners with sufficient channels of knowledge teaching, emotional education and moral education, but emotional education and moral education in the field of education need people's care. Artificial intelligence is unlikely to completely replace human teaching in these fields. If AI actually produces the same emotional experiences as humans in the future, will it completely replace humans as educators? Some might question that possibility. Therefore, before smart technology causes an educational revolution, it is necessary to strengthen public education on the ethics of science and technology and raise the moral level of the whole society. No matter in the stage of technology research and development or application, we must adhere to the bottom line of morality and carry forward the excellent traditional virtues of China.

III. Conclusions

There are potential risks in AI, but blocking AI technology is not the best solution. The emergence of technology is an inevitable trend in history (Li et al., 2021). With the increasing complexity of technology, unknown and unexplained factors are brought in, constituting complex systems. The complexity of technology leads to uncertainty about ethical risks, making ethical governance complex and challenging. The Chinese government has always regarded science and technology as an important means to meet people's basic needs, safeguard their fundamental interests and promote their long-term development, and actively avoid negative impacts. It is necessary to develop a new ethical paradigm for smart communities based on the "harmony" of traditional Chinese culture, and ensure the safe and controllable development of smart technologies through a cooperative model. Instead of focusing on blocking technology, emphasis should be placed on developing an ethical framework that promotes harmony and cooperation between humans and smart technology, aiming to minimize unforeseen and potentially harmful outcomes.

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