# Ideological Risks in the Age of Artificial Intelligence: Realistic Representations, Generative Mechanisms, and Response Logic

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**Abstract.** With the rapid development of AI technology, generative AI has triggered significant risks and challenges in the ideological field. This paper provides an in-depth analysis of the real-life manifestations of these risks, including the problems of algorithmic control, data misdirection and content distortion, and explores their generative mechanisms, which are mainly attributed to the interpenetration of technology and power, the Western values of the designers, and the technological manipulation of capital. These risks may not only lead to the loss of discourse power and a crisis of value identity, but also exacerbate the confrontation and conflict between different ideologies, posing a threat to national political security and social stability. To cope with these risks, this paper proposes strategies such as strengthening regulation, shaping mainstream values, and enhancing the public's intelligent literacy, aiming to safeguard China's ideological security and promote the modernization of the system and capacity of ideological risk governance.

**Keywords:** generative AI, ideological risk, mainstream ideology, coping logic.

## 1. Introduction

With the rapid development of AI technology, human society is stepping into an unprecedented era of intelligence. Generative AI refers to the way of content production that generates diversified content such as text, images, audio, video, code, etc. based on generative AI models, training data, etc. ChatGPT, Sora, and WenxinYiYin belong to the category of "generative pre-training models", which have anthropomorphic language comprehension, and are more prominent in the areas of content generation, graphic drawing, and video creation. ChatGPT, Sora and WenxinYiYin are all "generative pre-trained models" with anthropomorphic language comprehension, which are outstanding in content generation, graphic drawing and video creation. In this era, ideology, as an important part of the superstructure, has always been closely connected with the economic base, jointly constructing the spiritual pillar and behavioural guidance of society, while its security is facing unprecedented challenges and risks. General Secretary Xi Jinping profoundly pointed out that "ideology is related to the flag, the road, and the political security of the country [1], which provides an important guideline for us to understand and cope with the urgency of ideological risks in the age of artificial intelligence.

In terms of the ideological attributes of generative AI, from the perspective of the characteristics of the technology itself, ChatGPT, etc. is a new type of intelligent technology based on algorithms, models, and services for generating content such as text, sound, pictures, and videos, and it has ideological attributes such as the monopoly of data in the field of capital, the soft penetration in the field of culture, and the shaping of concepts in the space of the subject [2]. From the perspective of technology's integration into the logic of capital, although technology does not carry direct consciousness, its capitalist application will lead to technological alienation, and when technology conspires with capital and its power to penetrate into various fields, it will have ideological attributes due to its implicit ideological potential [3]. From the perspective of technology infiltrating discourse logic, ChatGPT-type generative AI technology can generate discourse texts, produce discourse logic and discourse themes, which can act on human subjective values, and thus has ideological attributes [4].

However, while enjoying the convenience and efficiency brought by AI, we must also face up to the ideological risks lurking behind it. Along with the wide application of generative AI technology, its ideological attributes such as data hegemony, cultural soft power and value reshaping have become increasingly prominent, with far-reaching impacts on the traditional ideological landscape. From the production and control of algorithms, to the sourcing and updating of data, to the generation and dissemination of content, generative AI is reshaping the mechanism of ideology generation and dissemination in a multi-dimensional and deep-seated way. The ideological risk triggers of generative AI mainly lie in the interpenetration of new technologies and power, the Western values of the designers, and the technological manipulation of capital in pursuit of capital multiplication [5]. As revealed in several academic literatures, the ideological risk in the era of AI presents complex and changing realities, including the control of algorithms, misleading data, distortion of content, etc., which may not only lead to the loss of discourse power and the crisis of value identity, but also exacerbate the interactions and conflicts between different ideologies, and pose a serious challenge to the country's political security and social stability.

Therefore, we should pay great attention to the new ideological risk "variable" of generative AI represented by ChatGPT, examine its potential ideological risk pattern, analyse the causes of its ideological risk formation, and explore the way of governance, which is the proper meaning of promoting the modernization of the ideological risk governance system and capacity. The purpose of this paper is to provide useful references and lessons for strengthening China's ideological security by analysing the reality, mechanism and response logic of ideological risk in the age of artificial intelligence.

## 2. The Realistic Needs of Ideological Management in the Age of Artificial Intelligence

### 2.1. The Invisible Struggle: The Great Power Game under Value Identity in the Ideological Field

At present, thanks to the development of intelligent technology, the speed and scope of information dissemination have been enhanced as never before. In the age of artificial intelligence, where information is power, the competition between countries is not directly demonstrated through a conflict of force or an obvious diplomatic confrontation, but is characterised as a competition of soft power, such as ideology, culture and philosophy, hidden behind technological innovation, i.e., the game of the great powers under the recognition of values in the field of ideology.

On the one hand, in the era of big data, AI algorithms have reshaped the organisational form of cyberspace, the pattern of news and information dissemination, and the ecology of ideological struggle. Based on data analysis and data integration,AI, with the support of digital capital, can undoubtedly strengthen the penetration and dissemination of ideology, provide technical and capital support for the defence of the country's mainstream ideology, and promote the development of national ideological construction in a more flat, immersive and three-dimensional manner, effectively enhancing the participation, expression and experience of the country's mainstream ideological construction. But at the same time, ideology is related to national political security. Artificial intelligence technology is a "double-edged sword", as Neil Postman pointed out, science and technology always has two sides, for social development, gifts and burdens are always born with each other.

Artificial intelligence technology is even more so, with the intertwining of capital, technology and power, the already complex ideology will become even more confusing, and in the globalisation scenario, the virtual, borderless and monopolistic qualities of digital capital will in turn expand the ideological risks derived from AI, and invariably exacerbate the ideological struggles between countries. For example, generative AI was bred in the West and is not only bound to be influenced by the ideology of Western capitalism, but also the Western ideology and culture that it carries in itself will form a soft penetration into the ideology of other countries. Generative AI tries to answer

ideology-related questions with the principle of so-called neutrality, but behind its seemingly objective appearance lies a hidden set of ideological or ethical values. In a dialogue with ChatGPT on how to evaluate the actions of the US army and the Chinese People's Volunteers in the Korean War, for example, its answer over-glorifies the heroic sacrifices of the US army in the war and ignores the civilian casualties caused by the violent war on the one hand, and denies and discredits the actions of the Chinese People's Volunteers on the other. It is not difficult to see that its answer to a particular historical question upholds Western interests, is strongly coloured by Western ideology and tends to reflect and disseminate the values of the Western countries represented by the United States.

Practice has shown that, in order to continue to control and exploit the developing countries, the Western capitalist countries, led by the United States, have taken great pains, relying on their technological superiority, to peddle at will technological products emblazoned with Western values, concepts of life, institutional frameworks and religious ideas [6]. By shaping and disseminating values, cultural concepts and social systems that are in line with their own interests, they are trying to win more value recognition and support on a global scale. Various types of information continuously generated by intelligent machines gradually spread to every corner of the network, thus causing artificial information to be subsumed and drowned out, and ultimately forming a great power political game between ideological fields. Although this struggle does not directly manifest itself in military conflicts, its influence and far-reaching degree should not be underestimated, because it is directly related to the country's international image, soft power and international status.

### 2.2. The coupling of technology and propaganda: generative artificial intelligence affects ideological communication change

Since entering the era of big data, with the support of artificial intelligence technology, Google, Microsoft, Apple, Amazon and other data platforms have become more and more powerful in the global economy, and with the increasing market share, these transnational data platforms have not only achieved "richness that can rival the country's" in terms of economic volume, but also in terms of their capital expansion attribute to a certain extent reshaped the pattern of global information dissemination, posing serious challenges to the ideology of developing countries. To a certain extent, these transnational data platforms have reshaped the pattern of global information dissemination, posing serious challenges to the ideologies of developing countries.

The process of digital capital travelling the globe is often also a process of information processing and global discourse domination. In other words, capital and technology are indispensable factors for information dissemination dominance. In the context of economic globalisation, digital capital's pursuit of profit remains unchanged, and as long as it is profitable, digital capital will boldly invest. The high demand of the public for information dissemination has made digital capital increase its investment, while technology, as a means of realisation, has contributed to the generalisation and spread of information dissemination, and the multiple forms of new media have also made the ways and contents of information dissemination more diversified, thus providing conditions for digital monopoly capital to dominate the dissemination of information globally. Multinational digital platforms are centred on bilateral markets, breaking through the linear logic of traditional unilateral markets, benefiting from direct network effects, indirect network effects and building user stickiness through cross-pricing, access to massive data, and precise algorithmic analyses, forming a lock-in effect. Benefiting from the low cost of data migration, head enterprises often tend to enter multiple market segments to provide consumers with one-stop services, thus building a huge business empire and acquiring more data through cross-feedback, which affects the competitive order of another market and further consolidates their superiority in the original market. The Matthew Effect, Winner-take-all, Lock-in Effect, and Bilateral Markets in the Internet economy have broken through the traditional economy. Breaking through the traditional economy, data, as an important means of production in the digital economy, has begun to devour the world with the monopoly and expansion of platforms.

As a phenomenal application, ChatGPT and other similar media occupy the forefront of current generative AI applications, and their empowerment of mainstream ideological communication is even more obvious. With its strong algorithms, arithmetic power, big data, deep learning and autonomous production, it not only improves the accuracy and timeliness of mainstream ideological communication, but also makes its content creation more intelligent [7]. The development of generative AI has accelerated the upgraded changes in the content production, communication channels and supply methods of information dissemination, profoundly changing the way and effect of ideological communication. "New technological changes represent the development direction of new productive forces, which will inevitably trigger major changes in ideological production and dissemination, and thus pose unprecedented challenges to traditional ideological governance."[8]. However, with the widespread application of generative AI, changes in its communication mechanism will further influence and even regulate human ideology, value judgement and behaviour.

On the one hand, generative AI can help governments, social media and other institutions to produce and disseminate information content more quickly and accurately in line with their own ideologies, and to improve the relevance, timeliness and intelligence of communication. ChatGPT collects massive amounts of information quickly based on powerful algorithms and arithmetic and completes the classification and aggregation based on the user's specific needs, which makes the collection and analysis of information more accurate and efficient, and can match users with "answers" that suit individual needs. ChatGPT is able to match the user with the "answer" that suits the user's individual needs, and realise natural human-machine dialogue and interaction. At the same time, through further pre-training and deep learning, it improves the efficiency of information collection and compilation, thus realising real-time ideology dissemination and greatly enhancing the timeliness of mainstream ideology dissemination. In addition, the main body of ChatGPT creation is AI rather than human, relying on a large-scale language model, it can continuously strengthen and adjust itself to generate ideological content that best meets the user's "interests and preferences", and to complete those tasks that require abstract reasoning and a strong form of logical thinking. It is clear that the development of generative AI has a positive effect on ideological communication.

On the other hand, this new type of intelligent technology may also be used to create false information, manipulate public opinion and other improper means, posing a threat to ideological security. The communication mechanism of generative AI determines that it is not just a simple tool for information interaction, but an intelligent medium with explicit or implicit ideological directionality and the potential to derive multiple value risks. "Capital has only one instinct for life, and that is to multiply itself."[9] The interpenetration of capitalist power and new technologies has led to technological alienation, as multinational corporations such as OpenAI, in order to achieve capital proliferation and capture more economic gains, purposefully control the flow of the content it generates by manipulating the digital traffic, thereby influencing the ideological, moral and ethical values of its users. The reason for this is because the language models and data production environments they rely on originate from Western countries, and the developers implant their own political tendencies into the pre-training, which are presented through AI answers, ultimately achieving the purpose of ideological infiltration of other countries and the dissolution of the mainstream ideological discourse.

## 3. A Mechanistic Review of Ideological Security Risks Caused by Generative Artificial Intelligence Applications

General Secretary Xi Jinping pointed out in the report of the 20th Party Congress that it is necessary to "build a socialist ideology with strong cohesion and leadingpower"[10]. Mainstream ideology, an important embodiment of a nation's ideals and beliefs, is the soul of a country's spiritual civilisation construction [11], playing a role in maintaining social stability, promoting social change and leading social development. The widespread application of generative AI has brought historic opportunities for ideological construction, but it has also triggered potential security risks for

mainstream ideology, including the phenomena of disordered management, pan-entertainment, information cocoon and digital divide. These risks are intertwined and affect each other, constantly dissolving mainstream ideological values and leading to the decline of our country's dominant mainstream ideological discourse.

### 3.1. Managing disorder: the fission propagation effect tests the coordination and tolerance of socialist ideology

The rapid development of generative artificial intelligence technology, especially its powerful information generation and dissemination capabilities, makes the fission dissemination effect of information more significant. Compared with the algorithmic recommendation technology, the content production capacity of ideological and political education in traditional media is lower, and the coverage and arrival rate of dissemination are also significantly lower. In this case, the traditional ideological education is not enough to respond to the algorithmic recommendation of the public opinion field, and some of its own functions have been replaced, and the dominance of the discourse has inevitably declined. This mode of information dissemination, which is fast, wide-ranging, low-cost, and has a high degree of user participation, poses a severe test of the coordinating and inclusive power of socialist ideology.

On the one hand, today's society is diversified in terms of ideological trends, and the content of information is diverse; the rapid fission of information may lead to the rapid proliferation of undesirable information or erroneous ideas contrary to the mainstream ideology within a short period of time, posing a threat to social stability. On the other hand, once the undesirable information spreads quickly and widely beyond the controllable range, it will make the socialist ideology marginalised and dissolved, leading to the reduction of its dominant position in the long run. Disorderly management makes it difficult for socialist ideology to effectively coordinate the interests of all parties and maintain social harmony and stability in the face of the complex and changing online public opinion environment.

### 3.2. Pan-entertainment: the principle of "traffic first" leads to the continuous erosion of the value of mainstream ideology

In today's trend of general entertainment, generative artificial intelligence is often used by capital to produce a large amount of entertainment content to satisfy the needs of individuals for entertainment, in order to pursue higher click-through rates and traffic flow, and to attract users for economic benefits. This "traffic first" principle crowds out the intrinsic value of mainstream ideological education. [12] Driven by the logic of capital, powerful algorithmic technology disassembles information content and pushes it to the public in the form of short videos and other fragmented and vulgarised forms, so that the content of mainstream ideology is excluded. The proliferation of entertaining content not only occupies users' attention resources, but also dilutes users' attention and thinking ability on serious topics, especially the attention of youth groups being held hostage. Positive value-oriented content is more likely to be blocked by algorithmic "filter bubbles", hindering the effective dissemination of mainstream ideology, and even causing mainstream ideology to be marginalised under the exclusion of monopolistic technology platforms. In the long run, the influence and discourse power of mainstream ideology in cyberspace will inevitably decline, and the intrinsic value of its education will gradually be deconstructed, which will in turn affect the overall values and morals of society.

In addition, "algorithmic cognitive warfare" is a completely new form of warfare. [13] New intelligence technology has gradually become a tool for the West to export its "universal values". It uses its technological advantage to fight "cognitive warfare" and dismantle China's mainstream ideology, posing a serious potential threat to national security. The United States and Western countries often use their technological advantages to promote the export of their so-called "universal values" to continuously dismantle our country's mainstream ideological identity. As "cognitive

warfare" is presented through "pan-entertainment" and other means, its risky forms are quite hidden, posing a huge obstacle to ideological regulatory scrutiny.

### 3.3. The information cocoon: customised content production models make it harder to disseminate mainstream ideology

"Information cocoons" refers to the fact that the public's own information needs are not all-encompassing in the dissemination of information. "We only listen to what we choose and what pleases us in the field of communication, and over time, we will shackle ourselves in a cocoon like a "cocoon". According to Sunstein, the "information cocoon" is one in which we focus only on what interests us. [14] His concept of "information cocoon" is particularly relevant in today's digital era. With the rapid development of generative artificial intelligence technology, we seem to be surrounded by a huge amount of information, but in fact, the information we receive is more and more limited to our own interests and preferences. This phenomenon not only limits our horizons, but may also have a profound impact on our way of thinking and values.

The customised content production model of generative AI has undoubtedly increased the ease and personalisation of information access. However, this convenience and personalisation comes at the expense of information diversity. Algorithms screen and filter data according to user preferences and push personalised information, making users immersed in personalised information recommended by algorithms for a long period of time, making it difficult for them to come into contact with information that is different from their own stance and viewpoints, and thus forming cognitive biases and solidified thinking. Under this phenomenon, it is significantly more difficult to disseminate mainstream ideology. As an important carrier of social consensus and values, the communication effect of mainstream ideology is directly related to social stability and development.

However, due to the limited scope of information reception by users, it is difficult for mainstream ideological information to effectively reach the target audience. Even if such information is received by users, it may be ignored or rejected because it is inconsistent with users' preexisting perceptions. In this case, the communication effect of mainstream ideology is greatly reduced, and it is difficult to play its proper leading role. On the other hand, the information cocoon may also exacerbate social division and conflicts. In a closed information environment, users tend to identify with and share information that agrees with their own views, and misunderstand and reject people with different views and positions. Such prejudice and rejection may lead to social division and conflict, breed cyber violence and undermine social harmony and stability.

### 3.4. The digital divide: limiting the expression of ideological discourse among ordinary people

"The effectiveness of the enabling role of digital technology lies crucially in the subject's digital literacy and skills"[15]. With the popularisation and application of generative AI technology, the speed and breadth of information dissemination has been unprecedentedly enhanced, but the effectiveness of this change not only relies on the continuous progress of equipment technology, but also is more profoundly constrained by the subject's digital literacy ability.

Groups with advanced digital technology mastery have more advantages in ideological discourse and greater power of expression. In contrast, ordinary people who lack basic digital literacy and skills may be at a disadvantage in terms of discourse, making it difficult for them to effectively convey their views and demands. Of particular concern is the fact that for those "vulnerable groups" who have little or no access to the Internet, such as the elderly, not only are they unable to make use of generative AI to reasonably express their interests and safeguard their rights and interests, but they may even be further marginalised due to the existence of the digital divide.

"The existence of the digital divide has allowed advances in digital technology to instead serve as a curb on the rights of 'digitally disadvantaged groups' to fairly access and communicate information, limiting their discursive expression in the ideological sphere [16]. The low participation of these groups on digital platforms and networks has led to the discussion and dissemination of ideological topics being confined within specific groups, making it difficult to form a broad social consensus.

This not only limits the participation and influence of the general public in the ideological sphere and hinders the effective feedback of real public opinion, but may also breed discontent due to information occlusion and injustice, further exacerbating social inequality and division.

## 4. Response Logic to Ideological Security Risks Caused by Generative Artificial Intelligence Applications

General Secretary Xi Jinping pointed out that "it is necessary to strengthen the research and prevention of potential risks in the development of artificial intelligence, safeguard the interests of the people and national security, and ensure that artificial intelligence is safe, reliable and controllable"[17]. Leading values and shaping value beliefs is where the value kernel of ideological construction in cyberspace lies. In the age of intelligence, in the face of the multiple impacts of innovative changes in the mode of information production and dissemination in cyberspace on the construction of socialist ideology, it is necessary to clearly adhere to the value orientation of ideological construction in cyberspace, identify the "backbone" of ideological construction, and attach great importance to the value leadership in order to build a clean and positive cyberspace ecosystem.

In view of the dual nature of generative AI, we can neither let it go, ignoring the hidden risks it brings; nor can we avoid treating it as a medical problem, stopping the development of new AI technology. For this reason, China in the vigorous development of artificial intelligence at the same time, must attach great importance to and properly deal with the security challenges it brings, should adhere to the guiding ideology of Marxism, strengthen the value of mainstream ideological leadership, standardise the design of algorithms to consolidate the technological support, the comprehensive use of laws and regulations to improve the rule of law, and effectively improve China's AI security governance capacity, to ensure that the safe and healthy development of artificial intelligence.

### 4.1. Adhere to the ideological guidance, strengthen the mainstream ideology of "intelligent leadership"

As a product of human scientific and technological innovation, although artificial intelligence is capable of human-computer interaction with users, outputting information in accordance with users' specific preferences and replacing human thought, by its very nature, its systems and algorithms do not have subjective consciousness and value judgement, and still require external guidance. And in the context of globalisation, the US and western countries have used their technological advantages to infiltrate our country's ideology through preset algorithms and data models, spreading western values and ideologies, leading to the dissolution of our country's mainstream ideological values. Not only does this threaten the security of our mainstream ideology, but it may also trigger deeper cultural conflicts and value exchanges. In view of this, we should adhere to the guiding ideology of Marxism, adhere to the mainstream ideology to lead the development direction of AI, and ensure that AI is in line with socialist core values and Xi Jinping's ideology of socialism with Chinese characteristics for the new era.

Firstly, an evaluation system based on mainstream ideology and socialist core values is constructed at the level of the underlying logic design of AI, and the algorithm is disciplined with mainstream values, so that it can self-correct in the process of learning and training and form a cognitive model in line with the mainstream ideology [18]. We should lead the operation of technology with public values and public norms, and implant the soul of values in the technology engine. The logic of commercial capital in pursuit of fame and profit is the original driving force for the operation of technology, especially the non-ideological parceling of technology, which allows the logic of capital to grow savagely in the cyberspace in the era of intelligence, and constantly squeezes out the space for the survival of socialist ideology. For this reason, in the era of intelligence, cyberspace ideological construction should adhere to the correct value orientation, mainstream value leadership throughout the intelligent information technology information technology fitted with a "steering wheel" to value

rationality to regulate the design, research and development and application of the whole process, for the direction of the intelligent technology, to correct the technological bias, alleviate technological anxiety, so that the "positive energy" of the "positive energy". "Positive energy" fills up the content production mode, information dissemination rules and power operation mechanism in cyberspace, and brings together "good flow" to promote the ideological construction in cyberspace.

Secondly, the proportion of mainstream ideological content in AI pre-training is increased, and mainstream ideological principles and values such as socialist core values and Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era are integrated into the development and application of AI systems, so as to ensure that AI can play a positive role in safeguarding the security of mainstream ideology. In the cyberspace of the intelligent era, complex and diversified interests, power, capital and other factors coagulate and interact with each other in the game, and social contradictions in real life continue to spread, evolve and differentiate under the amplification effect of the Internet and the agglomeration effect of intelligent information technology, and "impatient mentality" and "violent mentality" have appeared in the cyberspace. In cyberspace, there are negative social mentality such as "impatient mentality", "violent mentality", "hate the rich mentality" and so on, which undermine the harmony and order of cyberspace ecology.

In this regard, it is necessary to give full play to the role of socialist ideology in nurturing social mentality and value leadership, and to actively explore the intrinsic fit between socialist ideology and the nurturing of social mentality. Dynamically maintain the balance between socialist ideology and the public's interests and psychological world, so as to influence the public's perceptual psychology and the public's way of thinking and value concepts and behavioural modes, to promote the effective cultivation of the social mentality in cyberspace, and to provide a good social psychological environment for the coordination of social interests and the cohesion of consensus on interests, so as to converge the ideological and value consensus and promote the cyberspace the process of ideological construction.

### 4.2. Optimising algorithm design to lead AI technology for the better and better

General Secretary Xi Jinping pointed out that "Strengthening basic research is an urgent requirement for realising high-level scientific and technological self-reliance, and it is a necessary way to build a world scientific and technological power"[19]. In the context of the new era, in the face of the risk of ideological infiltration brought about by Western countries using the technological advantages of AI, optimising the design of algorithms, managing the corpus, and mastering the core technology and other behaviours are not only a necessary way to promote the development of AI for the better and for the better, but also an important move to safeguard the security of China's mainstream ideology.

First of all, we urgently need to optimise and upgrade the big data algorithms in response to the flaws in the algorithms themselves. Practitioners in the research and development and production of generative artificial intelligence should be committed to improving technological innovation and application capabilities, researching the operation mode of key algorithmic technologies, developing relevant software to cope with ideological risks, and breaking through the technological defects of algorithms by strengthening their interpretability, traceability, and accountability [20], so as to realise a comprehensive upgrading of algorithmic technologies.

For example, China's National Internet Emergency Response Centre (CNCERT), with the help of intelligent distributed data collection technology, carries out intelligent surveillance on content changes, structural changes, link changes and other changes in network information in terms of dimensions such as the network transmission of programme codes, which is conducive to accurate and real-time monitoring of algorithmic flaws.

Secondly, it is equally important to strictly control and manage generative artificial intelligence from the source. In view of the fact that some of our key core technologies are still restricted by others, we must make the independent control of core technologies our top priority, and endeavour to solve the problem of the "choke point" of key core technologies. To this end, we should rely on the close

cooperation and collaborative development of national laboratories, leading science and technology enterprises, and relevant departments to independently research and develop a high-quality Chinese corpus that conforms to China's mainstream ideology, and "integrate mainstream values into the core technology of algorithmic recommendation, implant the genes of mainstream values into the algorithmic recommendation, and increase the proportion of the weight of the mainstream values in the algorithmic priorities. "[21].

In order to achieve the above goals, the government should introduce relevant policy dividends and establish a long-term and effective incentive mechanism, so as to fully stimulate the independent innovation ability of all sectors. At the same time, it should accelerate the construction of digital infrastructure to provide solid hardware and software support for the R&D and application of AI technologies. Through these initiatives, we can further consolidate the discourse power of China's mainstream ideology in the field of generative AI and lay a solid foundation for building a safe, healthy and sustainable AI ecosystem.

### 4.3. Strengthening data protection and synergising technology and law to ensure ideological security

In the report of the 20th Party Congress, General Secretary Xi Jinping pointed out that "the rule of law must be given better play to the role of safeguarding the fundamentals, stabilising expectations, and facilitating the long term, and a modern socialist country must be comprehensively constructed on the track of the rule of law"[22]. Currently, China has introduced a series of laws and regulations such as the Personal Information Protection Law, the Network Security Law and the Interim

Measures for the Administration of Generative Artificial Intelligence Services, laying a legal foundation for the initial development of generative AI. However, most of the existing legal frameworks focus on ex ante regulation and preventive supervision, and there is still an urgent need to address how to closely integrate them with technological changes and realise the benign interaction between rule of law construction and technological development. Therefore, guided by Xi Jinping's thought on the rule of law, strengthening data protection and synergising technology and law are important measures to ensure China's ideological security.

The safety of data, as a core element of artificial intelligence, is directly related to ideological stability and security. Currently, generative AI faces the dual risks of illegal access and data leakage, which not only harms user privacy, but may also be used by Western countries to expand their influence by means of tampering with data and dissolving the mainstream values of users, thus threatening our ideological security. In view of this, we should take Xi Jinping's thought on the rule of law as the lead, strengthen the application of data encryption and privacy protection technology, and build an all-round, multi-level data security protection system. Through technical means, we can effectively prevent data leakage and misuse, and ensure that data are safe and controllable in all aspects of collection, storage, processing and transmission.

Firstly, in terms of risk prediction, we should move forward the "gate" of ideological construction in cyberspace. General Secretary Xi Jinping stressed that "not being aware of the risk is the biggest risk"[23], perceiving risk, predicting risk, preventing risk is the precursor of ideological construction in cyberspace, which requires us to locate the source of ideological risk, predict the type and time of ideological risk. In the face of ideological risks in cyberspace, which are fast-spreading, large-scale infections, and difficult to trace the source, we should embed big data intelligent algorithm technology into all stages of ideological production, collection, calculation, integration and dissemination in cyberspace, and make use of intelligent collection and development technology and intelligent extraction and identification technology to widely gather ideological risk data, gather "data hives", and build "data hives", as well as build "data hives" and "data hives". The "data hive" is gathered and a "data factory" is built to build a "technical base" and "resource treasury" for the prediction of ideological risks in cyberspace.

Secondly, relevant laws and regulations should be formulated and improved, the authority and responsibility for data use should be clarified, and a sound disciplinary mechanism should be

established. Regulate the behaviour of data use through legal means and provide solid legal support for data security. At the same time, clarify the status of the main body of responsibility of the developers and users of generative artificial intelligence, and achieve supervision from the source to the whole process. Through the development of a detailed list of responsibilities, the specific content and scope of responsibilities should be clarified, and penalties should be imposed in accordance with the law for violations of the regulations. In addition, regulatory authorities at all levels should strengthen joint supervision and improve law enforcement, so as to provide a solid rule of law guarantee for the safe use of data.

### 4.4. Strengthening public opinion guidance and shaping public "smart literacy"

Intelligent literacy, as the comprehensive ability, behavioural pattern and ethical value orientation demonstrated by individuals in the process of contacting, understanding, evaluating and utilizing AI technologies and applications, is of self-evident importance. For generative AI developers who master advanced digital technologies, professional ethics education needs to be strengthened to ensure that they can inherit and carry forward the excellent qualities of the older generation of scientists and adhere to the integrity of scientific research, while at the same time guarding against the erosion of the ideology of Western capitalism and strengthening the identification with the mainstream ideology. This is not only related to the healthy development of technology, but also a necessary condition for maintaining national scientific and technological security.

Firstly, in the dimension of "demand-side governance", it is necessary to strengthen public education on ideological security and improve public information literacy, media literacy and scientific and technological literacy, based on the cultivation of public awareness of risk prevention and information literacy. In the process of socialist modernisation, the public's modern political literacy must be cultivated through cognitive education, moral cultivation and emotional indoctrination. The development and evolution of intelligent information technology and its drive to revolutionise social production and life have influenced the basic paradigm and trend of information literacy. Therefore, it can be said that the smart era has put forward higher requirements for the public's awareness of ideological risk prevention and information literacy, and that "higher-order literacy, such as information security and monitoring, human-computer interaction and collaboration, information innovation, information thinking, and lifelong learning, has begun to enter people's viewpoints, and has become the new key indicator of whether people can adapt to the development of the smart society. "

Education on cyber-ideological security and the cultivation of information literacy in the smart era emphasises not only the cognitive understanding of technological foundations and information knowledge, but also the public's critical reflection on technological development itself and the ideological risks in cyberspace arising from technological change, as well as the public's ability to produce, use, participate in and collaborate with the media.

Secondly, for the general public affected by the "information cocoon" and "digital divide", their intelligence literacy should be enhanced. By strengthening digital literacy and AI education and popularising basic knowledge, the public's ability to filter information and think critically should be enhanced, so that they can better adapt to and use AI technology to express their personal demands. In addition, it is also necessary to cultivate people's ability to identify and prevent ideological risks, form a correct view of online public opinion, and effectively resist ideological infiltration by external forces. The government, enterprises and all walks of life should work together to create a clear cyber cultural space, crack down on undesirable content, protect the basic rights and interests of citizens, create a favourable environment for the healthy development of intelligent technology, and work together to promote social harmony and stability and the sustainable development of science and technology.

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