

Editor's Foreword

From the day we first learn about big data, we usually regard it as a new energy, a new technology, a new mode of organization, or as a new force that is changing the future, hoping to create more value through the crossover, fusion, openness and sharing of data. However, open data and data flow often bring more risks. The excessive collection and abuse of personal information brings great challenges to the privacy of data subjects, the information security of enterprises and the stability of society and even the country, which causes widespread and deep concern regarding data sharing, privacy protection and social justice, and becomes a major problem in global data governance.

This problem causes us to think deeper and try to come up with a theoretical hypothesis of “data person” to solve this problem. We call the rights derived from the “data person” the data rights; the order constructed based on the data rights the data rights system; the legal norms formed from the data rights system the data rights law, so as to construct a legal framework of “data rights – data rights system – data rights law.” This is the focus of this book.

If regarding the data as a kind of right, based on which a new order and a new law are constructed, then this kind of construction will give more brand-new and profound meanings to the future life of mankind. Human rights, property rights and data rights are three basic rights of the future life of mankind. Proving “Mine and Thine” by law is the primary issue of the relationship of rights. This involves the data rights and human rights, among others. After hundreds of years of development, human society is entering the era of big data, data person will turn from hypothesis into reality, and data relationships are reflected in all aspects such as personal life, business operation and national security. A new thing that is different from traditional things and transcends traditional people begins to enter the vision of legal relations, which is the “data.” Data is generated by the times, in turn, the times are created by data. It jumps out of the traditional relationships of legal rights and obligations, reflecting a characteristic of crossover and fusion. It is no longer the traditional “Right as against every possessor of it.” The flow and sharing of data are becoming the essence of this era. More importantly, based on the principle of protecting the inherent dignity of human beings, data right is a

new fundamental right at the level of human rights. According to the statement from General Data Protection Regulation (hereinafter referred to as GDPR), it is a basic right for natural persons to obtain protection in terms of personal data processing. This concept encourages us to explore the theoretical basis of the data rights within the context of “theory of human rights” and “theory of property rights,” and through the observation of human rights and property rights, reveal the justification of data rights in legal philosophy, and further explain the possibility, necessity and inevitability of the creation of data rights, data rights system and data rights law. Here the data rights break through the limitations of data protection by theories on personality, privacy, property rights, obligatory right, and intellectual property rights, and become a new kind of rights and interests in the data context. This new kind of rights and interests includes data sovereignty, personal data rights and data sharing rights. The data rights, together with human rights and property rights constitute the three basic rights of future life of mankind.

Data rights are a combination of personality rights and property rights. Data has personality and property attributes, but at the same time it is different from personality rights and property rights. The core value of personality rights of data is preserving the dignity of the data subject as a human being. In the era of big data, individuals will leave “data footprints” in a variety of data systems, and restore a person’s characteristics through correlation analysis to form a “data person.” Recognizing personality rights of data is to emphasize that the data subject enjoys the rights such as freedom without being deprived, reputation without being insulted, privacy without being snooped on, and information without being abused according to the law. At the same time, “data are valued” has become the consensus of the whole society; therefore, it is necessary to give data the property rights and protect it according to the law. As a new property object, data property shall have five legal characteristics which are certainty, controllability, independence, value and scarcity. The personality right of data and the data property right together constitute the two core rights of the data rights.

The subject of the data right is a specific obligee, and the object of the data right is a specific dataset. In a specific legal relationship of data rights, the obligee refers to a specific one. Data rights have different forms of rights such as data collection right, data portability right, right to use data, usufructuary right of data and the right to modify data. Therefore, it is necessary

to determine a specific obligee in combination with specific forms of data rights and prescribed contents. For the object of the data right, single and independent data does not have any value. Only the dataset with independent value combined according to certain rules has specific value, and the individual data in the dataset cannot be taken as separate object of the data right. Therefore, the object of data rights is a specific dataset.

Data rights break through the limitations of “one ownership for one object” and “properties are tangible,” and are often manifested as “multiple ownerships for one data.” “One ownership for one object” is the dominant essential feature of property rights. The forms of things have gradually enriched with the advancement of science and technology. With the continuous increase of the types of property rights, the separation of the rights and functions of ownership has become increasingly complicated. “One ownership for one object” has been impacted by “multiple ownerships for one thing” and “one ownership for multiple things” in reality. The extent and form of using things is constantly changing. “Multiple ownerships for one thing” and “one ownership for multiple things” have also obtained some legally tacit approval and vague permissions in the trial practice. With the development of the times and the advancement of science and technology, when the cost of things decreases or even approaches zero, the exclusivity of things becomes unnecessary. This is especially true for data resources of abundance and zero marginal cost. Their natural non-property-right objectivity and multi-subjectivity determine the basic principles of “making the best use of data.”

The data rights have private right attribute, public right attribute and sovereign attribute. The data rights have an altruistic and shared attribute naturally, which is a kind of existence between conflicts and games of private rights and public rights. Once the data rights arise from a natural right to a kind of co-ownership and “general will,” then it definitely transcends its own form and becomes a social right. In the era of big data, if people exist as a kind of data person, then this group of sovereigns composed of data persons will inevitably need a system to ensure that everyone can regain the things lost due to the abandonment of natural rights in the process of securing the private rights with the freedom of being data citizens. As stated in the GDPR: “The right to the protection of personal data is not an absolute right; it must be considered in relation to its function in society and be

balanced with other fundamental rights.” In other words, while protecting the rights of data subject, it should still leave room for technological innovation and industrial development at the same time, which is precisely the essence of “making best use of everything” of civil law. Since data has become a key production factor in the digital economy, we need to clarify how data ownership and right to use data are separated. Data rights and data ownership are the core issues which are more important than protection of data rights itself. In the eyes of civil law, everyone is the country itself. This is a very important philosophical framework for defining data rights. Individual sovereignty, social sovereignty, the sovereignty of Internet corporate giants, and the country’s data sovereignty shall be the same kind of good, but they also clash with each other, and they are considered as equally important in the history of Western political thoughts, but what is more important is the individual sovereignty that legal person will defend.

There are five basic dimensions in the data rights system. The legal system is the coordinator of social ideals and social reality, or it is an intervening area that is difficult to define clearly between norms and reality. This is especially true of the data rights system. Its significance lies not only in the maintenance and realization of justice, but also in the creation of order, that is, through the combination, adjustment and protection of system arrangements which combines the relationship and rules of data rights and can realize the relationship of data rights effectively, to the greatest extent, to reduce the costs of data transaction and improve the efficiency of data resource allocation. This requires us to build a set of system and operational rules around data rights, including the system of statutory data rights, data ownership system, system of data rights for public interests, system of data usufruct and sharing system. The core of these five dimensions is the system of personal data protection based on value objectives such as security and risk prevention. However, the protection of personal data cannot be limited to the protection of private rights. It needs to go beyond the model of “consent” or “informed,” and take a more open, inclusive and friendly attitude towards industrial development and social justice, and maintain the dynamics and flexibility of the rules, better (but not more) through a bottom-up, distributed mechanism of rule generation, establish a supporting system that is more in line with specific value objectives, and form a protection regulation and legal system of data that is more in line with real needs.

Sharing rights is the essence of the data rights. Remixing is the characteristic of the future of human life. The impact of remixing on the structures of power and rights has forced people to reexamine the society and reconstruct a new digital order. Data rights are the source of the inner vitality of the digital order. The idea of data rights is an important force to promote the reconstruction of order. This kind of power marks the decline of traditional power, the expansion of new rights and the transfer of personal sovereignty. Altruism is increasingly becoming the consensus of humanity in the future. Individuals' "natural rights" are the cornerstone of a society ruled by law. But we will always explore the ultimate norm of digital social life in the supremacy of a sovereign collective "general will" while protecting the inalienable individual rights. The data rights, as the right of future based on the hypothesis of data person, also have such a "general will." Only when the data person gets out of the economic ivory tower and the sharing becomes the core of the digital order, the essence of the digital power can be manifested.

The data rights law is the legal norms for adjusting data ownership, data rights, data utilization and data protection. Confirmation of data rights is the logical starting point for the protection of data rights and is a prerequisite for establishing data rules. Data rights are an important part of the legislation of data rights. And a law without content of rights can't raise people's desire for it. In the legislation, the data subject should be given corresponding rights such as the right to know, the right to rectification, the right to be forgotten, the right to collect data, the right to data portability, the right to use data, the right to benefit from data, the right to share data, the right to seek remedy. Not only must there be provisions on the data owner's rights to control, use, and benefit from the data, but also the provisions on rights of others to use the data, such as data usufruct, data rights for public interests and sharing right. The value of data lies in its use, under the premise of adhering to the principle of making the best use of data, we should develop the values of data for political, commercial and civil purposes, and force the development of the data utilization model of the "Three-Chain Integration" covering the whole governance chain, industry chain and service chain. The responsibility of protection is an indispensable part of laws, regulations and rules. If a law lacks the provisions on the responsibility of protection, the rights and obligations provided in the law are some ineffective rules. Collection, storage,

transmission, and use of data need to strengthen security management to prevent data from being attacked, leaked, stolen, falsified and illegally used. In addition, the data is related to national security and public interest, and data sovereignty needs to be protected at the national level.

The data rights law reconstructs a new order of digital civilization. The era of digital civilization is an intelligentized era based on emerging technologies such as big data, the Internet of Things, artificial intelligence, quantum information and blockchain. In this era, the trend of data rights is unprecedentedly active, the real-time flow and sharing of data constitutes a data-based ecosystem, and the entire social production relationship is marked by the relationship of data, and politics, economy, culture, technology and so on can be fully transformed, which will trigger unprecedented changes and reconstruction of the models of entire social development and interest distribution. On the surface, the external framework of the existing legal system is indeed very brilliant. From the Corpus Juris Civilis, Napoleonic Code to German Civil Code and other legislative creations, the legal system has been quite complete in the eyes of all beings. It seems to be perfect enough to satisfy human needs for orderly and organized life and the human desire to repeat the experience or arrangements and the impulse to respond to certain situations. However, in the face of contradictions between the laws, in the fields involving civil law, economic law, administrative law, criminal law, procedural law, international law, etc., how the data rights law crosses the border on earth still remains in a state of divergence. But in any case, the data rights law is indispensable for the orderly circulation of data, the premise of data reuse, the balance between personal privacy and data utilization. It is the basic material of the "square and round" world of the legal empire that constructs the space of digital world. The data rights law will be the new coordinate of the rules in the era of digital civilization, the new paradigm of governance and the new starting point of civilization, and will certainly reconstruct a new order of digital civilization.

The data rights law is an important cornerstone from industrial civilization to digital civilization. From agricultural civilization to industrial civilization and then to digital civilization, the law will realize the transition from the "law of man" to the "law of things" and to the "law of digit." The digital civilization provides the origin of value and the driving force of innovation for the creation of the data rights law. The data rights law also provides an

existence basis for the system maintenance and order promotion of digital civilization. The meaning of the data rights law is condensed in the order paradigm of digital civilization and becomes the normative basis for maintaining and enhancing this civilized order. In this sense, the data rights law is the product of the transition of civilization, and will also be the cornerstone of humanity's transformation from industrial civilization to digital civilization.

It is often said that economists are the least likely professional group to form consensus. In a certain sense, it may be even more difficult for the legal scholars to reach a certain consensus, especially when faced with cross-border and marginal issues like data rights. If we extend the thinking including the data rights law to the level of legal philosophy thinking, we will find that the relationships between people, nature and society under the legal framework reflected by data rights, the relationship between people or legal persons and law in knowledge and the legitimacy of legal authority are even more complicated. Data rights are a kind of relatively independent right. Data rights, the system of rights, the study of data rights law and more related issues have become a legal proposition that is closely related to the times and a grand narrative. The study of the data rights law is a groundbreaking and epoch-making work. It is a major social or academic issue that cannot be avoided in any way. Even if we don't touch it now, the future generations must study it. Therefore, we will maintain such a kind of initial intention and a strategic determination; not based on the present, but on the future; more from the assumptions, bold assumptions and careful verification and cross-border integration. Of course, the work we are doing now is only a theoretical exploration, which only provides scholars with a possible legal proposition or thinking resources of some researches. Just like the world's first steam engine definitely cannot be used, and the first car cannot be driven on the road, the new thing is absolutely imperfect. But I believe in such a judgment: "On the way heading to the world, digital economy laws are most likely to be the pioneer among other Chinese laws." We are making an effort now in this regard. And although it is difficult, I am convinced that the light of scientific wisdom and legal rationality will be reflected in the era of digital civilization.

Lian Yuming

Director of Key Laboratory of Big Data Strategy

August 10, 2018

