

Digital Inclusion: Research on the Digital Protection of Human Rights

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Abstract: *In the digital era, the protection of human rights inevitably integrates digital technology and presents distinctive relevant characteristics. Therefore, the concept of digital inclusion should be introduced. However, the protection of human rights in the digital age still faces four significant challenges, namely, limitations in hardware systems with unrealized access rights, lack of digital competency with widening digital divide, low degree of empowerment and inefficiency in digital utilization, as well as frequent digital infringements and compromised digital rights. To address these challenges, it is essential to ensure barrier-free access to information technology to strengthen the foundation of human rights protection, promote the extensive participation of social entities to expand the scope of human rights protection, provide inclusive services for diverse groups to deepen the content of human rights protection, eliminate the digital divide to promote equal realization of human rights protection, and enhance citizens' digital literacy and capabilities to improve the efficacy of digital protection of human rights. Under the framework of digital inclusion, the specific measures to achieve the digital protection of human rights are led by the value orientation and practical needs of the rights to subsistence and development, aiming to advance the universal protection, differential protection, and enhanced protection of human rights through digital inclusion.*

Keywords: digital inclusion ♦ human rights protection ♦ digital protection

With the accelerated development and cross-sector integration of digital technologies and applications such as the internet, big data, cloud computing, artificial intelligence, the Internet of Things, and blockchain, profound changes have already occurred in the political, economic, social, and cultural domains of the nation. Moreover, people's lifestyles, work patterns, and modes of social interaction have been reshaped. Digital transformation has thus become a pervasive reality in contemporary society. Historically, each industrial revolution or technological advancement has had an impact on social structures

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and modes of resource allocation. Unlike previous transformations, the current digital transformation, characterized by its rapid pace of development and extensive scope of influence, has brought about more complex and far-reaching impacts on society. On the one hand, digital technologies have provided people with unprecedented convenience and opportunities, such as remote work, online education, e-government services, digital transportation, and digital payment. On the other hand, this rapid change has also exacerbated social risks and inequalities, potentially severely affecting the full realization and equal protection of human rights. In response to the various inequalities arising from digital transformation, the concept and strategy of “digital inclusion” have emerged. Regarding the definition of digital inclusion, there are three main representative viewpoints in academia. The first perspective regards digital inclusion as a fundamental solution to the digital divide, arguing that “digital inclusion is derived from the term digital divide and refers to the specific actions and practical processes aimed at narrowing the social inequalities brought about by the digital divide.”¹ The second viewpoint posits that digital inclusion is a systemic construction of the inclusive empowerment elements of digital technologies in the digital age. Specifically, it is a system comprising three key elements: Digital access as the foundational element, digital competency as the central element, and a supportive data environment as the safeguarding element.² The third perspective interprets digital inclusion as a technological framework for promoting social inclusion. It shifts the focus of digital inclusion from merely bridging gaps through the provision of equipment to effectively integrating information and communication technologies into communities and institutions in order to foster social development.

In summary, digital inclusion aims to ensure that all members of society, particularly marginalized groups (e.g., digitally excluded populations), have access to and can effectively utilize digital technologies. In response to the “digital divide” caused by asymmetric societal development and the rapid iteration of digital technologies, it is committed to ensuring that everyone can participate in political and economic life through inclusive policies and safeguard their rights related to survival and development by leveraging digital technology. Initially, digital inclusion primarily focused on narrowing the gap in internet access levels between different countries and regions. Over time, its connotation has continuously enriched and evolved. Today, digital inclusion

¹For example, the Institution of Museum and Library Services (IMLS) defines digital inclusion in its report *Building Digital Communities* as “the ability of individuals or groups to access and use ICT.” This includes the capacity to access the internet quickly and reliably, having digital devices that meet user needs, obtaining digital competency training and technical support, and enabling citizens to actively collaborate and participate in the use of information software. See Samantha Becker, et al, “Building digital communities: A framework for action,” Institute of Museum and Library Services, page 1, accessed December 26, 2024, <https://www.imls.gov/sites/default/files/publications/documents/buildingdigitalcommunitiesframework.pdf>.

² Bu Miao, “Research on Digital Inclusion Policies and Practice Abroad: A Case Study of Britain, Singapore and New Zealand,” *Digital Library Forum* 7 (2022): 52-54.

encompasses not only technological access but also essential skill training and support, as well as economic empowerment, psychological support and other enabling conditions, all aimed at promoting social inclusion at all levels. The ultimate goal of digital inclusion is to ensure that everyone can fairly benefit from the achievements of digital technology and possess the necessary skills to fully utilize these technologies.³ At present, academic research on digital inclusion primarily focuses on digital transformation of social governance, public services, etc. However, the significance of the concept of digital inclusion for human rights protection in the digital age has not been given sufficient attention. Grounded in the objective of human rights protection in the digital age, this paper adopts the promotion of digital inclusion as a macroscopic perspective. Starting from the current status of human rights protection through digital inclusion, it explores the ideal orientation of digital inclusion in human rights protection and ultimately proposes specific strategies for advancing digital inclusion in human rights protection, aiming to enhance the quality of human rights protection in the digital age.

I. Significance of Digital Inclusion to Digital Protection of Human Rights

In the digital age, the content and forms of human rights protection have undergone significant changes. On the one hand, traditional human rights (such as the right to subsistence and the right to development) have acquired digital attributes through the “embedding of digital technology.” The coexistence of “biological humans” and “digital humans” has become a reality, with personal digital information of the subject becoming an indispensable element. In digital space, the formation of individual social relationships, maintenance of personal dignity, and realization of personal value are all depicted, expressed, and constructed through information, data, and code. Data and information have gradually become inseparable and constitutive elements of everyone.⁴ On the other hand, the digital age has given rise to many new types of “digital human rights,” including basic rights such as the right to information and the right to privacy, derivative rights such as the right to internet access and data autonomy, and specific rights that safeguard these derivative rights, namely, the right to data access, the right to data rectification, the right to data erasure, the right to data portability, the right to object to data processing, the right to restrict data processing, the right to object to automated decision-making, and the right to sue for data infringement.⁵ Regardless of whether these digital human rights are

3 This is the definition provided by the International Telecommunication Union (ITU) in 2019. See Yang Qiaoyun, Liang Shilu and Yang Dan, “Digital Inclusion: Practical Exploration and Experience Reference in Developed Countries,” *Information Studies: Theory & Application* 3 (2022): 195.

4 Ma Changshan, “‘The Fourth Generation of Human Rights’ under the Background of Smart Society and Its Protection,” *China Legal Science* 5 (2019): 8-10; Gong Xianghe, “Human ‘Digital Attributes’ and Their Legal Guarantees,” *ECUPL Journal* 3 (2021): 76-78.

5 Gui Xiaowei, “Digital Protection of Human Rights in Smart Society,” *Law Review* 1 (2023): 157-158.

recognized as a new category of human rights, compared with traditional human rights, their content and forms of protection are embedded with digital technology factors. These developments have precipitated a series of digital technology issues, such as the absence or poor quality of digital hardware, the widening digital application gap, the objective limitations of digital empowerment, and the psychological resistance of digital subjects. The emergence of these issues has increased the difficulty of human rights protection. Against this backdrop, digital inclusion can universalize the protection of digital rights and ensure the equal protection of these rights.

A. Digital inclusion leading the conceptual innovation of human rights protection

Digital inclusion can reshape the concept of social governance and lead the innovation of human rights protection concepts. On the one hand, as society transitions toward a digital age, people's social relationships, behavioral patterns, and daily lives are increasingly and profoundly influenced and reshaped by the development of networking, digitalization, and intelligence. Individuals undergo a transformation and upgrade from "biological humans" to "digital humans." The concept of "no digital, no human rights"⁶ and the value of digital human rights have become structurally embedded in social relations and daily life. The essence of digital inclusion is to ensure that citizens can access digital information fairly and securely, to comprehensively enhance digital literacy, and to achieve full digital empowerment. This fully demonstrates that "digital technology must be people-centered, must regard human rights and dignity as its highest goal, and must use human rights as its fundamental boundary and evaluative standard."⁷ This aspect includes both the respect and protection of citizens' (users') rights and freedoms in their digital lives, such as the privacy right, the data right, the right to freedom of expression, and the right to personal dignity, as well as the bridging of the digital divide faced by vulnerable groups to "truly realize their right to internet access or digital life."⁸ On the other hand, during the digital transformation period, human rights protection faces social risks such as uneven use of digital technology, infringement of personal information privacy, algorithmic discrimination, restriction of the public's right to know, and asymmetry in data control. The purposes and functions upheld by digital inclusion are precisely aimed at eliminating the digital divide, comprehensively cultivating citizens' digital literacy, fully enhancing citizens' digital competencies, and achieving inclusive digital technology empowerment.

B. Digital inclusion promoting the improvement of human rights protection models

The French scholar Karel Vasak proposed the "Generational Theory of

6 Zhang Wenxian, "No Digital, No Human Rights," *Beijing Daily*, September 2, 2019, 15th edition.

7 Zhang Wenxian, "Human Rights Jurisprudence in the New Era," *The Journal of Human Rights* 3 (2019): 21.

8 Zhang Wenxian, "No Digital, No Human Rights," *Beijing Daily*, September 2, 2019, 15th edition.

Human Rights” from a historical perspective.⁹ In 1948, the United Nations General Assembly adopted the *Universal Declaration of Human Rights*, which for the first time systematically and specifically established a list of human rights. After the 1968 International Conference on Human Rights adopted the *Tehran Declaration*, three categories of human rights were formed, with political rights, economic rights, and collective human rights as the basic framework. Based on the legal construction of human rights, three distinct models of human rights protection have emerged, corresponding to the three generations of human rights: the struggle of human rights holders against duty bearers (active model), the defense of human rights holders against duty bearers (passive model), and the cooperation between human rights holders and duty bearers (cooperative model).¹⁰ Compared with the three human rights protection models in the industrial and commercial era, the human rights protection in the digital age exhibits a new model. This model is characterized by respecting “human dignity” as the purpose of human rights protection, digitally extending and expanding the core content of the protection of the right to subsistence and the right to development, and using digital inclusion as the basic means. On the one hand, regardless of whether digital human rights can become an independent fourth generation of human rights in the digital age, the basis for protecting the rights of “biological humans” and “digital humans” still lies in the adherence to human nature and personal dignity. In this sense, digital human rights can actually be understood as the digital form of human rights.¹¹ Equality of protection, universality of protection, inalienability, and inviolability remain the fundamental starting point and destination for the protection of digital human rights, and digital inclusion aligns well with the universal legal principles of human rights protection. On the other hand, during the period of digital transformation, although the content and forms of human rights protection have been augmented with digital elements, safeguarding human subsistence and development remains the core value of human rights protection. Derived from traditional human rights, rights such as the right to internet access and data autonomy, as well as specific rights that safeguard these derivative human rights, like the right to data access and the right to data rectification, continue to emerge in increasing numbers and complexity. However, the core value of protecting

9 Regarding types of human rights, Vasak argues that civil and political rights are the first generation of human rights, aimed at safeguarding individual freedoms and enabling humanity to break free from the old feudal system. Economic, social, and cultural rights are the second generation of human rights, designed to ensure equality and oppose the oppression and exploitation by the bourgeoisie. The third generation of human rights is dedicated to combating hegemonism by certain states in the international community and promoting the establishment of a just and equitable new international order, thereby safeguarding the interests of the people in developing countries. See Karel Vasak, “Generations of Human Rights”, translated by Zhang Liping, et al., in *Collected Works on Legal Philosophy and Legal Sociology* (Vol. 4), Zheng Yongliu ed. (Beijing: China University of Political Science and Law Press, 2001), 468.

10 Liu Zhiqiang, “On the Three Kinds of Fali in Human Rights Law,” *Law and Social Development* 6 (2019): 58-59.

11Zhang Zhiming and Zhao Xuanyi, “Where is the Root of the Future Rule of Law: A Conceptual Examination of an Analytical Approach,” *Journal of National Prosecutors College* 1 (2022): 99-103.

digital existence and development has not changed. Digital inclusion, as the basic method of human rights protection in the digital age, is neither a purely defensive negative model nor a purely confrontational positive model. Instead, it is dedicated to balancing interests, integrating virtual and actual elements, focusing on specific application scenarios, and promoting collaborative cooperation among governments, enterprises, and citizens, as well as enhancing domestic and international interactions. This model is in line with the core values of human rights protection and helps to improve the models of human rights protection.

C. Digital inclusion boosting the enhancement of quality of human rights protection

In the digital age, digital inclusion methods, with core elements such as digital access, digital literacy, and data environment, emerge as fundamental means of advancing digital transformation of social governance and enhancing citizens' comprehensive digital competencies. Also, they significantly improve the quality of digital protection of human rights. While digital technology, embedded in social life, brings many conveniences to people, it also poses severe challenges to the protection and realization of human rights.¹² For example, improper collection, storage, analysis, and use of personal data are highly likely to infringe upon people's right to privacy. The impact of such cyber infringements on human life is reflected in comprehensive ways. As human life becomes increasingly dependent on data, information, and algorithms, cyber infringements are thereby "mechanized." While people enjoy the novelty, convenience, efficiency, security, and other digital dividends brought by technological progress, cyber infringements are also "objectified." The strong dependence of the entire society's production, commercial transactions, and daily life on digital technology has led to the "pervasive" nature of cyber infringements.¹³ Under such circumstances, employing the concepts and strategies of digital inclusion, and implementing measures such as interest balancing, technical compatibility, service inclusion, and collaboration among multiple stakeholders, can effectively enhance the quality of human rights protection.

II. The Dilemmas Faced in Advancing Digital Protection of Human Rights through Digital Inclusion

In the digital age, digital existence constitutes a fundamental model of human survival. This has given rise to new demands for human rights protection in digital contexts.¹⁴ On the one hand, confronted with the ever-increasing

12 Shi Hanqing and Yu Hao, "The Risks of AI Empowerment in the Rule of Law and Their Countermeasures," *Theoretical Exploration* 2 (2024): 126.

13 Ma Changshan, "'The Fourth Generation of Human Rights' under the Background of Smart Society and Its Protection," *China Legal Science* 5 (2019): 6-8.

14 Chang Jian, "Digital Existence and Human Rights Protection," *Journal of Southeast University (Philosophy and Social Science)* 4 (2022): 45-57.

specialization and growing control of digital technologies, the issue of human rights protection in the digital age has become increasingly urgent. This is because in the digital age, it is difficult for different individuals, groups, and regions to equally utilize digital technologies, which may lead to digital divides in internet access, digital knowledge, and technology usage. Under the circumstances of “algorithm dominance” and “algorithm black boxes,” natural persons or social entities are prone to being manipulated by digital technologies. Within the framework of the *Civil Code* and the *Personal Information Protection Law*, achieving autonomous control over personal digital information and property still faces certain challenges. On the other hand, the core of human rights protection lies in ensuring that individuals can freely survive and develop in society according to their essential needs.¹⁵ Hence, in any era, the basic needs of members of society should be closely linked to the lifestyle of the times.¹⁶ With the rapid development of information technologies such as the internet, big data, cloud computing, and artificial intelligence, digitalization is becoming the basic model of existence for contemporary people, and human rights protection must also shift toward a digital protection model. In the process of advancing human rights protection, digital inclusion mainly faces the following four issues.

A. Hardware constraints and the illusion of access

For the realization of digital human rights, internet access is undoubtedly of foundational importance. Without physical-layer connectivity infrastructure, any digital technology empowerment is illusory, and the benefits of digital inclusion cannot be realized. According to a 2021 United Nations report, about 3.7 billion people globally remain unconnected to the internet, accounting for nearly half of the world’s population. In countries with lower levels of economic development, only about one-fourth of the population has access to the internet.¹⁷ Even in areas where internet coverage is available, there are significant disparities in actual usage rates. For example, while about 89% of people in Europe use the internet, only 21% of women in low-income countries have access to it. Currently, services provided digitally account for nearly two-thirds of global trade services, but in economically disadvantaged regions, access is generally unaffordable. In South Asia and sub-Saharan Africa, the cost of a smartphone represents 40% of people’s average monthly income.¹⁸

The complexity and rapid iteration of digital technology itself also pose significant challenges to the implementation of hardware access rights. First, the

15 Lin Zhe, *A Study of the Legal Institutions of Citizens’ Fundamental Human Rights* (Beijing: Peking University Press, 2006), 12-16.

16 Chang Jian, “Digital Existence and Human Rights Protection,” *Journal of Southeast University (Philosophy and Social Science)* 4 (2022): 46.

17 United Nations Secretary-General, “Achieving Universal Connectivity,” accessed June 10, 2024, https://www.un.org/tech-envoy/sites/www.un.org/techenvoy/files/general/Universal-Connectivity-Summary_PDf.pdf.

18 UN Policy Brief: *Global Digital Compact — an Open, Free and Secure Digital Future for All*, see UN website, accessed June 10, 2024, <https://www.un.org/sites/un2.un.org/files/our-common-agenda-policy-brief-global-digi-compact-zh.pdf>.

complexity of technological products plays a restrictive role in digital inclusion, especially in achieving the goal of universal internet access for the global population. To realize this goal, it is necessary to have widely deployed mobile communication networks, such as 4G, 5G, and Wi-Fi. Also, it is essential to have mobile terminal devices capable of connecting to these networks, such as smartphones and tablets. The implementation and use of these technologies involve a series of complex steps and processes, and any problem at any stage can lead to the illusion of access rights, thereby hindering the true realization of digital human rights. Even in areas where network coverage has been achieved, due to obstacles in obtaining and using mobile terminal devices, such as high costs and insufficient technical support, ordinary users often find it difficult to actually access these networks. This means that even in regions where 4G and 5G are widely available and free public Wi-Fi is ubiquitous, digital access can still be a luxury. For example, in the United States, among families with an annual income of over \$100,000, the penetration rate of mobile terminal devices is as high as 99%, and most of these families have multiple electronic devices for internet access. However, in families with an annual income of less than \$30,000, about 13% do not have the relevant technical devices at home.¹⁹ Due to factors such as technical support, affordability, or infrastructure development, the absence of any single element can lead to access barriers. These access difficulties, arising from the complexity of the system, create systemic challenges for countries in promoting digital inclusion. Furthermore, the rapid iteration of technology requires users to continuously update their devices to maintain compatibility, which poses a significant challenge for those with limited economic means. Lastly, the construction and maintenance of mobile communication networks demand substantial infrastructure investment, which is particularly difficult in economically underdeveloped regions. As a result, even with the technology in place, actual accessibility may be severely compromised.

In summary, the limitations of hardware systems and the illusion of access rights make the realization of other digital rights, which are based on access rights, a matter of anticipation rather than reality. In the digital age, the harm caused by the illusion of access rights directly affects people's activities such as travel, shopping, accommodation, education, and labor, thereby creating a digital dilemma for the realization of human rights centered on the right to subsistence and the right to development. Thus, adhering to the concept of digital inclusion enables human rights protection to adapt to the needs of digital transformation. Also, it strengthens the foundation of digital human rights and overcomes the dilemma of digital protection of human rights.

B. Digital competency gaps and the widening digital divide

Digital competency covers a broad range of abilities, including technical

19 Emily A. Vogels, "Digital divide persists even as Americans with lower incomes make gains in tech adoption", accessed June 10, 2024, <https://www.pewresearch.org/short-reads/2021/06/22/digital-divide-persists-even-as-americans-with-lower-incomes-make-gains-in-tech-adoption/>.

operation, information management, communication, collaboration, creativity, critical thinking, and problem-solving. These skills range from basic usage abilities to advanced programming applications. Currently, the issue of digital competency gaps is primarily manifested in two aspects. The first aspect is overall digital competency gap in specific countries or regions. Research indicates that fewer than half of the countries in the world are able to keep pace with the development of digital technology.²⁰ The second aspect is individual digital competency gap. Many individuals still lack the ability to use smartphones and other smart devices, even when these devices are designed with clear voice prompts or graphical interfaces. Additionally, “digitally disadvantaged populations” face difficulties in accessing and using digital technologies. Even when they do have access, their lack of sufficient skills prevents them from fully utilizing these technologies to participate in modern social life. In the digital age, the digital divide is gradually widening due to the combined effects of digital competency gaps and other factors of social inequality. The expansion of the digital divide is mainly manifested in four aspects: (1) Low-income countries, regions, or groups, due to differences in economic income, are unable to achieve digital access or cannot afford the costs for digital access. (2) Data traffic and benefits are concentrated among a few participants. Developing countries, regions, and individuals often serve merely as providers of raw data while having to pay exorbitant service fees for data services. (3) Wealth generated by digital innovation is highly unequal, dominated by a few large platforms or countries. The digital innovation gap has become significantly more pronounced. (4) While digital technology brings rapid increases in productivity and value, investments in technology are not directed toward public education and infrastructure. The rapid development of digital technology has not promoted shared prosperity. Instead, digital economic power is accelerating its concentration among a smaller number of elite individuals and companies.

In summary, the lack of digital competency and the widening digital divide lead to the alienation of human rights values centered on security, dignity, and equality and exacerbate existing social inequalities in human rights protection due to the integration of digital factors. This, in turn, creates a digital dilemma for the realization of human rights centered on the right to subsistence and the right to development. Therefore, adhering to the concept of digital inclusion can both adapt human rights protection to the developmental requirements of the digital age and advance the substantive progress of digital protection of human rights, overcoming the dilemmas associated with the digital protection of human rights.

C. Low empowerment and inefficient digital effectiveness

20 UN Policy Brief: *Global Digital Compact* — an Open, Free and Secure Digital Future for All, see UN website, accessed June 10, 2024, <https://www.un.org/sites/un2.un.org/files/our-common-agenda-policy-brief-gobal-digi-compact-zh.pdf>.

Simply possessing hardware facilities and corresponding digital competency does not automatically translate into increased economic income or improved quality of life. While digital technology brings convenience to consumers and users, true digital empowerment has yet to be realized.

At the individual level, despite the opportunities for accessing advanced technologies provided by digital transformation for social members, most individuals have not been able to convert the application of these technologies into substantive economic empowerment. This kind of disconnection between technological application and economic empowerment limits the potential of individuals as innovative agents and invisibly exacerbates socio-economic stratification. For example, in the ride-hailing industry and e-commerce, digital technology has brought great convenience to consumers but has also had a disruptive impact on traditional industries. Individuals who fail to adapt to this shift face the risk of being eliminated from the market. Although digital platforms offer numerous new channels for employment and learning, insufficient digital empowerment, especially in areas such as digital decision-making support, market analysis, and entrepreneurial capabilities, severely restricts individuals' ability to obtain actual economic returns from digital dividends. If this situation persists, the digitally disadvantaged populations may be further marginalized, thereby exacerbating social inequality. On a global scale, the uneven development of the global economy and the existence of the digital divide have led to increased global injustice and human rights violations. The varying speeds and degrees of socio-economic development across the globe result in different positions of countries and regions within the global production chain. High-value-added production links are often concentrated in a few developed countries, while other countries are often limited to providing cheap resources and labor. Digital technology empowerment has not fundamentally changed this reality but has instead further exacerbated inequality. Digital technology has accelerated the concentration of economic power among a smaller number of elite individuals and companies, with the top 1% of income earners holding 38% of global wealth.

The low level of digital empowerment results in inefficient digital effectiveness, which is mainly reflected in three aspects: (1) Some users still struggle to access basic information. Digital technology has significantly lowered the barriers to using related software and hardware (i.e. Smartphones and other intelligent devices are equipped with the capability to transcribe speech into text and can read out text content, thereby providing illiterate users with a direct means to comprehend written information.), while major companies have also been promoting user-friendly design solutions with graphical interfaces to further simplify the use of technology. However, a large number of users are still unable to conduct the most basic information searches on the internet. (2) Difficulty exists in obtaining authentic and valuable information. Since the 1990s, the internet has undergone revolutionary changes. Initially, it was seen as an ideal platform for promoting information sharing and

equality, hailed as a tool for individual empowerment. However, after three decades of rapid development, the internet and its platforms have gradually become a new cause of social inequality. From the perspective of digital competency and digital literacy, the explosive growth of internet content often leaves users in a state of information overload. Among the vast amount of information available, truly valuable content often constitutes only a small fraction. This is particularly evident in internet advertising, where paid advertisements often dominate the top results when searching for information on education, healthcare, or employment, making it difficult for users to access genuinely useful content. (3) Digital technology empowerment has not been universalized, is not complete, and is insufficient. The lack of universalization of digital technology empowerment is mainly reflected in the uneven, intermittent, and incomplete access to, connection with, continuous updating of, and widespread application of digital technologies. The incompleteness of digital technology empowerment is primarily seen in the failure of individuals and communities to use Information and Communication Technology (ICT) to overcome barriers to information access, fully and effectively participate in socio-economic development, and obtain relevant information and benefits. The insufficiency of digital technology empowerment is mainly characterized by the failure of digitally disadvantaged populations to truly integrate into society, the lack of equalization of digital public services, the persistence of digital exclusion, and the failure to achieve social inclusion.

In summary, the low level of technology empowerment and the inefficiency of digital effectiveness prevent the protection and realization of human rights from keeping pace with the technological demands of the digital age. Also, they pose technological barriers and obstacles to social justice in the digital protection of human rights. This, in turn, creates a digital dilemma for the realization of human rights centered on the right to subsistence and the right to development. Thus, adhering to the concept of digital inclusion can both liberate digital technology empowerment from technological constraints and enable the digital protection of human rights to contribute to the realization of social justice.

D. Frequent digital infringements and compromised digital rights

In the digital society, not only do individuals possess the dual attributes of “biological humans” and “information humans,” but their activities and behaviors also exhibit “digital” characteristics. Correspondingly, human rights have acquired “digital attributes,” and violations of human rights have taken on “digital manifestations.” This includes the digitalization of privacy rights, personality rights (such as the right to be informed about data, the right to be forgotten, the right to data rectification, and the right to data erasure), and property rights (such as the right to data collection, the right to data portability, the right to use data, and the right to benefit from data). Violations range from breaches of data privacy to infringements of data personality rights and data property rights. On the one hand, digitalization enables people to fully enjoy the

convenience brought by digital empowerment and to reap substantial data dividends. On the other hand, it also poses new and severe challenges to the right to subsistence and the right to development. Digital infringements have not decreased despite the digital technology empowerment; on the contrary, they have emerged as more frequent, and digital rights have been compromised. Compromised digital rights are manifested in the following three aspects: (1) In the digital age, privacy violations occur frequently and have long-lasting impacts. This is because once information is posted online, it leaves a permanent trace. Even if it is deleted from the user's end, the data still remains on network servers and with service providers, making it difficult to control the circulation of copies or prevent the information from being transferred to other databases.²¹ (2) In the digital age, the abuse of freedom of speech, including the dissemination of extremist, hateful, discriminatory, and violent rhetoric, is more likely to occur and has far-reaching consequences. This is because the internet, big data, and artificial intelligence, while facilitating technological development and digital transformation, also bring destructive technological power to the digital environment, posing significant risks and challenges to the human rights protection.²² (3) In the digital age, algorithms, as the core technology of artificial intelligence, have been rapidly and extensively embedded into human production and daily life. While bringing great convenience to humanity, they have also triggered a series of infringement risks. On the one hand, algorithms mitigate information overload but simultaneously manipulate people's rights to free choice, autonomous decision-making, and self-determination. On the other hand, while algorithms gradually permeate or replace certain forms of power, avoid repetitive labor, and enhance efficiency, they also create issues such as "algorithm black boxes," "algorithmic price discrimination," and "algorithmic discrimination." Furthermore, while algorithms empower technological innovation, self-directed learning, and social governance, they also give rise to risks associated with the right to life and health, freedom of thought and behavior, equal access to education and employment as well as equal remuneration for work, property security, as well as national and social safety.²³

In conclusion, digital infringements occur frequently, and digital rights are compromised, putting the protection and realization of human rights in a passive situation. Also, they make it difficult for the digital protection of human rights to withstand the significant risks brought about by digital infringements. This, in turn, creates a digital dilemma for the realization of human rights centered on the right to subsistence and the right to development. Consequently, adhering to the concept of digital inclusion can make the human rights protection more effective and put the digital protection of human rights on the right track.

²¹ Ibid.

²² Yang Xueke, "The Fourth Generation of Human Rights: The General Outline of Digital Rights in the Digital Era," *Journal of Shandong University of Science and Technology (Social Sciences)* 2 (2022): 15.

²³ Zheng Ge, "Algorithm of Law and Law of Algorithm," *China Law Review* 2 (2018): 72; Ding Xiaodong, "On the Legal Regulation of Algorithms," *Social Sciences in China* 12 (2020): 138-159.

III. The Ideal Orientation of Advancing Digital Protection of Human Rights through Digital Inclusion

Human rights originate from the interpretation of the models of existence of the subject.²⁴ In the digital age, the fact that subjects are associated with digital interests may restrict and influence the ways of human existence and development. Faced with digital technology, whether the subject is a conscious, self-determined, moral, and humane existence, or an unconscious, manipulated, immoral, and inhumane existence, directly determines our judgment of the nature of human rights and the determination of human rights protection strategies. The debate over digital human rights in the domestic academic community is essentially a dispute over the attributes of human rights subjects. Meanwhile, the protection of digital human rights or the digital protection of human rights depends on the value presuppositions and practical concerns of the state and society for the human rights subjects' personal dignity, value of equality, and social justice. It serves also as the factual basis for judging the nature of human rights and determining human rights protection strategies. We believe that in the digital age, the internet, digital technology, and artificial intelligence remain intelligent products of human technological development and remain objects relative to the status of human subjects. Digital technology may benefit humanity, but it may also bring harm. Therefore, whether the concept of digital human rights is formally recognized becomes secondary. The essential focus lies in adapting to digital societal development by continuously fulfilling fundamental human needs for existence, ethical requirements, and rational demands. This requires upholding human rights protection that serves and satisfies the realization of personality, dignity, and value of equality, with digital inclusion strategies being the pivotal approach.

The ideal orientation of advancing human rights protection through digital inclusion is based on the essential attributes of human rights, adapted to the developmental trends of human rights protection in the digital age, and constructed as a macro strategy in response to the current practical difficulties of digital inclusion in human rights protection. According to the *Global Digital Compact*, promoting digital cooperation requires a shared vision, which provides digital public services for forcibly displaced persons, gradually narrows the digital divide and advances the achievement of the 17 Sustainable Development Goals (SDGs).²⁵ All the SDGs related to digital cooperation are

24 Gao Lijie, "Hermeneutic Thinking on the Subject of Human Rights: Four Perspectives," *The Journal of Human Rights* 2 (2021): 186-198.

25 The 17 global digital cooperation and sustainable development goals outlined in the *Global Digital Compact* are as follows: (1) Digital Empowerment of Social Security to End Poverty; (2) Digital Empowerment of Agriculture to Achieve Zero Hunger; (3) Digital Empowerment of Healthcare to Ensure Good Health and Well-being; (4) Digital Empowerment of Quality Education; (5) Digital Promotion of Gender Equality; (6) Digital Empowerment of Water and Sanitation; (7) Digital Empowerment of Affordable and Clean Energy; (8) Digital Empowerment of Decent Work and Economic Growth; (9) Digital Empowerment of Industry, Innovation, and Infrastructure; (10) Digital Promotion of Inequality Reduction; (11) Digital Empowerment of Sustainable Cities and Communities; (12) Digital Promotion of

closely aligned with the core concept of digital inclusion. Specifically, Goals 1, 4, 8, 9, 10, 11, 16, and 17 directly focus on services related to digital inclusion. Consequently, in addressing the prominent issues of digital inclusion in advancing the digital protection of human rights and in conjunction with the SDGs for digital cooperation promoted by the *Global Digital Compact*, the ideal orientation of digital inclusion in human rights protection specifically includes five aspects.

A. Digital inclusion should ensure barrier-free use of information technology and strengthen the foundation for digital protection of human rights

This is both a prerequisite for achieving digital inclusion and a foundational step in institutionalizing the digital protection of human rights. From a domestic perspective, governments at all levels should base their efforts on the universal needs of citizens in the era of big data, the internet, and artificial intelligence for digital technology, knowledge, and capabilities. They should build a comprehensive digital technology network system that covers the entire nation and all its people, rather than simply ensuring that everyone possesses a computer or a smartphone. On the other hand, governments should strive to adapt to the complex living environment brought about by the digital age, including the renewal of digital devices, the upgrading of digital technologies, and the changes in the forms of social interaction media. By improving public service facilities and optimizing the level of public services, they can ensure that people in remote areas fully enjoy the digital dividends.

From a global perspective, digital public infrastructure must be open, inclusive, secure, and interoperable. In line with this goal, the United Nations High Commissioner for Refugees has proposed “providing digital public services for forcibly displaced persons.” By establishing an accessible entry point, these groups can safely access humanitarian services and work with host communities and governments to ensure that forcibly displaced persons are included in the development and implementation of digital public services. To advance the digital protection of human rights through digital inclusion, the principles of non-restriction of digital subjects unless illegal and non-deprivation of digital access rights should be upheld to consolidate the foundation for the digital protection of human rights.

B. Digital inclusion should ensure widespread participation of social actors and expand the scope of digital protection of human rights

This is both a core element of promoting digital inclusion and a necessary form of advancing the digital protection of human rights. From a domestic perspective, the core content of digital inclusion is to enable people to enhance their health and well-being through digital technology, obtain digital learning and service opportunities, manage personal affairs appropriately through digital

Responsible Consumption and Production; (13) Digital Empowerment of Climate Action; (14) Digital Empowerment of Life Below Water; (15) Digital Empowerment of Life on Land; (16) Digital Empowerment of Peace, Justice, and Strong Institutions; (17) Partnerships to Achieve the Goals.

means, and connect with family, friends, and the outside world, thereby expanding the breadth of citizens' digital participation. On the other hand, digital inclusion is a necessary means of human rights protection in the digital age. Governments, platforms, citizens, and other actors should adhere to the principles of being people-centered, universally empowering, collaboratively building, and diversely sharing. By actively promoting the development of digital technology to foster human development, strengthening the human rights protection function of digital technology, and advancing regional, international, local, group, and individual cooperation between digital technology and human rights protection, the quality of human rights protection can be gradually improved.

From a global perspective, efforts should be made worldwide to enhance digital learning and skills, with targeted efforts for women, children, and young people, so that everyone can fully take advantage of the opportunities brought by connectivity. A people-centered approach should be adopted to promote digital transformation, ensuring that all members of society have the skills and opportunities to use digital technology and create value from it. To advance the digital protection of human rights through digital inclusion, the principle that digital subjects can freely participate unless explicitly prohibited by law should be upheld, thereby expanding the scope of digital protection of human rights.

C. Digital inclusion should ensure inclusive services for diverse social groups and deepen the content of digital protection of human rights

This is both a key aspect of deepening digital inclusion and a strategic measure for advancing the digital protection of human rights. From a domestic perspective, the following steps should be taken: First, breaking down social barriers. It is essential to overcome social barriers arising from gender, age, race, social status, and geographical regions to achieve a digital inclusion policy that ensures equal opportunities for everyone. Second, implementing a dual-track governance approach for digital inclusion. The state should take a top-down approach to formulate plans, policies, and laws for digital inclusion to optimize the allocation of information and digital infrastructure, and to ensure the training and proper placement of digital human capital. Reversely, digital inclusion should be promoted and implemented starting from the grassroots level, such as neighborhood committees, village committees, and communities. Third, starting from the real digital interests in the digital age, reflecting the demands of the majority of social actors. Digital inclusion should be implemented in a phased and step-by-step manner and steadily advance the digital protection of human rights.

From a global perspective, first, it is essential to construct infrastructure that is accessible, operable, high-quality, and sustainable, and to achieve inclusive, affordable, and secure coverage of digital technology. Concurrently, every individual should be equipped with the capabilities and skills to fully and safely utilize connectivity. Second, public digital learning opportunities should be further expanded to ensure that teachers, learners, and families in both rural

and urban communities have access to free and open educational resources.²⁶ To advance the digital protection of human rights through digital inclusion, it is imperative to embrace the principles that every digital subject should participate, digital industries and groups should develop in a coordinated manner, and digital rights should be shared by society. These principles will deepen the content of the digital protection of human rights.

D. Digital inclusion should ensure the gradual elimination of the digital divide and promote the equal realization of digital protection of human rights

This is both a key measure to deepen digital inclusion and a breakthrough in advancing the digital protection of human rights. From a domestic perspective, it is essential to start from the reality of the existing digital divide. Targeted digital inclusion measures should be taken to gradually narrow and eliminate the digital divide, which includes addressing the gaps in ICT hardware access, differences in ICT literacy, disparities in the use of information resources and knowledge, as well as the divides caused by social differentiation, social exclusion, and social inequality. Furthermore, based on the factors that shape the digital divide, such as geography, gender, age, education, employment, and income, it is crucial to actively create an environment where digital rights can be realized equally. Laws and regulations should be put in place to mitigate the risks exacerbated by the digital divide for individuals and groups. Targeted digital inclusion measures should be implemented to gradually narrow and finally eliminate the digital divide. Besides, considering the actual impact of the existence and exacerbation of the digital divide on realizing and protecting of human rights in the digital age, and taking into account the maintenance of personal dignity and the need for the right to subsistence and development, targeted digital inclusion measures should be taken to gradually advance the digital protection of human rights.

From a global perspective, countries and regions around the world need to take coordinated action to connect the 3.7 billion people who are currently offline. Through public policy interventions and targeted financial investments, this can be achieved by ensuring affordable and reliable broadband access coupled with mobile device availability. Ensuring digital public goods and mobile payment applications are accessible to all members of society enables universal access to financial and other services, benefiting both visible and invisible digitally disadvantaged populations. On the other hand, the availability of the internet should be leveraged to create more employment opportunities, decent work, and inclusive economic growth for all members of society, especially for the digitally disadvantaged populations. To advance the digital protection of human rights through digital inclusion, the principle of “no digital, no human rights” should be upheld to promote the equal realization of digital

26 UN Policy Brief: *Global Digital Compact* — an Open, Free and Secure Digital Future for All, see UN Website, accessed June 10, 2024, <https://www.un.org/sites/un2.un.org/files/our-common-agenda-policy-brief-gobal-digi-compact-zh.pdf>.

protection of human rights.

E. Digital inclusion should ensure an all-around improvement in citizens' digital literacy and capabilities, thereby enhancing the effectiveness of digital protection of human rights

This is both the ultimate goal of deepening digital inclusion and the value orientation for advancing the digital protection of human rights. From a domestic perspective, it is essential to fully recognize the role of technological development in promoting and leading human rights protection. Efforts should be made to strengthen the cultivation of digital technology knowledge, digital competencies, and digital literacy. Through digital inclusion, the all-around improvement of citizens' digital literacy and capabilities should be promoted. On the other hand, it is necessary to rationally view the changes in people's basic ways of survival and development in the digital age and their impact on human rights. An objective analysis of the potential harm that technological development may cause to human rights should be conducted. Awareness of risk prevention in the digital age should be enhanced, and the capacity to respond to risks should be improved. Concepts of digital ethics and digital security should also be established.

From a global perspective, countries should provide and ensure high-quality digital technology education and build connectivity that is accessible and affordable, enabling young people to use open, free, and high-quality digital competency and training platforms. Smart digital platforms can be provided in local languages, and digital platforms can be used to align curricula with internationally recognized standards and certifications. On the other hand, partnerships among governments, the private sector, and civil society should be leveraged to use digital tools to provide solutions for the development of all SDGs. To advance the digital protection of human rights through digital inclusion, the principles of universal enhancement of digital literacy and capabilities and the promotion of all-around human freedom and development should be upheld to enhance the effectiveness of digital protection of human rights.

IV. Measures to Advance Digital Protection of Human Rights through Digital Inclusion

In the digital age, the human rights protection faces objective challenges such as the lack of digital technology hardware, the digital application gap, algorithmic manipulation, and the absence of digital ethics norms. It also confronts subjective difficulties including divergences in digital philosophies, barriers to action by stakeholders, and low levels of digital literacy and capability. Meanwhile, it is also confronted with the lack of digital rights elements such as the rights to digital access, usage, benefit, and ownership, the difficulty in identifying digital personality rights, property rights, and intellectual property rights, and the unclear responsibilities for digital

infringement and digital regulatory oversight.

Human rights in the digital age, compared to traditional human rights, exhibit four major characteristics: First, the connotation and content of human rights are embedded with digital technology factors. On the one hand, the rise of global digital rights legislation is gradually elevating human rights to the level of constitutional fundamental rights, endowing the connotation and content of human rights with digital attributes. On the other hand, digital infrastructure services emerge as institutional constraints on human rights centered on the right to subsistence and the right to development. Digital technologies and applications such as the internet, big data, cloud computing, artificial intelligence, the Internet of Things, and blockchain have a significant impact on people's production and daily life. Second, the realization of human rights has become necessarily dependent on digital technology. In the digital age, the realization of human rights is inseparable from the application of digital technology. From the perspective of the value basis for the realization of human rights, traditional human rights are based on values such as security, dignity, and equality. In the digital age, the realization of human rights requires the world to create an open, free, and secure digital future for everyone. Also, it needs digital human rights to be based on universal human rights, outline a common vision for digital cooperation, and promote the sustainable development of digital society. From the factual perspective of the realization of human rights, which is centered on the right to subsistence and the right to development, the realization of these rights in the digital age relies on not only digital information technology platforms such as the internet, big data, and artificial intelligence but also on the empowerment of different human rights subjects through digital technology and the realization of specific rights such as the right to internet access, the right to data access, the right to data rectification, and the right to data erasure. Third, the forms of human rights violations are facing digital challenges. The threats to and protection of human rights in the digital age are confronted with entirely new challenges of the times. The most prominent manifestations are the mechanization, "objectification," normalization, and widespread nature of violations.²⁷ The mechanization of violations gives digital infringements the characteristics of being manipulated by algorithms, automated decision-making, persistent harm, and difficulty in relief and accountability. The "objectification" of violations allows digital infringements to exploit the objectivity and neutrality of digital technology to mask the subjectivity and discrimination of algorithm designers, leading to frequent factual violations that are difficult to remedy. The "normalization" of violations puts individuals in a situation where they enjoy the benefits of technological progress and digital empowerment but have to endure frequent digital violations and weak human rights protection. The widespread nature of violations means that digital infringements extend to traditional human

27 Ma Changshan, "'The Fourth Generation of Human Rights' under the Background of Smart Society and Its Protection," *China Legal Science* 5 (2019): 6-8.

rights areas while also covering the interests and models of traditional human rights protection in terms of infringement methods. Fourth, human rights protection must rely on digital means. Human rights protection in the digital age transcends the traditional models of human rights protection, including the negative model where individuals defend against public power violations, the positive model where individuals request protection from national governments, and the collective model where ethnic groups jointly safeguard their language, autonomy, environment, and development. Instead, it typically adopts a digital protection model where individuals, enterprises, and governments confront and deeply collaborate with each other.

Hence, to advance the digital protection of human rights through the strategy of digital inclusion, it is necessary to confront the practical difficulties of promoting digital inclusion for human rights protection. Meanwhile, it is essential to adhere to the concept of digital inclusion, using the right to subsistence as the benchmark and the right to development as the value orientation. By promoting a people-centered digital transformation, we can achieve universal, differential, and enhanced protection of human rights.

A. Promoting universal protection of digital inclusion based on the right to subsistence

The rapid development of science and technology has injected fundamental momentum into the progress of human society and the development of human rights cause. The degree of human rights protection has also become a basic indicator of the level of human social development. Based on the specific legal principles of human rights, a system of human rights norms has been formed in the constitution and various branches of law, including the right to subsistence, the right to development, property rights, citizenship rights, and freedom rights. Based on the general legal principles of human rights, a system of basic human rights principles has been established in the constitution and various branches of law, such as the principle of popular sovereignty, equality before the law, the state's respect for and protection of human rights, the principle of legality of crimes and punishments, and the freedom of contract. Based on the universal legal principles of human rights, the principle of "human dignity" has been established as a fundamental, moral, and rational basis for human rights.²⁸ Thus, based on the complex and multifaceted human rights system, human rights protection in the digital age must, on the one hand, be grounded in the universal principles of human rights, respecting the necessity of human nature, morality, and rationality. On the other hand, it must be based on the digital demands of the right to subsistence and the right to development. Thus, to advance and realize the digital protection of human rights through digital inclusion, the first step is to adopt the right to subsistence as a benchmark to promote universal digital inclusion, achieving holistic, inclusive, omnidirectional, multilayered, and

28 Li Buyun, "On the Origin of Human Rights," *Tribune of Political Science and Law* 2 (2004): 10-18; Liu Zhiqiang, "On the Three Kinds of Fali in Human Rights Law," *Law and Social Development* 6 (2019): 52-65.

sustainable digital protection of human rights for the entire society and all groups. Here, the right to subsistence enjoyed by citizens serves as the value standard and demand orientation for the digital protection of human rights, while the rights to digital access, participation, utilization, benefit, and protection from infringement constitute the specific content of protection. In a positive sense, the goal of digital inclusion is to ensure that digital rights are extended to every individual, social organization, nation, region, and group. In a negative sense, digital inclusion should prevent any individual or organization from having their right to subsistence restricted or deprived due to obstacles in digital access, participation, utilization, or benefit, or due to digital infringements. The measures to advance universal protection of human rights through digital inclusion mainly include the following three aspects.

1. States and governments must adhere to a people-centered approach to digital transformation. They should actively formulate feasible policies and laws to make human rights the foundation of an open, secure, and reliable digital future. Efforts should be made to narrow the digital divide between regions and groups, and eliminate gender and racial digital divides. These efforts ensure that everyone, especially digitally disadvantaged populations, can participate in internet platform activities in a meaningful and affordable manner. Additionally, digital literacy and cross-disciplinary skills training should be promoted to enhance individuals' digital competency and capabilities, enabling citizens to fully participate in the digital economy and benefit from inclusive digital opportunities.

2. Digital technology developers (enterprises) and digital platforms should maintain network neutrality, non-discriminatory traffic management, technical standards, infrastructure, and data interoperability, as well as the neutrality of platform devices. Meanwhile, they should protect individuals from digital surveillance, arbitrary algorithmic decisions, and loss of control over their labor.

3. Stronger cooperation among governments, industries, experts, and civil society organizations should be conducted. These entities should work together to develop and implement norms, guidelines, and principles for the responsible utilization of digital technology. Secure, reliable, and trustworthy digital network systems need to be built to effectively safeguard people's rights to digital existence and development.

In a word, advancing universal protection of human rights through digital inclusion essentially involves comprehensively safeguarding the digital access, usage, and benefit rights of individuals or groups. It aims to eliminate digital inequality and discrimination, free people from digital surveillance and manipulation, bridge the digital divide, and truly improve the basic living conditions of humans in the digital age through digital inclusion.

B. Promoting differential protection of digital inclusion based on the right to subsistence

The status of human rights or the realization of human rights possesses both universality, generality, and commonality, as well as specificity, individuality,

and differences. In the digital age, advancing universal protection of human rights through digital inclusion is primarily based on the universality, generality, and commonality of human rights status or realization. In contrast, advancing differential protection of human rights through digital inclusion is mainly based on the specificity, individuality, and differences in human rights status or realization. Here, the right to subsistence of citizens remains the value standard and demand orientation for the digital protection of human rights. Meanwhile, the rights to digital access, participation, utilization, benefit, and protection from infringement remain the specific contents of protection. By comparison, advancing differential protection through digital inclusion implies that, from a positive perspective, we should provide targeted digital protection of human rights based on individuals' specific needs, conditions, psychological states, spatiotemporal contexts, social strata, group characteristics, gender, and age differences. From a negative perspective, digital inclusion should not allow any individual or organization to have their right to subsistence restricted or deprived due to barriers in accessing, participating in, utilizing, or benefiting from digital technology, or due to digital infringements. The measures to advance differential protection of human rights through digital inclusion mainly include two aspects:

1. Digital enterprises should provide individuals with the capabilities and tools to manage and control their personal data, ensuring their freedom to choose to opt in or out of digital platforms, and to modify or delete incorrect information. These measures help to avoid infringements related to the collection and use of digital data. Digital regulatory bodies should actively fulfill their supervisory responsibilities to ensure that the use of digital technology is transparent, reliable, and secure, thereby preventing infringements related to digital surveillance and manipulation.

2. Digital enterprises should develop needs-adaptive digital products or services that meet the specific needs of different individuals and groups, based on their unique digital service requirements and the specific application scenarios of digital technology, so as to enhance the efficiency of digital services. Digital regulatory bodies should actively fulfill their supervisory responsibilities in areas such as digital policy, competition, taxation, consumer protection, online safety, data protection, as well as labor rights and interests, while ensuring that advanced digital technologies are aligned with fundamental human values and core ethics, thereby preventing digital technologies from violating ethical principles.

In a word, the differential protection of human rights through digital inclusion essentially respects the autonomy of individuals or groups in accessing and participating in digital platforms or activities. It meets the personalized service needs of individuals or groups, enhances the empowering effects of digital technology through digital inclusion, increases digital dividends, and fundamentally improves the basic living conditions of humans in the digital age.

C. Promoting the enhanced protection of digital inclusion with the right to

development as the guiding value

As Marx and Engels pointed out: “we must begin by stating the first premise of all human existence, and therefore of all history, the premise namely that men must be in a position to live in order to be able to “make history.” But life involves before everything else eating and drinking, a habitation, clothing and many other things. The first historical act is thus the production of the means to satisfy these needs, the production of material life itself.”²⁹ This statement reminds us that the human rights protection should start from the realistic material living conditions of human survival and development. In the digital age, digital technologies are embedded in both human rights and their protection, thus presenting distinctive digital characteristics. As a result, human rights protection must adapt to the basic requirements of the digital age. Compared with the universal protection and differential protection of human rights, the enhanced protection of human rights is mainly based on the right to development as the value standard and demand orientation. Specifically, two aspects are included. From a macro perspective, human rights protection in the digital age must first be based on the value and real needs of the right to subsistence of the subjects. However, it should not only be confined to this level. Digital empowerment must be universally inclusive as well as systematic, sufficient, and continuously enhanced.

Microscopically, human rights protection in the digital age must be based on the value and real needs of the individual’s right to development. Continuous progress should be made in accordance with the ideal pursuits and hierarchical positioning of individual development, and in combination with the field of digital technology empowerment, its potential energy, and expected outcomes. Therefore, to advance human rights protection through digital inclusion, it is necessary to simultaneously meet the dual needs of the continuous development of human material and spiritual civilization, and ultimately strive to promote the all-round human development. The measures to advance the enhanced protection of human rights through digital inclusion mainly include two aspects:

1. With material civilization as the value standard and demand orientation, and based on the realistic needs of human material development, we should advance the development of an open, free, and secure digital system based on universal human rights for the future, and achieve the SDGs. We should also improve the mechanisms and systems for digital protection of human rights, build specialized rights relief institutions and teams, and establish self-regulation mechanisms for enterprises and online platforms as well as industry self-discipline mechanisms, thereby laying the digital material foundation for the all-round human development.

2. With spiritual civilization as the value standard and demand orientation, and based on the realistic needs of human spiritual development, we should

²⁹ Central Compilation and Translation Bureau, *Selected Works of Marx and Engels (Vol. 1)* (Beijing: People’s Publishing House, 1995), 78-79.

advance the development of a people-centered digital system that is fair, just, and efficient, and achieve the SDGs. We should also innovate mechanisms and systems that can overcome the digital divide, data gap, and creation gap, and build a global governance system based on trust, cooperation, and mutual benefit, thereby laying the digital spiritual foundation for the all-round human development.

In summary, the enhancement of human rights protection through digital inclusion essentially involves respecting the creative spirit of individuals or groups and stimulating the rational, autonomous, conscious, and self-disciplined potential of human nature. Based on the universal and differential protection of human rights in the digital age, digital inclusion continuously improves the effectiveness of digital empowerment based on the material and spiritual needs of individual or group autonomous development, ultimately improving the living conditions and state of human subsistence and development in the digital age.

V. Conclusion

In the digital age, the widespread application of digital technology has led to issues such as the widening digital divide and inefficient digital empowerment, which consequently pose new challenges to the universal and equal protection of human rights. The core concept of digital inclusion aims to ensure that all members of society, especially marginalized groups (e.g., digitally excluded populations), can effectively access and utilize digital technology and fully enjoy the digital dividends. To this end, we need to address the issue of technology dissemination, improve citizens' digital literacy, and ensure that technological inclusion translates into actual economic and social empowerment. As digitalization becomes the new norm in modern life, the model of human rights protection also needs to be adjusted and innovated accordingly. Digital inclusion is not only about keeping pace with the rapid iteration of digital technology but is also committed to achieving broad social equity and inclusion. In the future, digital inclusion will remain the key to driving innovation in human rights practice and the improvement of protection models.

(Translated by *LI Donglin*)