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Study on the Legal Protection of the Right to a Digital Life for the Elderly

-- Taking Chongqing Yuzhong District as an Example

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Abstract

The protection of the rights and interests of the elderly in the process of digitization requires the construction of a synergistic framework of "law, technology and system". The study proposes the implementation of a "dynamic rationing" mechanism in the field of public services, mandating the retention of offline windows based on the proportion of elderly users, and the establishment of a flexible channel for the deployment of resources between online and offline, so that when digital channel resources are left vacant, they will be released to offline automatically, thus ensuring that the services can be accessed in real terms. The legal dimension advocates the establishment of new types of rights, such as the right to digital adaptation, through the Digital Inclusion Promotion Law, and the upgrading of the rules on offline service retention and the prohibition of mandatory face recognition, which were verified in local pilots, into national mandatory standards to provide a rigid basis for the defense of rights. Technological research and development should shift to a "rights-friendly" design paradigm, and implant self-limiting mechanisms in the underlying architecture of smart tools, such as closing non-essential data permissions by default and opening up age-adapted operating interfaces, in order to curb the exclusion of disadvantaged groups by technological alienation. Through legal empowerment to delimit the bottom line of service provision, technical ethics to constrain the logic of tool development, and institutional innovation to promote flexible resource allocation, a governance path that balances efficiency and dignity has been formed, providing a systematic solution for the aging society to cross the digital divide.

Keywords

Right to a Digital Life; Digital Inequality; Digitally Disadvantaged; Digital Human Rights.

1. Analysis of the Current Situation

1.1. Practical Characteristics of Digital Life Penetration

1.1.1. Policy Drivers and the Adaptation Dilemma

The national policy of promoting ageing-friendly transformation of public services has faced implementation bias in grass-roots practice. In the case of a tertiary hospital in Yuzhong District, for example, although the Special Action Program for Ageing Adaptation and Barrier-Free Transformation of Internet Applications explicitly calls for the retention of offline service channels, the actual operation of the digital service is dominated by elderly patients who are forced to repeatedly switch between online booking and manual windows due to operational barriers, creating the phenomenon of "surface compliance". --Hardware facilities are retained but the service process is tilted towards digitalization. Specifically manifested in two

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contradictions: First, ageing-appropriate transformation mostly stays in the enlargement of fonts and other surface optimization, not for the elderly cognitive characteristics of the reconstruction of the interaction logic; Second, the policy advocated the “dual-track parallel” by the efficiency-oriented squeeze, some hospitals through the reduction of manual windows, extend the queuing line in disguise to promote the migration of the online. The existence of such contradictions is sending an urgent signal to the standardization of service processes and the inclusiveness of resource allocation, which need to be bridged.

1.1.2. Limitations of Technology Application Scenarios

At the intersection of digital transformation and ageing-friendly transformation, the homogenization of functional iteration has become a key bottleneck restricting the deepening of technological benefits. Currently, the certified ageing-friendly apps generally focus on the optimization of obvious functions such as interface enlargement and voice broadcasting, but seldom reconstruct the interaction system based on the cognitive logic of the elderly. Take the health monitoring bracelet equipped in the pilot community in Yuzhong District as an example, although it carries a heart rate monitoring module, but due to the complex nesting of the operating interface layers, resulting in a high rate of 37% of mis-touching by elderly users, which in turn exacerbates the risk of distortion in the collection of health data. What's more, the physiological data collected by smart devices still lacks institutional safeguards in the definition of storage rights and the boundaries of commercial use. This phenomenon highlights the phased nature of technological ageing transformation - the improvement of convenience at the level of instrumental rationality has not yet formed a closed loop with the institutionalized protection of basic rights such as the right to privacy and the right to know.

1.2. Institutional Deficiencies in Legal Safeguards

1.2.1. Coverage Blind Spots in National Legislation

Existing legal frameworks face adaptability challenges in the area of safeguarding the digital rights and interests of the elderly. Specifically, the dynamic consent mechanism set out in the Personal Information Protection Law creates a structural tension with the cognitive characteristics of the elderly by presupposing that the user has the ability to continuously track the flow of data - research at medical institutions in Yuzhong District shows that 64% of elderly patients have difficulty understanding the terminology of privacy clauses, which leads to a passive authorization ratio of more than 80%. . At the same time, the data minimization principle of the Cybersecurity Law has not yet established exemptions for the elderly, and some institutions have expanded the scope of health information collection to avoid compliance risks, instead exacerbating the institutional blind spot of privacy protection. This phenomenon highlights the imbalance between the logic of universal legislation and the protection needs of special groups, and it is urgent to realize refined management through special judicial interpretation.

1.2.2. Local Policy Implementation Bias

The phenomenon of deflated implementation standards exists in the process of local elderly care policy implementation. Taking Chongqing Municipality's “Smart Elderly Implementation Program” as an example, the macro requirements of “building an ageing-friendly service system” lack detailed operational guidelines, leading to a tendency of instrumental rationality in grassroots practice. Specific performance: Yuzhong District, a community elderly service center's intelligent terminal completed hardware upgrades, but the operating interface follows the common government template, font adaptability and jump logic has not been optimized, resulting in elderly users still need to rely on manual assistance; at the same time, the flexible terms of the “retention of traditional services” has been alienated as a basis for the redistribution of service resources, and part of the hall through the compression of artificial

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windows, the addition of higher failure rate of self-service equipment, in essence, weakening the elderly groups. At the same time, the flexible provision of "retaining traditional services" has been alienated as a basis for redistributing service resources, and some government halls have substantially reduced the accessibility of services for the elderly by reducing the number of manual windows and installing more self-service equipment with higher failure rates. Such practical deviations reveal a structural mismatch between the appearance of technological empowerment and the core of user experience in policy implementation, and there is an urgent need for systematic calibration through the refinement of service standards and the institutionalization of operation and maintenance responsibilities.

2. Core Issues and Challenges

2.1. Loss of Synergy between Law and Technology

2.1.1. Intergenerational Rupture in the Rights System

The current legal framework shows insufficient institutional adaptation in the process of empowering older persons with digital technologies. Take the Law on the Protection of the Rights and Interests of the Elderly as an example, the institutional design of the "right to social participation" and the "right to culture and education" is still based on the paradigm of protecting the rights and interests of the elderly in the physical space, and it is difficult to cover new types of scenarios such as online registration and digital payment. Typically, the intelligent technology training courses at the Yuzhong District University for the Elderly are still based on basic operations, and there is a lack of targeted teaching modules for high-frequency digital service scenarios. The deeper contradiction lies in the fact that when elderly people suffer online property losses due to operational errors, there is a blind spot in the definition of the platform's duty of care under the current law - in judicial practice, compensation claims are mostly rejected on the grounds of "autonomous operational negligence" without systematically considering the objective limitations of the digital literacy of elderly users. Such phenomenon reveals the structural tension between the technology risk allocation mechanism and the protection of the rights and interests of special groups, and urgently needs to be adjusted through the updating of the legal interpretation method and the platform responsibility list system.

2.1.2. Technical Design Exclusion

The R&D and promotion of aging-adapted technology products face the structural contradiction of insufficient user cognitive adaptation. Take the Yuzhong District Smart Elderly App as an example, its main interface adopts flat design logic, with redundant functional entrances and low icon recognition, which, combined with the timeliness verification mechanism of key operations, leads to the majority of elderly users being forced to abandon the app due to navigation difficulties or operation timeout. The deeper problem lies in the adaptation deviation at the level of algorithmic design - although some platforms have launched an age-friendly version of the interface with enlarged fonts, they have nested high-interest financial pop-ups and push modules in the interaction process, creating a technical and ethical dilemma in which the commercial logic is out of balance with the risk prevention ability of elderly users. This kind of phenomenon reveals the systemic lack of age-friendly design specifications and algorithmic audit mechanisms, and it is urgent to build a development framework that gives equal importance to technology inclusion and rights protection through the standardization of interaction processes and the enhancement of algorithmic transparency.

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2.2. Imbalance in the Social Support System

2.2.1. Disconnected Educational Content

Community digital training services show a structural disconnect between the supply of knowledge and the demand for risk prevention. In Yuzhong District's "Silver Age Wisdom Classroom," for example, the curriculum system has long adhered to the paradigm of "basic operational training," focusing on shallow skills such as WeChat use and code-sweeping payment, but systematically avoiding core knowledge modules such as fraud prevention strategies and privacy protection, resulting in some trainees still being exposed to the risk of online fraud after graduation. Even more paradoxical is the fact that community cybersecurity publicity materials make extensive use of technical terms such as "data encryption" and "phishing sites," which creates a comprehension gap with the cognitive abilities of older groups. This kind of practice reflects the instrumental rationality dominated by the logic of operation in the field of technical education - the pursuit of surface coverage by reducing the difficulty of training, but ignoring the depth of the knowledge system and risk scenarios to adapt, it is urgent to reconfigure the curriculum and publicity discourse conversion, to build an education ecology of unity of knowledge and action.

2.2.2. Lack of Market Incentives

Ageing-friendly product innovation faces a structural mismatch of market incentives. Typical performance: although the smartphone for the elderly launched by an enterprise enlarges the buttons and simplifies the interface on the hardware side, the kernel of the operating system still follows the common architecture, and the pre-installed non-uninstallable applications are embedded with high-frequency pop-up modules, which results in the deterioration of the operation experience of the majority of users. This phenomenon reflects the gradient imbalance of the policy incentive system - the financial and tax subsidies for ageing-friendly renovation only cover part of the R&D costs and the application process is complicated, while educational products for young people enjoy a higher subsidy ratio and priority approval channels. The difference in incentives between the policy tools has led to a skewed allocation of innovation resources toward cash flow and a reduction of R&D investment by simplifying ageing-friendly renovation to a superficial adjustment of hardware. This kind of innovation path dependence urgently needs to be rebalanced through fiscal leverage and reconstructed through the certification system of ageing-friendly products, so as to form a systematic closed loop of benign interaction between technological innovation and market demand.

3. Solution Paths and Countermeasures

3.1. Legal Empowerment and Institutional Restructuring

3.1.1. Improvement of the Legal Rights System

The institutionalization of the protection of the digital rights and interests of the elderly needs to be realized through the improvement of the spectrum of rights at the legislative level. The key lies in incorporating the "right to digital life" into the revised framework of the Law on the Protection of the Rights and Interests of the Elderly, focusing on a three-dimensional system design: the right to digital access to guarantee the technical accessibility of public services, the right to digital denial to establish the veto limit for non-essential data collection, and the right to digital remedies to simplify the judicial remedial procedures. Typical cases such as the community access control system mandatory face information collection practice, due to the lack of legal "digital right of refusal" clear empowerment, the elderly groups are forced to "technical compliance" and "rights of autonomy" passive choice between. If legislation anchors the principle of "non-collection without necessity", it can systematically regulate the

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boundaries of technological applications and prioritize the protection of basic rights over the efficiency-oriented logic of technological governance. This kind of practice proves that the institutionalized construction of the rights spectrum is the core path to balance the technological empowerment and the protection of rights and interests.

3.1.2. Local Legislation First

In the absence of national legislation on ageing-friendly digital services, local legislative experimentation has become a necessary path to crack the governance gap. It is recommended that the Yuzhong District Aging-friendly Digital Services Management Regulations build a threefold institutional guarantee: first, to clarify the core requirements of aging-friendly transformation with statutory technical standards, and to constrain the substantive effectiveness of the digital transformation of public services through quantitative indicators such as interface simplification rate and advertisement shielding rate, so as to avoid the risk of formal transformation; second, to establish a dynamic offline service pocket mechanism, and to rigidly retain the proportion of offline service windows based on the aging degree of the community, so as to prevent the digitalization process from crowding out the service window. Second, establishing a dynamic offline service underwriting mechanism, rigidly retaining the proportion of offline service windows according to the degree of aging of the community, and preventing the digitization process from squeezing the basic rights and interests of the elderly groups; third, implementing a convenient procedure for tort remedies, breaking down the barriers to the rights of the elderly by relying on the special rights protection windows and the feedback system of filing a case within a limited period of time, and reinforcing the tilted protection of vulnerable groups. This type of legislation not only fills in the deficiencies of national laws that are not sufficiently operational through refined rules, but also provides a replicable model of governance for national legislation based on local practical experience, and realizes the organic connection between local innovations and central legislation.

3.2. Ethics of Technology and Social Synergy

3.2.1. Compulsory Ageing-Friendly Design Standards

There is an urgent need to break through the pitfalls of surface interface optimization and shift to the construction of a technological and ethical framework for technological ageing transformation. Currently, “pseudo age-friendly” designs are common in governmental applications, such as the elderly mode that enlarges the font icon but nests multiple layers of function entrances and imposes a time limit for operation, which essentially exacerbates digital exclusion of the elderly group. Legislation should establish three technical benchmarks: lengthening the time limit for operational response to eliminate interaction anxiety, compressing the layers of functional entrances to three levels to realize direct access to services, and blocking inducing commercial information across the board. At the same time, algorithmic ethical alienation should be regulated. For some platforms, in the name of simplifying the interface for the elderly and using behavioral data to push high-priced commodities in a targeted manner to carry out “precise harvesting”, algorithmic filing and review mechanisms should be established and fines should be imposed on a proportional basis in order to ensure that technological empowerment and ethical constraints evolve in tandem.

3.2.2. Two-Track Guarantee of Public Services

In the process of digitization, public services need to build a flexible mechanism to protect the substantive rights and interests of the elderly. Implement a “dynamic ratio system of service provision”, requiring institutions to dynamically adjust the number of offline windows according to the proportion of elderly users - when the proportion of elderly groups exceeds a threshold, it is mandatory to retain basic manual service channels to curb the risk of exclusion caused by excessive digitization. Simultaneously, a synergistic mechanism for online and offline

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resources is established, automatically releasing quotas to offline windows when digital platform resources are vacant, balancing service efficiency and fairness. This mechanism transforms policy principles into enforceable standards through quantitative indicators, restrains public service organizations from blindly relying on smart tools, and realizes the integration of traditional service underwriting and digital technology efficiency. The legal dimension needs to establish new types of rights, such as the right to digital adaptation, and incorporate provisions such as offline window retention and algorithmic rejection into the legislation to provide a rigid basis for the defense of rights. Technical research and development should implant self-limiting constraints, close non-essential data privileges by default, and open up age-adapted operation interfaces. Through legal empowerment to delineate the bottom line, technical ethics to constrain the logic of tools, and dynamic ratios to optimize resource allocation, a governance framework to crack the digital divide has been formed, and a balance between dignity and efficiency has been achieved in the areas of medical care, finance, and other areas of people's livelihoods.

4. Conclusion and Outlook

4.1. Core Findings

To safeguard the right of older persons to a digital life, it is necessary to build a synergistic framework of law, technology and society. At the legal level, legislation should clarify the attributes of the "right to digital life" and incorporate provisions such as retaining traditional services and prohibiting algorithmic discrimination into the Law on the Protection of Rights and Interests of the Elderly, so as to provide rigid support for actions to safeguard their rights - for example, elderly people in Yuzhong District have successfully boycotted property owners' mandatory face-swipe access control on the basis of local regulations. Compulsory face-swipe access control highlights the value of the law's shift from text to practice. The technical dimension must be implanted with ethical constraints. After hospitals implemented the dual-track system of "online booking + offline support", disputes over the registration of elderly people dropped significantly, proving that technical tools should be based on the premise of rights protection, and that digital exclusion should be eliminated through dynamic quota adjustment and age-adapted interface modification. Social synergy relies on the linkage of multiple subjects, and the community has formed volunteer teams to provide guidance on the operation of equipment for the elderly living alone and to fill the capacity gap. This trinity of institutional ecosystems not only avoids narrowing down ageing to technical training, but also prevents protective measures from solidifying the marginalized status of the elderly, ultimately pointing to the equal realization of citizenship rights in the digital age.

4.2. Future Directions

4.2.1. Legislative Breakthrough: From Local Pilot to National Action

The legislative practice of Yuzhong District provides an institutional model for cracking the governance of aging in the digital era. It is recommended that new types of rights such as "the right to digital adaptation" and "the right to algorithmic rejection" be incorporated into the national Digital Inclusion Promotion Law, and that the locally explored mechanism of "dynamic rationing of offline windows" be upgraded to a national standard, so as to curb the digitalization process. The mechanism of "dynamic rationing of offline windows" explored at the local level has been upgraded to a national standard, and it has been made mandatory for medical institutions and financial institutions to retain basic human service channels, so as to curb technological violence in the digitalization process. Translating local pilot experiences into national legislation can prevent ageing-friendly transformation from being reduced to policy advocacy, and establish a unified line of defense for digital inclusion for the elderly by setting

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rigid indicators such as window retention rates and cash payment options. This not only bridges regional institutional differences, but also transforms digital adaptation from moral advocacy to legal obligation, so that technologically disadvantaged groups can obtain stable and predictable institutional shelter, and realize the substantive balance between public service efficiency and humanistic care.

4.2.2. Technology Adaptation: Shifting from Instrumental Rationality to Value Rationality

Technology R&D needs to shift to a "rights-friendly" design path, embedding ethical constraints into the underlying logic of the product. In the case of Yuzhong District's "AI Voice Government Assistant", for example, its dialect-recognizing and other inclusive features allow elderly people to conduct high-frequency business without being forced to adapt to the technical logic. Such tools should be promoted through a mandatory system that requires companies to open aging-friendly interfaces and give users basic control rights such as blocking algorithmic recommendations and turning off data tracking. The current technology iteration often falls into the function superposition misunderstanding, excessive pursuit of recognition accuracy and other technical indicators, in fact, exacerbate the marginalization of vulnerable groups. Only by implanting self-limiting mechanisms in the development stage, such as turning off non-essential permissions by default and limiting the scope of data collection, so that digital tools naturally carry the attribute of rights protection, can we curb technological alienation and establish a sustainable balance between efficiency and dignity.

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