**Digital intelligence technology promotes changes in human cognition**

Source: People's Forum Network·National Governance Network

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Date: 2025-02-19

<https://www.rmlt.com.cn/2025/0219/723563.shtml>

In today's new wave of science and technology, digital intelligence technology has become the representative technology of the era. Digital intelligence technology is an organic combination of digital and intelligent technologies, leading human society into a new digital intelligence era. The impact of digital intelligence technology on the progress of human civilization and social development is comprehensive, profound and lasting. The impact, breakthroughs and challenges it brings are unprecedented in severity. It has an epoch-making impact on people's production and lifestyle, social structure and evolution process, especially on the impact mode, focus of action, evolution path and practical effect of social subjects and productivity, from the material world to the spiritual level.

**The profound impact of digital intelligence technology on the development of human society**

The emergence, rise and rapid development of digital intelligence technology have a strong impact on the development process of human society. This is not only the accumulation, improvement and improvement of labor tools in production practice, but also the condensation and sublimation of the wisdom and creativity of workers. In essence, it is the inevitable result of the continuous progress and improvement of subject cognition. Compared with previous scientific and technological advances and industrial revolutions in the history of human development, digital intelligence technology has evolved from traditional physical enhancement and liberation of material productivity to more emphasis on stimulating intelligence and improving spiritual productivity, highlighting the source role of subject cognition, opening up more channels for the realization of subject value, and further clarifying the dominant position of people (broadly defined workers) in the various factors of productivity and their dominant relationship with other factors. As the foundation of social construction, subject cognition is the core fulcrum and diffusion source of human exploration and innovation practice. Its promotion of the all-round development of people and society is also bound to be panoramic, in-depth and sustainable.

"Number" has existed since ancient times and is a tool medium for humans to interact with nature. It has different ways of acquisition and forms of expression in different periods of history; "intelligence" is a high-level summary and abstraction of human's own unique characteristics, and its original meaning refers to mind, wisdom and intelligence. Digitalization and intelligence are high-end manifestations of numbers and intelligence in the context of today's era of scientific and technological progress. Both have a close natural connection with subject cognition, but their characteristics and division of labor are different: digital technology can deeply and finely portray the cognitive subject's own characteristics and the observation and feelings in the interaction and change of external conditions, the behavior process driven by thoughts, and the evolution of organizational governance, social structure and macro-morphology. Acquiring data in an entity, real scene, real time and effective way can be said to be the first half of digitalization. Intelligent technology focuses on human learning, memory and adaptation, automates data storage enhancement and modal conversion, and imitates human wisdom to reason, approximate improvement and expand and enhance thinking, which is the second half of digitalization. The two stages of digitalization and intelligence interweave and feedback with each other, and are organically connected. They comprehensively, accurately and efficiently carry out perception, thinking, decision-making and action in various complex real-life scenarios. Based on big data, they gradually explore the generation, internal change and external manifestation of human consciousness, promote the development of hybrid intelligence of human-machine collaboration, and also promote the healthy development of digital intelligence technology in the direction of "technology for good". Just like throwing a stone into the water to stir up ripples, digital intelligence technology focuses more on the stimulation and promotion of the source of cognition, which will inevitably cause responses and changes in all aspects of human society.

What is the essence of digitalization and digitalization transformation? How does digitalization promote cognitive upgrading and the comprehensive development of human society? The key elements and links of digitalization are: touch experience - data information - thinking cognition - connection conversion - computing power algorithm, etc. The development and progress of future society is actually mainly achieved under the promotion of digitalization capabilities. The core and fundamental of digitalization and transformation is cognitive upgrading and corresponding practical actions, so as to promote the comprehensive development of human society through cognitive changes at the source. From virtual reality (VR+), metaverse to various generative AI big model technologies, as well as in cloud technology, blockchain and other fields in the past decade, with the evolution of the main line, stage and underlying logic of social development, the calibration, correction and improvement of the core and substantive creativity driven by internal and autonomous organizations should not only have computing power enhancement, algorithm refinement and data accumulation, but also the creation of computing principles (the computability of the internal associations and laws of the research objects) and computing rules (the corresponding conversion rules between different object forms and logical systems), so as to organically connect the enhanced micro-subject modeling simulation (ABMs) with the AI ​​big model (LLMs), and give full play to the greater comprehensive advantages in complex decision-making with multi-subject participation, multi-factor interaction, multi-modal conversion, multi-scenario application and multi-goal achievement. Digital intelligence technology with virtual-real integration and human-machine collaboration expands the physical space and time and the imagination space and creativity of human beings, expands horizons, opens up channels, touches subtleties, forms correct cognition in the deep structural adjustment and even reconstruction of social economy, and has insight into the essence and grasps the laws, so as to truly use digital intelligence and use it well.

It is no secret that the gradual promotion and application of digital intelligence technology will undoubtedly cause a certain degree of job replacement panic for some people at a certain stage, leading to technological unemployment, resource mismatch and ethical confusion. However, both theory and historical practice have fully proved that the deep integration and mutual promotion of science and technology and humanities will constantly stimulate the wisdom and creativity of the human brain and its far-untapped potential and brain-computer functions, which will inevitably open up more and more flexible channels for value realization, create new business forms, new positions and new jobs that are closer to humans, and bring more well-being to people.

**The internal mechanism of digital intelligence technology promoting human cognitive transformation**

Further analysis and discussion of the theoretical support, influence mode and effect of digital intelligence technology in inducing changes in human cognition can only be better understood and grasped from the perspective of subject cognition. Digital intelligence technology integrates the precision, depth, detail and accuracy of data analysis with the multi-speed, efficiency and intelligence of intelligent algorithms. It can promote the interaction and coordinated progress of multiple subjects and factors in an all-round, distributed and integrated manner. With its powerful ability, it reshapes all walks of life and promotes human society into a new era. This is where the power and value of digital intelligence technology lies. It uses powerful computing power, advanced algorithms and models to extract valuable information from multi-source, multi-state, heterogeneous and heterogeneous databases (computing materials) to help people better understand the world and make smarter decisions. It will not only be a technology, but also link it with the improvement of human cognition and social progress. It can be seen that this is a force for profound social change and a powerful driving force for human progress.

Exploring the essential meaning of digitalization is a profound philosophical question. Scientific and technological progress originates from and its results serve the ever-increasing needs of mankind. The effect of scientific and technological progress and application depends on the subject's cognitive level. Modern scientific research increasingly emphasizes the cross-integration of different disciplines to solve more complex problems. In the new era of digitalization, many complex problems that were originally difficult to solve can be solved through the comprehensive application of multidisciplinary knowledge and technology, making the impossible possible. This is of great benefit to the construction of an independent knowledge system of philosophy and social sciences and the deep organic integration of interdisciplinary fields, such as the emerging hybrid intelligent economics, computational social sciences, and complex decision-making research. They not only involve the performance of cognitive and thinking abilities, but also involve emotional awareness, thinking judgment, value orientation, ethics, and cultural foundation. Scientific and technological progress can undoubtedly help people gradually deepen their understanding and simulate intelligence in certain areas, while philosophical cognition can provide a more comprehensive and profound framework to think about the true connotation of digitalization. The exploration from a philosophical perspective helps humans reflect on the internal determinants and main driving forces of the development of digital intelligence technology and its regularity, and also gradually inspires people to think more deeply about how artificial intelligence (AI) is related, coordinated, and integrated with human survival values.

Around the Spring Festival this year, China's technology innovation companies launched the artificial intelligence big model DeepSeek, which shocked the world and was highly praised by the domestic industry. Even the three American giants Nvidia, Microsoft, and Amazon also connected to the DeepSeek model on the same day. The gradually in-depth and objective interpretation of the DeepSeek phenomenon, beyond the level of Sino-US artificial intelligence competition and technology war, from the perspective of the development of all mankind, as Professor Richard Murphy of Sheffield Management School in the UK pointed out: The significance of DeepSeek is not only the technological innovation of the artificial intelligence big model itself, but also that it challenges the core of the capitalist system and re-points out the core driving force and organizational form of human social development. This is mainly because: First, DeepSeek shifted its focus from capital to people, refreshing people's understanding of the dynamic mechanism of social development and evolution, changing the situation and path of capital obtaining high returns through technology monopoly and creating financial technology elites to become the ruling class of society in today's era; second, DeepSeek stabbed the lifeblood of hegemonic countries, shook their position as global hegemons, and saw the signs of losing relative economic advantages and possibly changing the world pattern due to the weakening of the leading momentum of technological growth; third, DeepSeek's concept spread fair and open philosophical thinking to mankind, opened up intellectual property protection, organized high-density talent innovation teams from the bottom up, and used free and open source in the application market, advocating and practicing the value of technological innovation for the benefit of the general public, and won unprecedented and widespread support from the people of many countries. The DeepSeek team has attracted outstanding talents from many fields such as physics, computer science, and electronics, and has the unique advantage of conducting interdisciplinary research, which greatly and effectively stimulates the initiative, enthusiasm and innovative vitality of each member of the team. This interdisciplinary team structure enables DeepSeek to break disciplinary boundaries in technology research and development, and to be bold in carrying out interdisciplinary project cooperation, thus making breakthroughs in many cutting-edge fields such as the combination of quantum computing and artificial intelligence, and the integration with 5G communications and the Internet of Things. Regardless of how DeepSeek develops in the future, the spark it ignited from technology monopoly to conceptual awakening (cognitive awakening) provides important inspiration for China's scientific and technological innovation.

**Focus and practical paths for promoting cognitive transformation in the digital era**

From the perspective of deep integration of science and technology with humanities, strong human-machine collaboration and hybrid intelligence, based on the subject's cognitive basis, we can more accurately grasp the focus of scientific and technological progress in the new era of digital intelligence to promote social development and the development path in practice.

**Constructing a digital cognitive system**

To promote cognitive transformation and advancement through digitalization and promote the all-round development of human society, the primary task is to build a profound and accurate cognitive system for digitalization and its transformation process. Only by fully recognizing the importance of building a knowledge system as a foundation for digitalization, thoroughly understanding the essence of digitalization technology, and accurately grasping the evolution of digitalization transformation, can we grasp the correct direction of digitalization, ensure that digitalization technology tools and strategies can be efficiently and accurately implemented, and maximize the release of value.

Data in the sense of digital intelligence is not only a production factor in the traditional sense, but also a leading factor of new productivity. Leading the forefront of science and technology, reshaping human cognition, and reconstructing the social structure will greatly stimulate and mobilize the initiative of the subject. The subject's in-depth perception is a necessary prerequisite. Data is the cornerstone material of digital intelligence, the connection channel is the skeleton support, and hybrid intelligence is the high-level goal of digital intelligence. Humans use advanced technologies such as machine learning to deeply mine and analyze massive data to achieve automated decision-making and intelligent services for various real and complex scenarios.

Digitalization is not only a technological breakthrough, but also triggers profound changes in thinking and social structure. Humanities and social sciences research strengthens the soul and empowers scientific and technological progress, and digital technology can make humanities and social sciences more scientific, accurate and practical. This two-way interactive transformation has not only changed people's lifestyles and ways of thinking, but also reshaped the social structure and governance model. In the face of the rapid development of digital technology, we need to always maintain an open mind, enhance our sense of innovation, actively respond to challenges, and jointly promote the healthy development of digital technology.

**Focus on the balanced relationship of multi-agent interaction**

Subject cognition is a common attribute characteristic when the subject interacts with external conditions. Use system theory and dynamic interaction to view and deal with the mutual promotion, mutual achievement, and mutual complementation of heterogeneous individuals and social groups, break through cognitive barriers and disciplinary barriers, transcend traditional thinking patterns, and not be limited to the framework of traditional cognition and disciplines. Stimulate the endogenous motivation and innovative vitality of various subjects and form an ecological mechanism for the internal development of multi-subject collaboration. Especially when studying complex social and economic issues, we should correct the positioning and boundaries of factors such as total factor productivity and subject internal factors and external conditions in innovation activities, expand from single-track one-way thinking to multi-track coordinated advancement, stand higher, see wider and farther, go beyond simple technological progress and industrial development, give humanistic warmth to cold and ruthless data indicators, and try our best to achieve horizontal connectivity, vertical penetration, internal and external connectivity, digital and real integration, multi-mode communication, and human-machine collaboration.

**Cultivate compound talents with both broad knowledge and professionalism**

The cognitive subject's perception and behavioral response mode to the outside world is not divided into disciplinary categories, and the development of social economy will not follow the track of existing professional knowledge. This determines from the bottom that it is necessary to cultivate interdisciplinary talents beyond disciplinary categories in order to better adapt to and meet the actual needs and bring more value and positive impact to society. Digital intelligence technology is changing the logic of knowledge generation, the division and setting of disciplines and majors, the way of education and learning, and the innovation model. In the process of interdisciplinary talent training, the concept of "humanistic integration" should be used throughout interdisciplinary education. All kinds of educational institutions should lead the whole process of personalized interdisciplinary talent training with the improvement of subject cognition, encourage the training objects to combine their own interests, behavioral characteristics and career development needs, choose multi-disciplinary learning content, and give play to their respective relative advantages. In particular, they should focus on cultivating the insight of perceiving and capturing information, discovering and refining problems, and more closely connect and coordinate with auxiliary digital intelligence technology, and attach importance to and strengthen the role of mutual encouragement and feedback among team members. This will also be more conducive to the construction of my country's independent knowledge system of philosophy and social sciences and promote the construction of an education power.

We must have a deep insight into and understanding of the overall coordinated development of the economy, science and technology, and human society, objectively view and deal with the strong impact and short-term boom in scientific and technological progress, strategically and deeply understand the laws of economic work, especially in today's digital era. We must, on the basis of transforming and enhancing the subject's cognition, cultivate and develop new types of productivity that integrate the virtual and the real and collaborate between man and machine in a flexible manner, achieve high-quality development, and vigorously promote Chinese-style modernization.

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