

The Triple Dimension of Realizing Socialist Science and Technology Modernization

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Abstract: Science and technology modernization is one of the four modernizations in China, and it is the core and the key driving force to build a strong socialist modernization country. Throughout the history of human civilization, science and technology is the revolutionary power in the highest sense to promote historical progress. Nowadays, there is still a gap between the development of science and technology in China and the West, and the core technology “neck” problem plagues China, which requires us to accelerate the pace of modernization of science and technology. The path to modernization of science and technology in China includes: giving full play to the advantages of the socialist system, strengthening the national strategic scientific and technological forces; strengthening the main position of enterprises in technological innovation, and effectively promoting the deep integration of industry, academia and research. The main point of modernization of science and technology is people, in the process of modernization of science and technology to the people as the center, but also the ultimate value of the pursuit of building a strong socialist modernization.

1. Introduction

1.1 Science and Technology is a Revolutionary Force in the Highest Sense That Drives Historical Progress

To build a strong socialist modernization country in 2050 and realize the four modernizations, namely industrial, agricultural, national defense and science and technology modernization, the most critical lies in the modernization of science and technology. The modernization of science and technology refers to the process of science and technology becoming the first productive force in a country's development, and is also about the overall improvement of human resources, science and technology system, management innovation and other elements, which constantly meet the needs of social development and form a positive interaction with social development[1]. Marx believed that science and technology is a revolutionary force in the highest sense of the word that drives historical progress.

Throughout the three industrial revolutions in the history of human civilization, all of them were mainly based on science and technology, which promoted changes in productivity and then caused changes and progress in the production methods, lifestyles and ways of thinking of human life. The first industrial revolution was powered by Watt's improved steam engine, and the technological inventions mainly came from the practical experience of workers and technicians; Britain seized this opportunity to become the Sunset Empire at that time. In the second technological revolution, the United States and Germany used electricity as the driving force to promote the invention and creation of a series of scientific and technological products, so that science and technology began to be closely integrated and achieved the catch-up with Britain. The development of science and technology became the main means of transforming productivity. The third scientific and technological revolution is due to the widespread use of computers, bringing mankind into the era of information technology, science and technology penetrated into various fields, science and

technology combined more closely, and promote each other. At present, the world is in a situation of unprecedented changes in a century, science and technology innovation has become a key element to influence and even change the world economic map. History and practice have proved: which country has mastered the core science and technology, it has seized the strategic opportunity, and the opportunity of development will be held tightly in its hands.

This process of human civilization development verifies Marx's statement that science and technology is a revolutionary force in the highest sense that drives historical progress. In the process of building a socialist modern power and realizing the four modernizations, China should pay particular attention to the role of science and technology as a key revolutionary force.

1.2 The Current State of Development of Science and Technology in China and the West Requires Us to Accelerate the Pace of Modernization of Science and Technology

At present, countries around the world have launched science and technology innovation strategies to seize the opportunities of the times, improve efficiency and seize future opportunities. In the past few years, China's Tiangong, Jiao Long, Eye in the Sky, Wukong, Mozi, and large aircraft are among the major technological achievements that have caught the world's attention. We are proud that our country's self-developed nonlinear optical crystal, DJI drone, and 5G technology are China's first, and the world has not been able to surpass them yet. Although the successful development of China's "Dragon Core" series of general-purpose chips has put an end to the history of "no core" for information products in China, we still have a big gap compared with the high-end chips of the United States, and currently China is the second largest economy in the world, but many products are still mainly dependent on imports. Still rely on imports, once the Western countries to curb our imports, is bound to make us a short time at a loss.

Information technology has become the leading force for profound changes in the economy, society and life, one aspect of the Sino-US trade war competition also lies in the field of technological knowledge, the mastery of the dominant power in the field of science and technology is crucial. Therefore, iron needs to be hard, we need to master the core science and technology in their own hands as soon as possible, in order to enjoy the right to speak in the world. The modernization of science and technology is the top priority of our task to build a strong socialist modernization country. The gap and contrast between us and developed countries, and the existence of the core technology "neck" problem, accelerate the realization of science and technology now is urgent.

2. Path Latitude: Path Selection and Practice for Realizing Science and Technology Modernization

2.1 Give Full Play to the Advantages of the Socialist System and Strengthen the National Strategic Scientific and Technological Forces

In December 2020, the Central Economic Work Conference listed "strengthening national strategic science and technology forces" as the first of eight key tasks to be done in 2021, which shows the importance of this work.

To strengthen the country's strategic scientific and technological forces, we must first give full play to the advantages of the socialist system of centralized power to do great things, which is a vital task that can not be accomplished lightly or by beating a drum. In the process of modernizing science and technology, we should continue the spirit of the "two bombs and one star". During the period of the "two bombs and one star", the scientific researchers worked hard and desperately during the most difficult period of the country's economy, and concentrated the nation's efforts to develop atomic bombs, missiles and satellites for ten years. They fully demonstrated the powerful advantages of the socialist system and made the impossible in the eyes of others possible. As socialist construction has entered a new era, China's economic level and comprehensive national power have been significantly improved, and science and technology have also gained rapid development. The state's investment in science and technology has increased year by year, from 2%

of GNP in 2010 to more than 2.5% in 2020. It is an important material basis for strengthening strategic scientific and technological forces.

Secondly, make full use of the advantages of the system, train a large number of scientific and technological talents, and achieve major scientific and technological special projects as soon as possible, scientific and technological innovation ultimately depends on scientific and technological talents to achieve, and talents need education to cultivate, so China put forward the strategy of “developing the country through science and education”, and pay attention to the close integration of education and science and technology. 1977, Comrade Deng Xiaoping resumed The first thing Comrade Deng Xiaoping did was to take charge of science and technology and education, and the higher intellectuals and experts who were wrongly criticized during the Cultural Revolution returned to their posts. Comrade Xiaoping's “respect for knowledge and talent” brought tears to the eyes of a large number of old science and technology workers, who have since become part of the Chinese working class and the backbone of the process of realizing the four modernizations. Today, more than forty years later, China's emphasis on scientific and technological talent has only increased, although China has reached the technical level in some technologies, like the aforementioned DJI drones, 5G technology, as well as high-speed trains on the development and hybrid rice yield of 100 kilograms per mu leading the world, but the high-end chip is still subject to limitations, which requires us to train more scientific and technological talent to break through this special technology Difficulties, science and technology research and development departments should work closely with experts and scholars in universities to overcome difficulties, and to see the problem in the light of sustainable development, while tackling difficulties to train a number of young people to take on the responsibility of the times, mastering the core technology of outstanding successors.

2.2 Strengthen the Main Position of Enterprises in Technological Innovation, and Effectively Promote the Deep Integration of Industry, Academia and Research

General Secretary Xi Jinping in the 19th National Congress report, particularly stressed the need to deepen the reform of the science and technology system, the establishment of enterprise-oriented, market-oriented, in-depth integration of industry, academia and research technology innovation system.

Promote the deep integration of industry-university research, first of all, we should encourage enterprises to cooperate with scientific and technological personnel, or let scientific and technological workers to start their own companies, but there is a problem: scientific and technological workers do not have the experience of managing companies, and the lack of scientific and technological staff in enterprises, so that we adopt such an approach, that is, let experienced people to run the business, scientific and technological workers only need to devote their energy to scientific research, but they also occupy the company The shares of the company can fully stimulate the innovative power of talents. Secondly, to better play the role of the enterprise as the main body, to seek the views of enterprises, enterprises are directly linked to the user, the market to establish contact with the main body, so they have the most understanding of market demand and customer needs of technology, but also suggest that more enterprise experts to participate in the formulation of science and technology policy, and actively contribute. Again, to promote scientific and technological innovation and institutional innovation “two-wheel drive”, with policy innovation to promote scientific and technological innovation, such as “management and administration” so that some scientific and technological personnel are encouraged, the opportunity to increase, so they have to roll up their sleeves to work. Promote the deep integration of industry, academia and research, not only need the main role of enterprises, but also need the active cooperation of research institutes and universities science and technology workers, hand in hand to promote the completion of China's socialist science and technology modernization[2].

3. Value Dimension: the Ultimate Point of Achieving Modernization of Science and Technology is the People

3.1 Circumventing the Alienation of Science and Technology with Socialist Forces

Marx pointed out that “historical activity is the cause of the masses” and only when science and technology really become the power of the people, the alienation of science and technology can be eliminated and the liberation of human beings can be realized[3]. The construction of a modern and powerful socialist state cannot be built without the support of science and technology, but in the process of using science and technology, deviations in thought or behavior will inevitably occur and eventually bring harm to human society. Science and technology promote the development of productive forces, disguised as a push for social change, in the era of industrial mass production gave rise to the capitalist system, where technology has become an appendage of capital, becoming an accomplice of capitalists to exploit and enslave flesh and blood people. In such a developed industrial society, driven by technology, it has caused the alienation of human beings, who have become the money-making tools of the capitalists.

In his critique of this phenomenon, Marx constructed an ideal society in which there is no exploitation or oppression, and all science and technology are used for the people. In the course of China's construction and reform led by Marxist thought, the concept that the creation of science and technology both originates from the people and the results serve the people is fully applied and put into practice. With the power of socialism to circumvent the drawbacks brought by capitalist society science and technology, in the process of China's science and technology development formed to adhere to the people as the center of the orientation, stand in the perspective of the people to think about the advantages and disadvantages of science and technology, to achieve the real science and technology for the people to serve.

3.2 Deepen the Concept of Science and Technology Development in the Service of the General Public

Marx's classical writer's view of science and technology, that the ultimate value of science and technology is to achieve the free and comprehensive development of human beings. The satisfaction of human needs for a better life is increasingly inseparable from the support of science and technology. Since the 18th Party Congress, our Party has further put forward the scientific concept that the development of science and technology should serve the general public. Our Party believes that the needs and creativity of the people are the realistic driving force of science and technology development, and the ultimate goal of science and technology modernization is to achieve the modernization of people. Science and technology development should revolve around the needs of the people, rely on the power of the people, always respond to the people's voices, and pay attention to and solve the real problems of the people[4].

The new era to pay more attention to the people's sense of well-being and sense of access, the achievements of science and technology more comprehensive, the whole process of benefiting the people, in the process of scientific and technological development of the country also actively take measures to strongly support the development of science and technology, the preferential indicators are endless, fully stimulate the majority of entrepreneurial innovation of the times youth. At the same time, the country is always advocating science and technology, talent to strengthen the country, innovation-driven development strategy, focusing on creating the spirit of science in society, with the power of the spirit of nourishing people to build a strong socialist modernization power. We will accelerate the pace of modernization of science and technology, and use the results of science and technology to shoot the strong socialist modernization country, so as to lay a solid foundation for achieving the higher goal of comprehensive and free development of all human beings.

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