

Systemic Dilemmas and Practical Responses of Digital Human Rights Theory in the Context of Smart Society: A Literature Review

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Abstract. In the context of the accelerated development of digital technology represented by the Internet, big data, cloud computing and artificial intelligence, and the world's digitalization, the concept of "digital human rights" has emerged and attracted widespread attention in the academic community. However, up to now, there is no relatively unified concept of digital human rights in the academic circle, and there is a wide conflict over whether digital human rights can constitute the "fourth generation of human rights". In the context of digitalization, people's ways of living and exercising their rights are being reshaped or even replaced, and the protection of digital human rights has been put on the agenda. However, it is difficult to find a path to protect digital human rights when the academic community has not yet reached a consensus. These several issues affect each other and are interlinked. Different preferences for the definition of digital human rights will directly affect whether digital human rights are considered to be the fourth generation of human rights, and this will further affect the way we adopt to guarantee digital human rights, and whether it is effective and feasible. The rapid development of digitalization has built a digital space that is different from reality, which not only overturns the original rules and order, but also provides us with a new way of exercising rights, so digital human rights should be considered as the fourth generation of human rights. On this basis, I think we should first start to take some concrete initiatives, including the formulation of laws and regulations regulating the application of digital technology, the establishment of relief institutions

Keywords: digital human rights; fourth generation human rights; smart society; human rights governance.

With the accelerated development of digital technology, we have entered the digital era, where digital technology is deeply integrated with production activities and people's lives, and profoundly affects every aspect of our lives. This includes the reshaping of the traditional human rights system by digitalization. The development of digital technology has changed the content of traditional human rights and given rise to some new categories of human rights. It has brought about new ways of exercising traditional rights and introduced a new human rights concept of "digital human rights". Based on this, scholars have explored the concept of digital human rights, whether it constitutes a new type of human rights, the necessity of guaranteeing digital human rights, and how to guarantee digital human rights.

1. Definition of the concept of "digital human rights"

There are many different views on the concept of digital human rights, which can be divided into two major views: digital human rights are new and independent human rights, and digital human rights are only subordinate rights extended from the existing human rights system. A group of scholars, represented by Wenxian Zhang and Changshan Ma, believe that today's information revolution and digital development have brought about not only the simple expansion and extension of the existing production and survival methods, but also the overall replacement of the traditional industrial and commercial society by the emerging intelligent society, and thus the "digital human rights" were born. It is an indispensable right in the use of digital technology, which relates to the conditions and capabilities of human existence, including many specific rights in digital life, such as

the right to privacy and the right to access the Internet. It breaks through the real world, physical time and space, and takes the production and living relations in the dual space of digital reality as the social foundation, and is a transformation and upgrading of the original human rights system for the realization of human rights and comprehensive development in the emerging intelligent society. However, it is not completely separated from traditional human rights, which include both the digital extension of traditional human rights under the conditions of intelligent development and various emerging rights. The essence of digital human rights is the rights that one should enjoy as a human being in the digital age and intellectual development. Other scholars have broadened the content of digital human rights on this basis, arguing that the exercise of digital human rights cannot be limited to digital space, but also needs to cover all current and future areas of digital interaction in user experience, and should be widely used in the digital sphere, including the right to equal opportunity in the digital economy, online intellectual property rights, universal Internet access, the right to online justice, and many other specific rights.

While all the above-mentioned views consider digital human rights as a new type of human rights, scholars who hold another view, represented by Zhiqiang Liu, believe that digital human rights are human rights in digital space, a series of subordinate rights that extend with the digital expansion of human living space. It is not a new right of human beings, nor does it have independence, but a series of subordinate rights. Some even think that the so-called "digital human rights" are not even appropriate as a subordinate concept of human rights. According to the principle of intergenerational division of human rights, even if "digital human rights" could become a human right, it could only be classified in the structure of existing human rights types. But it lacks the moral basis of human rights and cannot pass the argument of moral human rights, and at the same time, it not only lacks the constitutional normative basis, but also does not meet the criteria of "human dignity" and "minimum basicity".

What is the definition of the concept of digital human rights in foreign countries, in addition to the two claims in China. Digital human rights is a proprietary term in foreign countries, which is used a lot in the media and often appears in the discussion of privacy issues in digital space, but it is less used in academia and does not have a clear definition. In contrast, digital human rights are more often denoted in foreign literature as human rights in the digital age, human rights in digital space, or human rights online. On the definition of whether digital human rights are a new type of independent human rights, extraterritorial scholars can also be divided into the same two major views as domestic scholars. In 2012, the UN Human Rights Council proposed that human rights protected offline are also applicable online, and the Office of the Special Envoy of the UN Secretary General for Technology made digital human rights a major item of the UN's technology work, dividing human rights into online and offline human rights, indicating its preference for classifying Digital human rights are classified as a new type of human rights. Some scholars define digital rights as the fundamental rights of people in the Internet space, the 2020 U.S. Digital Freedom Foundation (USFF) has also made clear that digital rights are human rights.

However, like a group of domestic scholars represented by Zhiqiang Liu, Hutt believes that digital human rights are not a set of rights with independence, but rights that are closely related to other human rights. Taking the right to privacy, which is the most concerned among digital human rights, as an example, digital human rights and the right to privacy are not juxtaposed to rights, but are embedded in the right to privacy. Bachelet argues that digital human rights are not a new right for human beings, but that traditional human rights have been extended and expanded due to the rapid development of digital technology, but there is no corresponding means to govern them, thus undermining the principle of consistency between real and digital space advocated by the United Nations. TIOF believes that digital human rights are an extension of human rights and that people in the digital space should be protected by the same principles embodied in the Universal Declaration of Human Rights, and that there is a need to develop, and is developing, a Universal Declaration of Human Rights in Digital to extend human rights protection to all digital domains.

A number of scholars, led by Wenxian Zhang and Changshan Ma, have recognized the profound impact of digital development on traditional societies and the human rights system, and have proposed that digital human rights are emerging rights indispensable to the use of digital technology developed in the context of an intelligent society. Although arguing that digital human rights include digital extensions of traditional human rights also include emergent rights, the relationship and boundaries between the two are not well defined. Another group led by Liu explains the criteria of human rights iteration well, proposing that digital human rights are not an added right or even a subordinate concept of human rights. However, such claims weaken the impact of digital human rights on productive life in today's digital context and are not conducive to better recognition and guarantee of digital human rights. I believe that digital technology is profoundly affecting the way of life of human beings at an unexpected speed and intensity, and is bringing great changes to the traditional society and human rights system that will last for a long time, and we cannot just ignore the changes and challenges it brings. Now that we are aware that digitalization is the trend, we should bravely try to develop new human rights to deal with the complex and changing future.

2. The Fourth Generation Human Rights Debate and the Need to Guarantee Digital Human Rights

The different views advocated by the academia on this issue can be roughly divided into two major theories. The same group of scholars, represented by scholars such as Wenxian Zhang and Changshan Ma, believe that digital human rights can constitute the fourth generation of human rights. The smart society has profoundly changed human living conditions, living environments, behaviors and values, and human rights have been digitally transformed and reshaped in different dimensions as never before. In the long life of real space, we have constructed a set of rules of order that can be applied. However, due to the great difference between digital space and real space these orders are difficult to apply in digital space. Digital human rights are human rights in digital space, and the generation of digital human rights is based on the specificity of digital space, which brings new ways of exercising power, and the establishment of the "fourth generation of human rights" existing in the digital world is on the agenda. Some scholars argue from the perspective of politics and international status that this issue is to a certain extent a matter of political judgment, and that "digital human rights" already have the characteristics of a new type of human rights, especially in line with the human rights views of developing countries such as China. At the same time, digital human rights, as an emerging human right, is leading the development of a new generation of human rights, and it is a strategic need to enhance the discourse of Chinese jurisprudence in the international community by strengthening the constraints and regulations on the development and use of digital technology with the power of human rights. It is worth mentioning that some scholars have proposed the concept of "digital attributes" of human beings to prove "digital human rights". The nature of human beings includes the natural and social attributes of human beings, which is the root of the legitimacy of human rights - the origin of human rights. The digitization of human social activities in the digital age has had a huge impact on human beings themselves, and it can be said that human beings have acquired stable "digital properties". This shows that digital development has given rise to new patterns of social relations and that "digital attributes" are the root of the legitimacy of digital human rights.

On this issue, a group of scholars, represented by Zhiqiang Liu, has pointed out that "digital human rights" is not only not a new type of human rights upgrade - the fourth generation of human rights, but even not suitable as a subordinate concept of human rights. Liu also argues from the theory of intergenerational division of human rights, and believes that the essence of intergenerational innovation of human rights is the structural expansion of new human rights to the existing human rights system. The human rights subjects, obligation subjects, rights and obligations of "digital human rights" can all be well explained in the existing human rights system. Second, "digital human rights" do not have a moral basis for human rights. An institutional human right must be premised on a moral human right, but "digital human rights" cannot take "humanity" as the core value and moral basis.

The attempt to find a moral basis for "digital human rights" is also very likely to cause moral misconduct and ethical disorder. Some scholars have questioned the above-mentioned theory of "digital properties". They argue that it is limited to argue human rights from the nature of human beings, and it is easy to fall into metaphysical conceptual debates. While he acknowledges that digital existence is becoming one of the inseparable ways of human existence, he suggests that digitalization is only a new stage in the development of industrialization and that it is only necessary to extend the theory we need within the existing human rights system.

However, the theoretical controversy over "fourth-generation human rights" still reveals that the two opposing theoretical claims share common premises, including the recognition by scholars that human rights are the most fundamental values worthy of protection and that the concept of "digital human rights" can be justified, although the opponents have reservations and do not consider it to be a fourth-generation human right. The concept of "digital human rights" and related propositions have a solid jurisprudential basis, practical needs and great significance. Digital life has become an important part of life. Humanity is highly dependent on digital technology, and we have opened up a digital way of being. At the same time, new challenges and threats to human rights in the digital society are not fully addressed by the already existing legal fundamental rights, and those in control of data technology have the obligation to safeguard human rights, as they are either direct violators or stakeholders of digital human rights. An important purpose of digital human rights doctrinal claims is to be able to give these data and technology holders new legal obligations of a human rights nature. There are also many specific examples that argue for the need to guarantee digital human rights. For example, digital technologies can facilitate access to education, and where access to computers and the Internet is available, digital technologies can facilitate access to education through the deployment of distance learning. Similarly, digital technologies are a very important way to help people access information, with more than half of the adult population in the UK now using the Internet or social media to access news. Moreover, digital technologies such as artificial intelligence can facilitate rapid damage assessment and prognosis of risk by analyzing large amounts of complex data, such as satellite imagery.

Like Changshan Ma and other scholars, the author agrees that digital human rights can constitute the fourth generation of human rights. On the one hand, the author believes that digital technology has led the development of digitalization to such an extent that it has already had a great impact on our living life and even constructed a relatively complete digital space, and the objective conditions for the constitution of digital human rights are already in place. On the other hand, new developments inevitably bring new problems and challenges. Under the conditions of an intelligent society, the norms of order we observe in real space can no longer solve many of the new problems we face, so the establishment of "fourth-generation human rights" can make it possible to regulate the development of digital technology with the status of human rights, which is beneficial to both society and human rights development. A group of scholars, such as Zhiqiang Liu, once again clarified the iterative criteria of human rights and refuted the theories and research methods that endorse the fourth generation of human rights, pointing out the doctrinal errors of such claims, but failing to recognize that it is necessary to establish the fourth generation of human rights not only from the perspective of political judgment but also from the perspective of strategic needs. Therefore, I think it is appropriate to adopt the viewpoint of a group of scholars represented by Changshan Ma as the general viewpoint.

3. Path options for the realization of digital human rights

Since entering the 21st century, the development of human society has shown accelerated changes. Most people have not yet fully adapted to the information society, and even some people have not yet adapted to the industrial society, they are rapidly pushed into the intelligent society. The integrated development and extensive use of intelligent technologies such as big data, Internet, cloud computing and artificial intelligence, the Internet of Things and blockchain stand out, unprecedentedly changing

the production, life, survival, learning and behavior of human society, even changing the governance system, governance system and governance capacity of the country, changing the decision-making process and implementation mechanism of the government, changing the legal system and its operation, and shaping A new intelligent society.

Changshan Ma believes that the "fourth generation of human rights" will encounter many difficulties and challenges, and there is an urgent need to strengthen the exploration and structure of the concept, mechanism and regulation strategy, so as to provide the rule of law guarantee for the "fourth generation of human rights". First, we should establish the concept of "digital human rights": based on digital support, identify with digital personality, and reshape human rights values; second, we should build the protection mechanism of "fourth-generation human rights": promote the institutionalization of data and information autonomy, explore the scenario-based balance mechanism of rights and interests, and explore the process-result regulation strategy; third, we should shape the "moral infrastructure" that respects human rights values: on the one hand, we should establish the ethical principles of algorithms, and on the other hand, we should cultivate the moral acquisition ability of algorithmic "intelligences".

Gong advocates that the legal rights of digital human rights should be established based on the "digital attributes" of human beings and the legal obligation system of digital human rights should be constructed based on digital human rights. He believes that the iteration of human rights theory originates from the change of human nature theory, and the emergence of digital society has expanded the extension of social attributes of human beings and formed "digital attributes", and digital human rights should be a new type of human "digital attributes" as the origin. Secondly, the binary structure of the rights protection system of digital human rights should be constructed. As a new type of human rights, digital human rights are not completely separated from traditional human rights, but have expanded the content of new human rights and formed their unique theoretical system while transforming and upgrading traditional human rights. Part of the binary structure of digital human rights should be the traditional human rights in digital form, which are formed by the "digital attributes" of human beings. Another part of the binary structure of digital human rights should be the new digital rights formed by the "digital attributes" of human beings. In addition to establishing the legal rights of digital attributes of human beings based on the "digital attributes" of human beings, the legal digital human rights must also be transformed into actual digital human rights in real life through the obligations of the duty-bearers, i.e. the obligations. In other words, the legal obligation system of digital human rights, which is composed of personal obligations, obligations of technology enterprises and obligations of the state, should be constructed based on digital human rights. First of all, while guaranteeing digital human rights, individuals must comply with the basic obligations stipulated in the Constitution; people should fulfill their traditional obligations in digital space in digital form to promote the realization of digital human rights; people should also fulfill various newly created "digital obligations" in digital space to guarantee digital human rights. Secondly, it is necessary to clarify the obligations of technology development companies to respect and guarantee; to clarify the obligations of network enterprises to respect and guarantee; and to clarify the obligations of network platforms to respect and guarantee. Once again, in addition to the legal obligations of individuals and digital technology enterprises to respect and guarantee digital human rights, the state also needs to undertake corresponding legal obligations, and the state obligations are the fundamental guarantee of digital human rights. According to the historical process of the development of civil rights on which the state obligations arise and the degree of difficulty in the fulfillment of state obligations, the structure of state obligations can be summarized into three sequential levels: respect, protection and payment. Thus, the legal obligations of the state to digital human rights also include the three-level progressive obligations of respect, protection and payment. In order to meet the new challenges and requirements of human rights protection in the digital era, it is necessary to strengthen human rights protection in the process of digital technology application in a targeted manner. However, since the development of digital technology is rapidly changing and becoming more

complex, and the infringement of human rights has adopted a more technological approach, human rights protection in the digital era also needs to adopt a more "digital" approach accordingly.

Some scholars have proposed many concrete initiatives to guarantee digital human rights based on this. These include the formulation of laws and regulations governing the application of digital technology; the establishment of specialized relief agencies; the provision of effective remedies; self-regulation and industry self-regulation by enterprises and online social platforms; the need for governments to strengthen self-regulation in digital governance in accordance with the law; and the construction of an ethics of digital technology application that everyone must abide by.

Similarly, some scholars believe that the "digital infrastructure" should be used to promote the equalization of access to digital space, build a tripartite governance mechanism of "government-market-people", use blockchain to enable data privacy protection and prevent data control, and promote a shift in the understanding of human digital attributes. Some scholars believe that the "digital infrastructure" should be used to promote equal access to digital space, build a "government-market-people" tripartite governance mechanism, use blockchain to enable data privacy protection and prevent data control, and promote a shift in the understanding of human digital attributes. However, unlike other views, they propose to strengthen the governance of digital governance, and the protection of digital human rights also requires the prevention of human rights violations in the process of digital governance.

Unlike the above-mentioned scholars, Jianxin Li does not think that in guaranteeing digital human rights, it is necessary to prove that digital human rights constitute the fourth generation of human rights. He proposes that even if they do not constitute the new generation of human rights, if we focus on problem solving, from the perspective of ethics and morality, it is a realistic way to establish an ethical framework of science and technology to guarantee human rights and supplement the lag of law through ethics.

At the same time, the concept of fundamental rights protection will be implemented in the future legislative process, and the guidance of AI development will be strengthened, so that the development of new AI technologies can be implemented in a reasonable and orderly manner without violating human ethical norms. The duality of ethics and law is complementary to the system of digital rights protection, which is tested by the concept of "ethics" that is the origin and foundation of law, and brings a powerful complement to law that cannot lose its logical self-consistency due to changes.

4. Conclusion

Digital human rights is an emerging field of domestic research and a key area for future digital governance and human rights protection. The basic theoretical research on digital human rights has been moving forward slowly amidst continuous disputes, and a series of preliminary research results have been formed so far. Through reading and organizing the relevant literature, it can be broadly divided into "conceptual proof," "system positioning," "guarantee significance," and "guarantee mode." "As an emerging field of human rights research, the digital media is the most important part of the research. As an emerging field of human rights research, a series of theories of digital human rights have not reached a general consensus in the academic community. The most basic concepts have not yet been defined uniformly, and both inside and outside the field show a division between "recognizing digital human rights as a new and independent human right" and "considering digital human rights as a subordinate right extended from the existing human rights system. The former, I believe, is more suitable to be adopted as the general viewpoint, that is, "digital human rights are independent and indispensable rights that people should enjoy under digital conditions". Because of the irresistible trend of digitalization and the vagaries of future technological development, we can see that the problems and challenges of digital-related human rights are already widespread. In this context, the best approach is to clarify the concept of digital human rights so that they can be better studied and understood, and more efficiently safeguarded. This brings us to the next issue - the "fourth generation of human rights debate" on digital human rights. There is a general controversy in the

academic community as to whether digital human rights can constitute "fourth-generation human rights," but the many views can be divided into two propositions, namely, "accepting that digital human rights can constitute fourth-generation human rights" and "not accepting that digital human rights can constitute fourth-generation human rights". The division is similar to the conceptual division, but the focus of the problem is different. The former is to identify a unified and universal concept in order to divide and choose the theories of digital human rights and help us further research; the latter is to determine whether this new concept of digital human rights can be placed in the position of human rights to solve the challenges and problems we are facing now, which is also the point of contention between the two claims of whether it can constitute the fourth generation of human rights. I prefer the view that "digital human rights can constitute the fourth generation of human rights". Some scholars may argue that digital human rights do not yet meet the requirements of the new generation of human rights, but I believe that if the current human rights system is unable to respond well to the challenges posed by digitalization, it is time to consider whether it should be developed to the next stage. Despite the controversy over the positioning of digital human rights in academic circles, the importance of guaranteeing digital human rights in the face of the new challenges of digital human rights is self-evident, and the construction of a new guarantee path and system is also something we need to address urgently. As digitalization continues to deepen, there will be more human rights risks and challenges in the future, and how to enrich the theory of digital human rights and effectively connect it with digital governance is undoubtedly an important issue for future research on digital human rights.

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