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# *Research on Legal Issues Related to Artificial Intelligence from the Perspective of New Quality Productive Forces*

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***Abstract:*** Digital productive forces are the production of the third information revolution, the change of the economic base will cause the change of the superstructure. New quality productive forces take data rights as the means of production, artificial intelligence as the carrier, and network communication as the way. Due to the lag of legislation, there is a serious lag in the legislation related to artificial intelligence, which is mainly reflected in the division and ownership judgment of data rights and interests, the inability of current criminal law to regulate some AI crimes, the lack of soft law norms in AI governance, the conflict of legal ethics faced by different legal systems, and the concurrence of criminal jurisdiction. In this article, we believe that we can overcome the problem of lagging legislation by realizing the connection between international law and domestic law, formulating corresponding penalty rules based on artificial intelligence program algorithm, making good use of international non-governmental organizations to create soft law, and promoting the idea of a community with a shared future for mankind.

## 1. What Are Digital New Quality Productive Forces?

In September 2023, during President Xi visit to Heilongjiang province, he proposed to integrate scientific and technological innovation resources, lead the development of strategic emerging industries and future industries, and accelerate the formation of digital new quality productive forces. The so-called new quality productive forces are the productivity based on scientific and technological innovation, which not only uses the nature of traditional productivity and transforms the nature, but also makes breakthroughs in the two levels of "new" and "quality". With the development of science and technology, digital economy has gradually become the main force of China's economic development, thus giving birth to digital new quality productive forces. Digital new quality productive forces take digitalization and intelligence as the core and integrates different production factors together with digital technology to promote productivity to make the leap. Compared with traditional productive forces, digital productive forces provide new basic factors of productivity for high-quality economic development, highlight the role of innovation factors in the process of high-quality economic development, and cultivate new momentum for high-quality economic development. Digital new quality productive forces are formed based on inheriting and developing traditional productivity, which is a new form of productivity driven by high-tech conformal

development, which means that traditional productivity has undergone qualitative changes with the development of The Times and the change of social environment. Digital new quality productive forces are the productivity of the new situation in the era of digital economy and is an important aspect of new quality productivity. Its connotation can be summarized as the ability to integrate other production factors through digital technology, create material products and spiritual products that meet social needs, and drive economic growth. It is the digital result of the "trinity" of productivity factors, namely workers, labor materials and labor objects, and plays an important role in promoting high-quality economic development. The role of new quality productive forces in promoting high-quality economic development is mainly reflected in the following aspects:

First, the basic factors of productivity are often represented as factors of production in a certain economic form. In the era of industrialization, the basic factors of productivity are represented by three production factors: labor, capital and land. In the era of digital economy, "digital productivity", as a representative of the new quality productive forces, no longer relies solely on traditional production factors, but takes digitalization and intelligence as the core, leads productivity through digitalization, and adds development momentum through intelligence. Therefore, it provides new production factors for high-quality economic development.

Second, new quality productive forces highlight the role of innovation factors in the process of high-quality economic development. Compared with traditional productivity, new quality productive forces emphasize the role of innovation-driven, which is based on innovative elements, including intangible innovation productivity such as intelligence, algorithm, computing power and data. In the era of digital economy, the new quality productivity generated since digital technology is mainly manifested as new quality productive forces, through the integration of digital technology with other production factors, through the digital form of quantitative evaluation of workers, labor materials and labor objects.

Third, new quality productive forces to build a high-quality development of talent chain, industrial chain, technology chain, mechanism chain integration of new driving forces. In the construction of talent chain, talents with high-level innovation ability are valuable resources in the era of digital economy, and new quality productive forces provides new opportunities for the rise of emerging industries, thus providing diversified technical talents with jobs. In terms of building an industrial chain, the digital transformation of the industrial chain is the key to achieving new quality productive forces, which provides a large amount of investment for emerging industries, establishes an environment conducive to market competition and enterprise innovation, ensures the effective operation of the mechanism chain, effectively improves the speed of scientific and technological innovation, and provides institutional support for cultivating innovation momentum.

New quality productive forces are closely linked to the development of artificial intelligence technology, that is, artificial intelligence is an important medium of new quality productive forces, and data is an important production resource of new quality productive forces. However, when China develops new quality productivity through artificial intelligence as a medium, it faces the following legal problems.

## 2. Legal Dilemmas in the Field of New Quality Productive Forces and Artificial Intelligence

### 2.1. The Division of Data Rights and Interests and the Judgment of Ownership

Data rights and interests are different from data property rights. The fundamental cause of data rights and interests lies in the realization of data value, and the realization of data value is based on the utilization of data, that is, the gain from the use of data, and the discovery based on the gain and the realization of data value. The former includes the mining of the initial potential value of data and the production and increment of data value. The latter includes the sharing and flow of underlying

data value. Due to the natural public nature of data, the initial potential value of data is mined and the basic data value is shared and flowed. Due to the natural public nature of data, the process of mining the potential value of data and sharing the basic data value emphasizes the public and social nature. However, when data set producers spend a certain amount of cost to screen, purify and collect data as the data basis for decision-making assistance, the isolation between individual data is broken, and the interoperability between data generates new data value, that is, value increment is realized. Data aggregators enjoy certain control rights and profit rights over this part of value increment data. Also, since the fundamental realization of data value is the flow of data, it is undeniable that the flow of data between subjects generates value-added value contributions, and data producers, data processors and data collectors do not enjoy the rights and interests of sharing benefits.[1] Although China's Civil Code has made clear provisions on the distribution of commercial interests, it is still unable to make a judgment on the distribution and ownership of benefits generated by data appreciation. Due to the transnational nature of data flows, the distribution of benefits in disputes dealing with the distribution of such civil interests often involves multiple countries. The application of artificial intelligence to data is the key to new quality productive forces, such as the update, application of artificial intelligence program code, bitcoin mining, drone exploration, etc., at this level involves multinational litigation and the application of conflict of laws. At this level, China faces the corresponding legal loopholes. Both the Civil Code of China and the corresponding intellectual property laws and regulations have made clear provisions. This is a major problem that limits our new quality productive forces.

### 2.2. The Current Criminal Law Cannot Regulate Some Artificial Intelligence Crimes

Artificial intelligence is an important medium to achieve new quality productivity. Looking at the existing criminal law in China, the criminal legislation on artificial intelligence crime has a certain lag, which is mainly reflected in the following aspects.

The first aspect is that the constitutive elements of the crimes in China's existing criminal law do not cover new ways of behavior in the era of artificial intelligence, such as insider trading of stocks using artificial intelligence in the futures trading market and demanding high compensation through false reporting. For example, artificial intelligence can provide artificial limbs for disabled people, when the artificial limbs are damaged, then whether this behavior can be regarded as a crime of intentional injury or need to be dealt with according to the crime of intentional destruction of property. It is difficult for the traditional crime constitution system to fully explain the problem of new artificial intelligence crime. One of the most typical is the problem of criminal liability, taking the crime of traffic accident as an example, if the traffic accident occurred in the process of car exercise is caused by the quality problem of the car itself, the designer or producer of the car should bear the responsibility for the related product. If the crime of manslaughter is caused by violating the corresponding traffic rules in the process of driving, the driver should bear the corresponding criminal responsibility. However, with the development of artificial intelligence, especially the artificial intelligent driving system, passengers buy related driving robot services, and the robot drives the vehicle according to the requirements of passengers, but because of its own weak artificial intelligence, it leads to traffic accidents. In this case, since the AI has no human subjectivity, and the instructions issued by humans to go to the destination are not at fault. Therefore, it is more difficult to convict and sentence the crime in this situation.

The second aspect is that China's existing criminal law lacks charges corresponding to crimes in the era of artificial intelligence, such as whether the use of humanoid robots to provide sexual services will constitute the crime of organizing, accommodating and introducing prostitution? In terms of constitutive elements, it is difficult to define whether humanoid robots meet the definition of criminal

subjects. Additionally, in terms of objective aspects, humanoid robots do not meet the identity definition of sex workers. Therefore, it has caused a difficult problem for our country to set up the charges of such crimes.

### 2.3. The Lack of Soft Law Norms in Artificial Intelligence Governance

Compared with the concept of "hard law", soft law has three basic forms: the flexible norms in state law, the self-regulatory norms created by political organizations and the autonomous norms created by social communities. The flexible norms in national law mainly refer to the laws, regulations and rules which have the character of declaration and call. The soft norms of political organization venture capital mainly include internal disciplinary rules and punitive rules and regulations of political parties. The so-called autonomous norms created by the social community mainly refer to the specific provisions between industries on related issues. In other words, soft law refers to those legal norms that do not rely on state coercive force to ensure implementation (connotation), they are composed of some national legal norms and all social legal norms (extension). From national legislation to community legislation, the emergence of soft law makes the legislative body diversified and further adapts to the needs of legislative democratization. In fact, the essence of the concept of law does not lie in the "state", nor in the "state coercion". As a supplement to the source of national law, the role of soft law is also reflected in the balance between the private rights of citizens and the public power of the state. Law is not necessarily rooted in the recognition of the will of the state, nor is the will of the state the only necessary basis for the legitimacy of soft laws and regulations. Law should rely on the effective interaction and cooperation between people and rule-makers and implementors. The rise of soft law makes the investigation of legality no longer focus on the formalistic requirements, but more substantive legality content. In the form of law, a consultative legislation mechanism characterized by unanimous adoption appears. Soft law takes consensus as the prerequisite for law adoption and does not adopt the mechanism of minority obedience to majority as in hard law. In the formulation of procedures, from strict legal procedures, legislative procedures to simple consultation, negotiation, coordination and other ways have emerged and been recognized. In the implementation of law, a variety of implementation mechanisms characterized by social coercion and voluntary obedience appear. Compulsory and non-compulsory obligations are combined, mandatory requirements and expectations coexist, and legal implementation and cooperation are emphasized.[2] In other words, soft law, as a supplementary source of formal law, overcomes the lag of law to a certain extent.

New quality productive forces are the product of the development of the information revolution, the economic base determines the superstructure, if the superstructure cannot meet the needs of the economic base in time, it will lead to institutional rigidity, thus hindering the development of productivity. Therefore, when the new quality productive forces are formally legislated in our country, it needs the support of norms such as soft law to further improve the implementation. Therefore, the lack of soft law as the supplementary source of law is a "governance problem" faced by the new quality productive forces in our country.

### 2.4. Legal Ethical Issues Faced by Different Legal Systems

The overseas interests derived from new quality productive forces are vulnerable because they are free from the protection of territorial jurisdiction. Throughout the world, there are mainly socialist law systems, Marine law systems, civil law systems, Islamic law systems, Indian law systems and other legal systems, and each legal system has a different value ranking for law. Socialist law systems focus on maintaining justice and order, placing justice value and order value first in the value of law. Marine law system and civil law system are the products of Enlightenment thought, so they focus on

safeguarding production efficiency and value. The Islamic law system and the Indian law system have obvious religious traces, and the maintenance of religious order is the primary value. Digital new quality production force is a new type of international public goods with network as the medium and data flow as the way, which needs to relate to local laws in the process of transnational flow. For example, the recent "electronic sex partner" product developed by Musk Company meets human sexual needs through artificial intelligence dolls. Such products do not raise ethical issues in maritime law and civil law countries. However, Islamic law countries are completely different, Islamic law countries based on the teachings of the *Koran*, have long suppressed the development of sexual culture, if the popularity of artificial intelligence products such as "electronic sex partners", it is bound to bring a lot of ethical disputes.

### 2.5. The Issue of Concurrence of Criminal Jurisdiction

New quality productive forces provide international public goods through network data transmission and artificial intelligence as the medium. The mobility of data is similar to that of ocean currents, which are widely disseminated. First, if it involves cybercrime, it is bound to involve the issue of jurisdiction competition. The criminal law of our country generally follows the principle of "control by the side", that is, the result of the crime, the place where the crime is carried out, the way of the crime, and the end/beginning of the crime tool all have criminal jurisdiction. However, the specific details of foreign-related cybercrimes are not clearly stipulated in China's criminal law. Second, as a socialist country, China has obvious differences with Western countries in terms of international security concept. Since the early days of the founding of China, China has established a foreign policy based on the "five principles of peaceful coexistence" and the "principle of non-interference in the internal affairs of other countries". Under this policy, China only takes the fight against cybercrimes as a part of international criminal cooperation. However, the prevailing neo-realist ideology often uses the excuse that "cyber acts endanger its security" to carry out illegal sanctions on social countries such as our country. It has caused some obstacles to the internationalization of the new quality productive forces in our country. To sum up, the concurrence of criminal jurisdiction involved in new quality productive forces not only involves the provisions of domestic law, but also involves the content of international law.

## 3. China's Response Strategy

### 3.1. Division of Data Rights and Interests and Judgment of Ownership

#### 3.1.1. International Treaties

First, China could clearly stipulate the distribution and ownership of data rights and interests and the share of benefits distribution by signing relevant benefit distribution treaties with countries along the "Belt and Road" Initiative. Secondly, China should improve our legislation, so that domestic law and international law could be effectively connected. Based on the treaty, China could further stipulate the division and ownership of data rights and interests through civil legislation and two high judicial interpretations.

#### 3.1.2. Domestic Legislation

Data rights and interests not only have realistic material economic value, but also have the nature of related intellectual property. Therefore, in the civil and commercial legislation of data rights and interests, China should coordinate the material economic value of data rights, interests and pay attention to the intellectual property attributes of data rights and interests.

This article argues that relevant legislation should be carried out according to the nature of data rights and interests. Data rights and interests belong to the material economy, such as the value generated by the blockchain, virtual currencies such as bitcoin, and data rights and interests in gaming accounts that can be bought and sold through special markets, specifically in accordance with relevant laws and regulations regulating private property. The second kind is about the data rights and interests of intellectual property, such as the code of the program, the copyright of the network novel, etc., such data rights and interests belong to the intellectual property. When the first kind of data rights and interests are infringed, it is similar to the crime of property infringement. At this time, China's criminal law should be strictly applied to regulate according to the specific amount. The second type of data rights and interests belongs to the category of intellectual property rights, because intellectual property rights themselves have a high degree of communication, so the degree of infringement of such crimes could be applied to the less restrictive administrative regulations or civil and commercial regulations. This article holds that domestic legislation should be specialized according to the different nature of data rights and interests.

### 3.2. The Perfection of Artificial Intelligence Penalty Setting

The penalty system applicable to artificial intelligence is different from natural persons and units to some extent. In terms of the types of penalties that may be applicable, the differences between artificial intelligence robots and natural persons and units are mainly reflected in three aspects. On the one hand, artificial intelligence does not have property rights, that is, it cannot apply penalties such as fines and confiscation of property. Second, AI does not enjoy the right to participate in political life, so it cannot apply the penalty of deprivation of political rights to it. Third, artificial intelligence is composed of programming and data code, and there is no so-called personal freedom and right to health, so the penalty of deprivation of liberty and body rights could be applied. In this regard, this article draws on Professor Liu Xianquan's point of view and believes that China's artificial intelligence penalty settings could be divided into three kinds: deleting data, modifying procedures and permanent destruction. Deleting data refers to the criminal data that artificial intelligence relies on to carry out criminal acts, which is equivalent to erasing the criminal memory of artificial intelligence. If these data no longer exist, the harmfulness of artificial intelligence robots will be greatly reduced. The modification program refers to the modification of the program that causes the artificial intelligence robot to commit crimes. The implementation of criminal acts by artificial intelligence is often formed by the misdirection or deviation of the basic program. When these misleading programs or deviation programs are deleted, the loss of artificial intelligence could be minimized to the greatest extent. Permanent destruction refers to formatting all of its data traces and abolishing the faulty AI to the maximum extent possible at the AI survival level.[3] Therefore, when we formulate/improve the relevant laws and regulations of artificial intelligence, China could set up the penalty of deleting data, the penalty of modifying procedures and the penalty of permanent destruction.

### 3.3. The Formulation of Soft Law Norms

As the development of artificial intelligence technology is relatively rapid, China's criminal legislation is difficult to cope with its high uncertainty. At this level, China could construct soft law to assist criminal law in implementing governance. Compared with the concept of "hard law", soft law evaluates social behavior through moral and other concepts, to realize the guidance of social behavior. Soft law has three basic forms: the flexible norm in state law, the self-regulatory norm created by political organization and the autonomous norm created by social community. Although soft law does not have the binding force of hard law, its flexibility could adapt to the uncertainties in

the development of artificial intelligence. According to social practice, the standard-setting bodies of artificial intelligence are mainly government administrative departments, national or domestic regional science and technology associations, multinational science and technology companies, and international organizations. Although the administrative departments of the government only have the legislative power of administrative regulations, they could formulate corresponding guidance documents. National or domestic regional science and technology associations, although they do not have the legislative power of public power, but artificial intelligence manufacturing standards, related parameter setting and access standards, taboos for the use of artificial intelligence are formulated by science and technology associations. Multinational companies take the market as the guide and carry out quantitative assessment on the production standards of artificial intelligence products, so as to formulate the corresponding norms of artificial intelligence in practice. International organizations provide the soil for the generation of international customary law on the circulation of data rights. Therefore, in the formulation of soft law norms, China should cooperate with science and technology associations, multinational corporations and international organizations to build soft law and make up for the lack of criminal legislation on artificial intelligence.

### 3.4. Legal Ethical Dilemmas Faced by Different Legal Systems

The legal ethical dilemma faced by new quality productive forces is essentially the gap in the concept of rule of law. Ideas could be defined by the proportion of the distribution of social interests, as well as the boundaries of national interests. The difference of legal ethics between different legal systems of new quality productive forces is essentially caused by different national concepts. Under such circumstances, China could promote the idea of "community with a shared future for mankind" and take "extensive consultation, sharing and co-governance" as the basic principle to achieve cooperation while seeking common ground while shelving differences. To sum up, the conflicts of value concepts in legal systems often exist in the identification of concepts. In other words, at the level of domestic law, the value ranking of law reflects the ranking of the state between the executive power and the private rights of citizens, and at the level of international law, the value ranking of law reflects the international order embodied by the game of states. When the imbalance between public power and private rights in domestic law will lead to social unrest, and when the distribution of national interests at the international law level is not coordinated, it will lead to conflicts in national economy, trade and politics. Therefore, when dealing with the legal ethical difficulties arising from the digital new quality productive forces in our country, we should take the identification of concept as the main focus.

### 3.5. Competition and Cooperation of Criminal Jurisdiction

The issue of criminal jurisdiction contestation of new quality productive forces could be solved in the following ways: First, at the multilateral level, China could build a criminal jurisdiction cooperation mechanism through the platforms of international organizations such as the United Nations, based on international criminal cooperation treaties such as the *United Nations Convention against Corruption* and the *United Nations Convention against Terrorism*. Second, at the unilateral level, China could follow the approach from the neighborhood to the region, and first sign bilateral extradition, cybercrimes, and artificial intelligence crime judicial assistance treaties with neighboring countries to establish institutional provisions for criminal law enforcement jurisdiction such as cybercrimes. Third, at the level of domestic law, China should clarify the distribution of criminal responsibility for joint crimes between strong artificial intelligence robots and developers, joint crimes between strong artificial intelligence and users, and joint crimes between strong artificial intelligence robots through legislation, to confirm the distribution system of criminal jurisdiction.

## References

*[1] Xiang Z. (2020) The connotation Division and attribution Judgment of data Rights and Interests. Shanghai Law Research, 3(01), 338-351.*
*[2] Haocai L. and Qiang Z. (2013) Multidimensional Thinking on Soft Law Research. Chinese Law, 5, 102-111.*
*[3] Xianquan L. (2019) Criminal Law in the Era of Artificial Intelligence, Shanghai: People's Publishing House.*