

Impact of next-generation Artificial General Intelligence (AGI) on international relations

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ORIGINAL ARTICLE

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Abstract. The new generation of artificial intelligence technologies occurrence represented by ChatGPT is the beginning of the Artificial General Intelligence (AGI) era. In contrast to the impact of weak AI technologies on international relations discussed in the previous era, AGI is no longer just a tool in the traditional sense. The human-computer integration facilitated by AGI technology will rapidly and deeply penetrate into all areas of social policy and economy. It also may change the mode of social production and economic development, influence international relations and geopolitics by transforming the comprehensive state capacity, and simultaneously force new challenges in global governance. The acknowledgement of a new generation of AGI technological qualitative changes' impact on future changes in international relations is no longer the fantasy; the underlying AGI changes in labour productivity will certainly lead to a disruptive reconfiguration of future international relations.

Keywords: ChatGPT; General Artificial Intelligence; digital technology; international relations

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Introduction

Currently, in terms of international politics, the geopolitical crisis effects on the international relations; in terms of the international economy, restructuring of the global value chain and the increase in hidden threats to energy and food security are the issues of the global management. There are great changes in the superstructure of international relations, which have not been seen for a hundred years. Therefore, a new historical technological revolution emerges. It provides the development of new generation of artificial intelligence, represented by ChatGPT. It shows the influence of artificial intelligence (AGI) technology on human socio-political and economical life with unprecedented speed. Moreover, it will certainly affect international relations through a change in productive forces. Certainly, it will play a role in the future profound evolution of international relations through the transformation of production relations by productive forces. At the same time, more important and demanding attention is the issue of the «technological singularity» of AGI, represented by the ChatGPT model; the features of its influence on international relations and geopolitics. Also there is an issue of the extent and paradigm of the new generation of AGI; changing and rebuilding of international relations under AGI influence.

Main Part

1. Characteristics of the next generation of AGI

Indeed, in terms of AI stage of development, the existing achievements in the field of international relations are mainly based on the perspective of weak artificial intelligence, as well as on research and analysis with a starting point of «datatism». However, in order to investigate the disruptions and differences generated by AGI, it is necessary to assess the history of AI development, and the changes caused by the technology self-creation.

1.1. History of next-generation generic artificial intelligence technology development

The 1956 Dartmouth Conference marked the beginning of AI development; it initiated research in the field of AI technology. The 1950s and 70s were the golden age of AI. Those time many disciplines related to

computer science, physiology, and philosophy integrated into AI. It helped to transform it into an important interdisciplinary field. However, AI reached a low point in the 1970s and 1980s: AI research progressed slowly due to technical constraints and funding cutbacks. Nevertheless, between 1980 and 1987 the second period of AI development began. Indeed, there was a boom caused by significant investments from the Japanese government and the revival of neural network theory. Between 1987 and 1993, AI development was recessed; there were the reduction of investments and programmes. However, since 1997, the development of AI rapidly started/ the main reason was the victory of the Deep Blue computer over the world chess champion. More and more researchers have begun to focus on syntactic analysis and use mathematical tools. In addition, AI plays an important role in any industry. Its breakthroughs in big data, cloud computing, and the Internet of Things influence both theoretical research and practical applications.

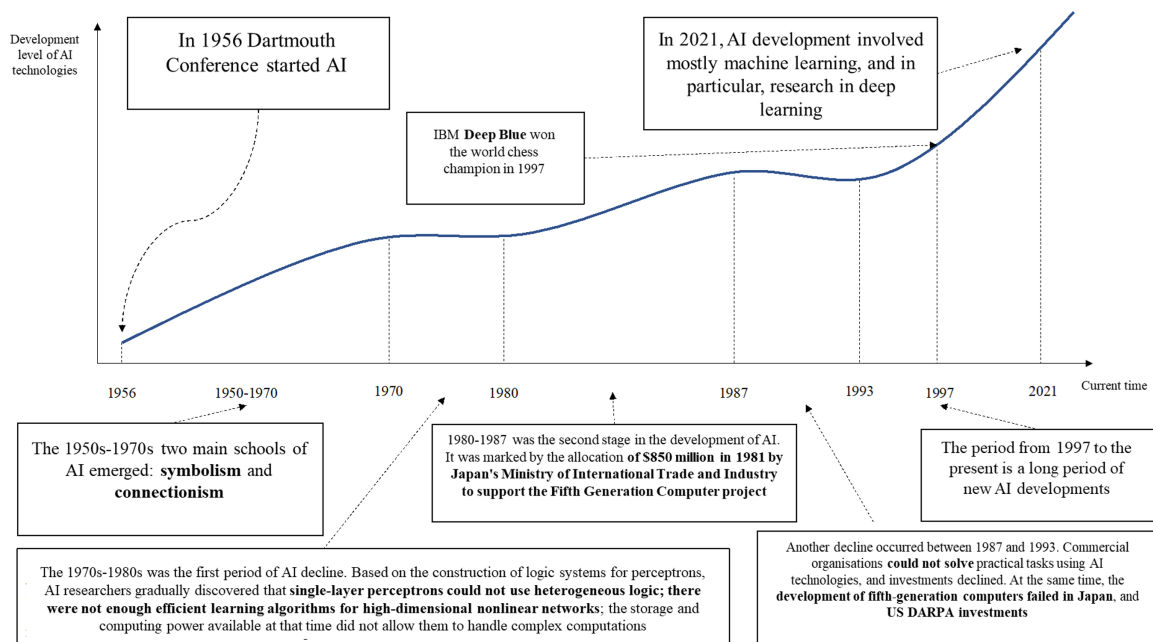


Figure1. The history of new generation AGI technologies development

Source: composed by the author

1.2. Difference of the new generation of general artificial intelligence from the previous one

The formation and restructuring of international relations under the influence of technological development correlate with the history of international relations. This is evidenced by the historical change of the «hegemonic states», corresponding to the historical process of the three previous industrial revolutions. If the iterations of AI technological development listed above are considered as a «technological change of power», then the current AGI represents a qualitative leap in a completely different technological form and a fusion of rapid restructuring of productive forces and production relations. It affects the structure of the international relations.

1. AGI has powerful self-iterative, self-learning, and innovative capabilities. It uses large technological corpus and mass learning, and multimodally influence on all areas of human life.
2. AGI differs from the traditional artificial intelligence model.
3. AGI is distinguished from past AI technologies by its strong autonomy and fast iteration, especially in the field of human-computer interaction. It causes the emergence of self-awareness and feedback within the framework of the AGI paradigm. The emergence of AGI made machines the developers of industrial relations, and not only the modifiers of productive forces.
4. In terms of the existing states, society and individuals use AI quite passively (as a tool of production). By the way, in terms of the existing digital economy, AGI can act as an independent partner in all spheres of life of the state, society and citizens. Moreover, it can establish complicated structures and generate new changes. AGI enhances the managerial capabilities of the state, acts as a new international social actor, spreads

knowledge and information, forms ideologies, creates a new culture, and influences the international balance of power.

5. Under the influence of AGI, the restructuring of labour productivity and production systems can cause the effect of «incremental gain», and comprehensively increase the social productivity. The technological powers of AGI can transfer to the mode of real «machine labour». It allows them to replace human labour in the existing production system, maximize the release and creation of new productive forces, and solve the problems of demography and quality of life. This «technological intergenerational» trend will affect the structure of international power and contribute to the restructuring of international relations.

II. The influence of the new AGI on state restructuring and transformations in international relations

2.1. Qualitative changes in the international political and military potential of the state

The historical process and the existence of the international community have demonstrated the inseparability of the political and military aspects of the activities of State actors at the international level. The history shows that the creation of any technology is either associated with military applications; it can or may eventually be used for military purposes. Technological innovations, in particular AGI, can have a significant impact on the military sphere. For instance, AGI can analyse strategic and tactical data, provide officers with the ability to make accurate decisions, etc. Autonomous drones and automated systems have been developed using AGI to increase operational efficiency and reduce risk to soldiers. Intelligent weapons and missile systems can also be controlled by AGI. It increases the accuracy of strikes, etc. As a result, AGI will cause a qualitative change in the country's military potential based on the «generational difference» between weapons and operational capabilities. It also may create the possibility of a «downward strike» on the military systems of other countries, and might cause the unpredictable deterrence in international politics.

2.2. Strengthening and restructuring the state international financial power

The financial power of a country in the international arena, its financial reserves, payments, and cash capabilities are based on derivative financial instruments and economic basis. Robert Gilpin quoted Kindleberger's theory of hegemonic stability and gave an appropriate explanation of the international political and economic logic of international relations. However, the current rapid expansion of global financial scales and profound changes in the global financial system realized the function of finance as «premium class instrument» in the country's foreign affairs, and in the global financial system. The monetary policy of the Federal Reserve System had an impact on global finances. It is the influence of the market and monetary policy of other countries. Moreover, the current leading countries in the field of digital technologies implemented applications in cross-border payments, supply chain finance, trade finance, inclusive finance, etc. Indeed, differences in technology and regulatory standards established invisible barriers between different payment systems and markets. At the same time, state and non-state actors implement advanced digital payment and settlement systems, and gained more financial stability. Artificial intelligence could develop. And the economic cycle can further strengthen the attribute of the «hegemonic currency» power. This can be seen in the large GPT model currently being developed by Bloomberg. The development and improvement of such large-scale financial models will undoubtedly allow AGI to change the financial sphere.

2.3. Strengthening the international communication of the state

Modern AGI training relies to large models and amounts of data; excellent data and algorithmic capabilities allows it to implement a human-computer communication mode and overcome temporal and spatial restrictions on the transmission of information. Within the framework of the AGI model, the AGI platform can generate targeted speech in large quantities, simulate user speech, and effect on public opinion through the Internet social networks. Moreover, AGI technology can generate fictional events and false information using deep falsification methods, supplemented by a variety of confusing materials. Indeed, the fabrication of political and social information in conditions of technological manipulation can have a direct impact on political sentiment. The spread of unidentified misinformation generated by machines can easily provoke extremism, political skepticism, and discontent. It will negatively affect the stability of public order. Hence, the new generation of AGIs are not able to exert influence in a general political sense. They also

allow countries with powerful AGI technology spread, induce and strengthen their international legitimacy in their own national interests. Thereby, they can obtain a greater ideological result and dominant control. Therefore, when AGI appeared at the level of international communications through the popularized Internet, the power of dissemination and penetration of countries with superior AGI technology clearly increased and intensified. All kinds of information constantly produced by machines flooded cyberspace and effectively blocked artificial information. Thereby, they expand new boundaries of the political and ideological game of the states.

2.4. Strengthening the «technological private rights» of TNCs

Currently, transnational corporations, relying on the global value chain network system in the era of globalization, have gained unprecedented power over the formation of an international political and economic order and structure through the integration of industrial, value and technological chains. The global digitalization causes the emergence of large multinational technology companies. They provide a new logic of capitalist accumulation aimed at extracting data and manipulating behaviour [3]. Currently, data production has become the main basis of capitalist accumulation. Currently, data production, control and algorithms are controlled by technology platforms of multinational corporations. The rapid growth of their asymmetric power is an undeniable fact.

However, since the thresholds of technologies, data, and algorithms required for AI are higher than those required for conventional data production processes, technology platforms are naturally screened out and selected based on their fundamentals and capabilities. Therefore, AGI, like ChatGPT, is not an open source platform and open services; AI is, in fact, the foundation for multinational technology companies creating closed technology platforms, either alone or in alliances. These technological platforms can incorporate their own interests and preferences into their design, feed specific techno-political imaginations, provide strong subjective guidance and formation of ways of sociotechnical development, rules and standards, value judgments, and even complete a set of independent legislative, administrative and judicial bodies, which are a set of closed operating systems of the national efficiency. Therefore, the development of AI will lead to the further formation and strengthening of the «technological private law» of the AGI platform. The implementation and dissemination of such «technological private rights» will create new problems for the management of existing nation-states. It will affect the formation of future international relations.

2.5. New obstacles to trade management in the digital economy

The development of digital technologies, the global regulation of digital trade cause new challenges. Various countries are developing their own digital trade agreements based on their advantages and interests. It causes the fragmentation of the competitive system. Technical barriers and the «siphon effect» of the digital economy ensure the serious differences in interests and principles between countries engaged in close trade, especially in the management of cross-border data flows. Thus, the «controversial multilateralism» in the digital economy will weaken the process of developing rules for global digital trade. It will also cause the further fragmentation of the established international trading system. Despite the USMCA template agreement, the EU GDPR and the DEPA framework agreement already exist, the fragmentation of the global digital trade rule-making process shows the existence of «data problem» based on the national security factor in digital commerce. In addition, the demand for large-scale data and its use by AGI further complicates the problem, providing powerful AI states with additional advantages in terms of high levels of control and use of global data. Thereby, it causes the conflict between digital trade and traditional trade rules, which requires new thinking and strategies.

Conclusion

Breakthroughs in a new generation of large AI model technologies such as AGI indicate the approach of the era of generalized AI. It causes a discussion between technologies and normative documents. The paradoxical resolution of the issue of whether AI will be taken out of human control, in addition to discussing its impact on modern society, it is more important to consider the role of state subjectivity. AI provides additional opportunities for States to form and strengthen their international power. Hence, the widening gap

in the capabilities of states caused by AI will not only change the way established international relations are built, but also in the face of powerful and unprecedented technological forces will require the restructuring and reconfiguration of international relations in accordance with future development.

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CONFLICT OF INTEREST

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