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The differentiation of advantages and fairness challenges of generative artificial Intelligence in the supply of grassroots public services

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ABSTRACT: *Emerging technologies represented by generative artificial intelligence are profoundly influencing the development of the economy and society. Grassroots public services, as a key link in promoting social stability and achieving modernization of national governance, are actively keeping up with the pace of economic and social development and applying generative artificial intelligence in all aspects of providing public services. Artificial intelligence has demonstrated potential in enhancing the efficiency and quality of government services, promoting departmental collaboration, and innovating social governance models, and has become a hot topic in academic research. Against this backdrop, this study aims to deeply explore the impact of artificial intelligence technology on the supply model, efficiency, and potential challenges of grassroots public services. To provide references for further optimizing service supply, responding to people's livelihood demands, and consolidating the foundation for common prosperity.*

KEYWORDS - *Fairness, Generative artificial intelligence, Grassroots public services*

I. INTRODUCTION

Public services are not only a direct manifestation of modern national governance capacity, but also a key link connecting government authority and social recognition. Their quality and form profoundly influence the legitimacy basis of social governance and the accumulation level of social capital.[1] The report of the 20th National Congress of the Communist Party of China clearly states, "We will improve the basic public service system, raise the level of public services, enhance their balance and accessibility, and steadily advance common prosperity."[2] Grassroots public services are the "nerve endings" of the national governance system, the most direct link between the government and the people, and run through the entire process of ensuring people's livelihood, maintaining social stability, and modernizing national governance. Improving the quality and efficiency of grassroots public services is the core path to responding to the people's demands for a better life and a key support for achieving the goal of common prosperity for all the people. By optimizing the supply of grassroots services, it is possible to more accurately meet the demands of people's livelihood and lay a solid foundation for promoting the modernization of common prosperity.

According to the "National Basic Public Service Standards (2023 Edition)", this article defines the scope of public services as nine categories: ensuring that children are well cared for, providing education for all, ensuring that workers earn a living, ensuring medical care for the sick, ensuring support for the elderly, ensuring housing for all, providing assistance to the weak, providing excellent military services, and cultural, sports and educational

activities. Grassroots public services are mainly concentrated in grassroots units such as communities and towns, with a relatively small service scope. They are closer to the daily lives of residents and pay more attention to local characteristics and the actual needs of residents.

In recent years, artificial intelligence technology has been accelerating its iteration and upgrading, and is gradually becoming a key area driving economic growth and technological competition among countries. Generative artificial intelligence refers to a fusion product of machine learning, neural networks and deep learning based on traditional single-reactive machines, which can deploy one model to train another in machine learning tasks.[3]

As an important component of economic and social development, grassroots public services are also gradually receiving the influence of artificial intelligence. The Fifth Plenary Session of the 19th Central Committee of the Communist Party of China emphasized that efforts should be made to strengthen the construction of a digital society and a digital government to enhance the digitalization and intelligence of public services and social governance. Therefore, the use of emerging information technology means such as artificial intelligence for assistance in the process of public service supply has become a development trend.

At present, the use of artificial intelligence to promote public services has become a research hotspot in the academic circle. The Fourth Industrial Revolution has brought about changes in the supply mode of local public services in China, especially the application of big data and artificial intelligence technologies, which has promoted the transformation of government forms from "physical space" to "digital space".[4] Big data and artificial intelligence can enhance the efficiency and quality of government services.[5] Through the study of "Internet + Government Services", the application of artificial intelligence in promoting collaborative cooperation among government departments was discovered.[6] By studying the role of government hotlines in promoting the innovation of social governance in megacities, outstanding achievements of artificial intelligence in enhancing the efficiency and effectiveness of social governance have been demonstrated.[7] In addition, some experts and scholars believe that the application of artificial intelligence in the public service sector may bring harm. For instance, Shen Fangjun holds that the most significant danger of generative artificial intelligence lies in the "Colin Ridge Dilemma", meaning that future risks are difficult to predict. By the time the technology matures to a predictable level, artificial intelligence will have its own development path.[8] Scholars such as Yao Zhiwei believe that the content generated by generative artificial intelligence poses risks to national security, public security and private rights and interests.[9] Zhao Zhouyang believes that the application of artificial intelligence in areas such as employment, social assistance and the judiciary poses a significant threat to the rights and interests of the people.[10] Whether scholars' attitudes towards artificial intelligence are positive or negative, the trend of artificial intelligence becoming a social hot topic and a cutting-edge trend in technological development is unstoppable. This article will further explore the impact of artificial intelligence on grassroots public services.

II. THE DEVELOPMENT PROCESS OF GRASSROOTS PUBLIC SERVICES

2.1 PHASE ONE: RAPID DEVELOPMENT PHASE

With the innovation of global government governance practices and the development of new public service theories, building a service-oriented government has become a new trend for governments of all countries. At this point, the principal contradiction in society is the conflict between the people's ever-growing material and cultural needs and the backward social production. Economic construction should be given priority, and the emphasis on development is the hard truth. Although remarkable achievements have been made in China's reform and opening up, it is still generally in the primary stage of socialism, and there is a gap in the level of productive forces compared with developed countries. However, with economic development and the improvement of people's living standards, the public's demand for material and cultural resources is constantly increasing, and so is the demand for public services. For instance, the government's capacity to supply public services is insufficient, including the imbalance of educational resources, limited coverage of medical security, and the imbalance between urban and rural development after infrastructure construction. With the first mention of the term "public

services" in the "Outline of the Tenth Five-Year Plan for National Economic and Social Development" released by the government in 2001, it was clearly stipulated that "public services" should be one of the four basic functions of the government, and the government's supply of basic public services was resumed, confirming that public services are one of the government's responsibilities.[11] In addition, it was proposed to create preliminary conditions for ensuring that everyone enjoys basic public services. In 2006, the "Decision of the Central Committee of the Communist Party of China on Some Major Issues Concerning the Construction of a Socialist Harmonious Society" pointed out that gradually forming a basic public service system that benefits all the people is an important part of "building a service-oriented government", marking that public services have risen from "supporting guarantees" to "national strategies". In 2008, the "Decision of the Central Committee of the Communist Party of China on Some Major Issues Concerning the Promotion of Rural Reform and Development" proposed to gradually establish a unified public service system for urban and rural areas. During this period, the public service sector developed rapidly. From being first proposed as a concept in national policies to being elevated to a national strategy, it demonstrated the country's emphasis and support for public services. A basic public service system covering both urban and rural areas and benefiting all citizens was initially established,[12] laying a foundation for subsequent deepening of reforms.

2.2 PHASE TWO: COMPREHENSIVE PROMOTION PHASE

In November 2012, the 18th National Congress of the Communist Party of China explicitly stated that "China has entered a decisive stage in building a moderately prosperous society in all respects", emphasizing "comprehensiveness", with the coverage of fields, populations and regions being comprehensive, and addressing the problems of unbalanced, uncoordinated and unbalanced development.[13] Driven by this policy goal, public services have undergone significant changes, ranging from ensuring basic needs to improving quality, from hierarchical advancement to systematic integration, and from government-led to multi-party governance.

In 2011, the "Outline of the 12th Five-Year Plan (2011-2015) for National Economic and Social Development of the People's Republic of China", abbreviated as the "12th Five-Year Plan", put forward the concept of equalization of basic public services. In 2012, the "12th Five-Year Plan for the National Basic Public Service System" for the first time clearly defined the national standards for basic public services, covering nine major fields including education, healthcare and social security, and proposed that the gap in service items, resource input and quality levels between urban and rural areas and regions should be gradually narrowed. In 2016, the "13th Five-Year Plan for Promoting Equalization of Basic Public Services" clearly defined the division of powers between the central and local governments, established a fiscal sharing mechanism, and shifted the provision of public services from a single government supply to a multi-party collaborative supply. In 2016, the "Internet + Government Services" initiative was launched, promoting the online processing of high-frequency matters such as social security and medical care. For instance, the national unified medical insurance information platform was completed in 2020, marking the beginning of introducing emerging technologies into the public service sector. Meanwhile, the 13th Five-Year Plan clearly defined "equalization of basic public services", promoted the equalization of basic public services, and proposed the overall direction of "inclusiveness, basic guarantee, equalization and sustainability" as the guiding document for the construction of the national basic public service system during the 13th Five-Year Plan period. In 2018, the "Guiding Opinions on Establishing and Improving the Standard System for Basic Public Services" constructed the overall framework of the basic public service standard system from four levels: national, industry, local and grassroots service institutions, promoting the transformation from equalization to "standardization" of basic public services. At this stage, public services have gradually become systematic and standardized, evolving from full coverage to high-quality full coverage. This has deepened the previous goals and laid a solid institutional foundation for high-quality development in the new era that follows.

2.3 PHASE THREE: THE STAGE OF TECHNOLOGICAL INNOVATION

Since the 18th National Congress of the Communist Party of China, artificial intelligence has been elevated to a national strategic height. In 2017, The State Council's "Next Generation Artificial Intelligence

Development Plan" clearly identified it as a "strategic technology leading the new round of scientific and technological revolution and industrial transformation". In 2019, the "Guiding Opinions on Promoting the Deep Integration of Artificial Intelligence and the Real Economy" was issued, promoting the in-depth application of AI in government services, healthcare, transportation and other fields. In 2021, artificial intelligence was included in the 14th Five-Year Plan, emphasizing the integration of "intelligence Plus" and public services. In 2014, the "Guiding Opinions on Deepening the Development of Smart Cities and Promoting the Digital Transformation of the Entire Urban Area" was issued, promoting the large-scale application of AI in smart cities and government services. In 2015, the "Report on the Work of the Government" proposed "Artificial Intelligence + Government Services", clearly stating that intelligent technologies should be used to optimize government service processes and enhance the efficiency of "one-stop online services". The application demand of artificial intelligence in public service fields such as government services and urban governance is becoming increasingly urgent.

III. THE REALISTIC PREDICAMENT OF GRASSROOTS PUBLIC SERVICES

3.1 THE COORDINATION ABILITY AMONG MULTIPLE SUBJECTS IS INSUFFICIENT

As early as in the "13th Five-Year Plan", it was proposed to transform the public service supply system, shifting from government supply to diversified supply. Encourage the participation of social forces. Multi-party participation is a core feature of social governance and also a basic requirement for the modernization of social governance with Chinese characteristics. With the development of society and the formation of the governance concept of multi-party collaborative governance at the grassroots level, the concept of multi-party participation has gradually become well-known to the public, but there are still some problems.

In the process of public service supply, grassroots governments still hold a dominant position, controlling the majority of social resources. There is a considerable administrative management inertia, which leads grassroots governments to easily underestimate or neglect the information resources provided by other social forces.[14] Furthermore, many social organizations have a single channel for raising funds. The proportion of social organizations that can raise social resources and have independent profit-making ability is not high. Coupled with the lack of interest motivation for enterprises to participate in public service supply, the willingness of social organizations to participate in public service supply is not strong.[15]

3.2 THE LEVEL OF INFORMATION CONSTRUCTION IS RELATIVELY LOW

The informatization construction of grassroots public services can effectively transform public service products into digital products, expand the marginal effect of grassroots public service products, and get rid of the predicament of idle resources.[16] At present, the application of modern new technologies in the public service sector is facing adaptation challenges, making it difficult to effectively enhance the smoothness of service supply. Meanwhile, the informatization construction of grassroots public services shows significant regional imbalance, with cities outperforming rural areas and the east leading the west, resulting in the supply channels still mainly relying on traditional methods. The shortage of professional talents further restricts the implementation of grassroots informatization construction. Coupled with the overall low informatization literacy and limited acceptance willingness of the audience, they jointly constitute practical obstacles to improving the informatization level of public services.

3.3 THE PUBLIC SERVICE FACILITIES ARE UNBALANCED

There are obvious regional differences in the financial support capacity for the construction of public service facilities in urban and rural areas. This has led to significant differences in the completeness of public service facilities in different regions. The improvement of service facilities such as home-based elderly care and preschool education in Northeast China and remote western areas lags significantly behind those in other regions. The improvement of public service facilities in rural areas is also generally behind that in urban areas, especially in the field of medical and health care. The main problems are the small number and incomplete functions of

institutions and organizations. Currently, the main place for rural residents to seek medical treatment is the township health center. There is a general lack of basic medical treatment, emergency rescue and telemedicine capabilities.[17] The operation and use of public service facilities cannot keep up with population mobility. In vast rural areas, there are widespread phenomena such as schools being left idle after their closure and merger, most rural libraries being neglected for years, and beds in some elderly care institutions remaining idle for a long time. How to effectively integrate these public service facilities and improve their utilization efficiency will undoubtedly become a key issue that needs to be emphasized and resolved in enhancing the level of public services.

3.4 THE AWARENESS OF GRASSROOTS SERVICE IS INSUFFICIENT

At present, there is still a considerable gap between the supply of community public services and the demands of community residents. Public services are mainly provided through a "top-down" mechanism, which supplies according to the preferences of higher-level departments. Residents lack channels to fully express their demands and participate in decision-making.[18] Therefore, public services cannot be provided reasonably and effectively based on the actual needs of residents. Even some grassroots governments use administrative means to force community service projects to become "image projects" and "visiting projects", while for the projects that residents urgently need to handle, they are too "small" to be solved in a timely manner. The supply and demand do not match, and there is a lack of basic service awareness.

IV. THE ADVANTAGES OF ARTIFICIAL INTELLIGENCE IN THE SUPPLY OF GRASSROOTS PUBLIC SERVICES

4.1 IMPROVE SERVICE EFFICIENCY AND RESPONSE SPEED

By introducing artificial intelligence into the field of government services, automatic approval without human intervention can be achieved. The originally complex and time-consuming approval process can now be completed instantly through algorithm comparison, greatly enhancing the efficiency of public services.[19] For instance, an intelligent customer service system can not only respond to users' questions in real time but also provide personalized feedback based on users' historical queries, thereby enhancing the flexibility of government departments in responding to public demands. For instance, "Jing Xiaozhi" in Beijing can answer public inquiries 24 hours a day, handle high-frequency issues such as social security inquiries and policy consultations, and reduce the pressure on manual customer service. During the approval process, generative AI can intelligently analyze application materials, generate approval suggestions, and make dynamic adjustments based on the latest policies to reduce deviations that may be caused by human intervention.

Artificial intelligence predicts the peak demand for public services and allocates resources in advance by analyzing historical data and real-time information. For instance, Shanghai's "One Network for All Management" system conducts real-time analysis of traffic flow data and dynamically adjusts the duration of traffic lights, reducing the peak congestion index by 15%. The rapid response capability of artificial intelligence greatly reduces the time cost of public services, and it handles problems flexibly, thereby enhancing efficiency.

Artificial intelligence breaks down information silos and enhances collaboration efficiency through cross-departmental collaboration. Integrate data from multiple departments, such as public security, civil affairs, and medical care platforms, to build a unified information platform and reduce residents' repetitive submission of materials and manual verification. For instance, Guangdong's "Yueshengshi" integrates over 500 government services, automatically associates user data through AI, enables "zero-trip" processing, and establishes a "One-Stop online service" platform.

4.2 REALIZE PRECISE AND PERSONALIZED SERVICES

Artificial intelligence can significantly enhance the precision and personalization of public services through data integration, algorithm optimization and dynamic feedback mechanisms. Breaking down information

silos, it aggregates massive public data from different departments, channels and formats, providing a panoramic view for in-depth understanding of the characteristics of service recipients, identifying potential needs and grasping the status of resources. Artificial intelligence builds a panoramic user profile by integrating structured and unstructured data. For instance, the smart elderly care platform in Hefei collects health data of the elderly (such as heart rate and gait) through wearable devices, combines questionnaires to obtain psychological needs, and forms personalized service recommendations.[20]

Artificial intelligence dynamically optimizes public services through reinforcement learning and adaptive adjustment, and iteratively upgrades based on user feedback. It can capture feedback information from multiple dimensions such as user satisfaction, service effect and operation process efficiency in real time. These feedbacks are promptly incorporated into the system, driving the immediate fine-tuning of the algorithm model and the dynamic optimization of the service strategy. This closed-loop mechanism of "perception - analysis - optimization - re-output" enables public services to respond nimbly to changes in social demands, updates in policy standards, and evolutions of individual demands.[21]

4.3 OPTIMIZE RESOURCE ALLOCATION

Artificial intelligence integrates multi-source data through systems, uses machine learning to accurately identify resource distribution bottlenecks and demand hotspots, builds dynamic optimization models to achieve cross-departmental resource scheduling, and optimizes resource allocation through data-driven decision-making. For instance, in public health emergencies, large models can also predict the trend of epidemic spread and assist decision-makers in formulating response strategies such as restricting personnel movement and allocating medical resources.[22] Shanghai has improved energy-saving efficiency by 20% through AI analysis of building energy consumption data and automatic adjustment of air conditioning and lighting systems. Shenzhen's "Government Procurement Cloud Platform" optimizes the bidding process by analyzing the qualifications and historical performance of suppliers through AI. Artificial intelligence can break through the temporal, spatial and information barriers of traditional governance, shift resource allocation from passive response to active prediction, and significantly enhance the efficiency of public services.

4.4 ENHANCE THE SCIENTIFIC NATURE OF DECISION-MAKING

By applying advanced technologies such as machine learning and deep learning, AI can process and analyze massive and complex data, revealing patterns and correlations that are difficult to discover with traditional methods. This greatly enhances the scientific basis and prediction accuracy of decision-making. The visualization and interpretation of decision-making basis and reasoning process effectively increase the credibility and acceptability of decisions. It has promoted the transformation of decision-making from experience-driven to data-driven and science-driven, and optimized the overall decision-making process. For instance, during the COVID-19 pandemic, the "empirical assimilation Prediction Model" predicted the virus transmission path by analyzing population mobility, climate, and social network data. It fully utilized big data and its technological means to grasp the essential laws of things, guiding decision-makers to shift from subjective qualitative decisions relying on intuition and experience to precise data analysis and quantitative decision-making. This will reduce the high degree of uncertainty in the analysis and judgment of the development trends of things.[23] In addition, artificial intelligence can also simulate different decision-making scenarios through machine learning algorithms and select the optimal path. For instance, Shanghai's "City Brain" has adjusted the timing of traffic lights in real time, reducing the peak congestion index by 15%.

V. THE DEFICIENCIES OF ARTIFICIAL INTELLIGENCE IN THE SUPPLY OF GRASSROOTS PUBLIC SERVICES

5.1 ALGORITHMIC BIAS AND FAIRNESS RISK

Algorithms are the fundamental units for artificial intelligence to process data, learn patterns, make predictions and optimize decisions. The emergence of algorithms such as generative models, deep learning and natural language processing has improved the accuracy of algorithms. Algorithmic bias is a significant technical

risk for artificial intelligence algorithm models, mainly divided into two sources: one is that the algorithm model itself has inherent defects related to bias; The second is that the limitations of developers' personal cognition and values are integrated into the model through development and design.[24] Algorithmic bias in artificial intelligence can significantly exacerbate fairness risks in the public service sector. When the training data of an algorithm contains historical discrimination or is unrepresentative, its decision-making will systematically exclude specific groups. For instance, in welfare eligibility reviews, predictive policing for public security, recruitment screenings or credit approvals, biased algorithms may wrongly deny vulnerable groups the opportunity to access key services or resources. This not only deprives individuals of the equal rights they should enjoy, but also solidifies and amplifies the existing unequal structure in society. Because algorithmic decisions are often regarded as "objective", their unfairness is more concealed and has a wide range of impacts, seriously eroding the inclusiveness of public services and the foundation of social trust.

5.2 FORMALISM AND INSTRUMENTAL ALIENATION

The wide application of artificial intelligence in government governance is giving rise to new formalistic tendencies. When technology itself is alienated into an assessment tool, the governance logic undergoes a fundamental shift: algorithm design mainly serves the traceability needs of higher-level management and the generation of data reports, rather than the actual governance needs at the grassroots level.[25] This leads to a dual alienation: First, the deployment of technology is superficial. Some departments take the application of AI as the goal of showcasing political achievements, overly pursuing technical appearances such as the coverage rate of smart terminals, while neglecting the optimization of back-end processes and the improvement of actual efficiency, resulting in a "digital performance". Secondly, the logic of tools erodes public values. Rigid algorithmic indicators become rigid standards, forcing staff to be preoccupied with online traceability to complete data tasks, which instead weakens their ability to solve practical problems. Technology has thus been alienated from a service tool to a management purpose. This not only increases the burden on the grassroots due to repetitive reporting but also leads to a misallocation of public resources, continuously eroding the government's responsiveness and governance effectiveness, and ultimately damaging the foundation of social trust.

5.3 TECHNOLOGICAL RELIANCE AND WEAKENED GRASSROOTS CAPABILITIES

The popularization of artificial intelligence technology applications, while enhancing efficiency, also poses risks of intensifying technological reliance and weakening grassroots capabilities. The core mechanism lies in that when AI systems are deeply involved in decision-making and operational processes, the original space for knowledge acquisition, analysis and judgment, as well as practical operation of grassroots personnel is easily significantly compressed. Excessive reliance on artificial intelligence technology may lead to a decline in the autonomous decision-making ability of grassroots workers, and even result in the phenomenon of "technology replacing humans".[26] For instance, algorithm-driven decision support systems may simplify or even replace the independent analysis process of complex situations by grassroots personnel. If automated tools take over routine operation tasks, it directly reduces the opportunities for hands-on practice and experience accumulation. Grassroots personnel may overly rely on system output, and their ability to think proactively and solve problems independently gradually deteriorates. When facing abnormal, complex or sudden situations beyond the coverage of algorithms, their response capabilities and adaptability will be significantly insufficient, leading to damage to the overall resilience and innovation potential of grassroots public organizations.

VI. THE APPLICATION APPROACH TO MAXIMIZING THE ADVANTAGES AND MINIMIZING THE RISKS OF ARTIFICIAL INTELLIGENCE

6.1 TECHNICAL ASPECT: ALGORITHM TRANSPARENCY AND INTERPRETABILITY

The "Decision of the Central Committee of the Communist Party of China on Further Comprehensively Deepening Reform and Promoting Chinese-Style Modernization" adopted at the Third Plenary Session of the 20th Central Committee of the Communist Party of China clearly states, "We should accelerate the establishment of systems for determining the ownership of data property rights, market transactions, distribution of rights and interests, and protection of interests, enhance the capacity for data security governance and supervision, and

establish an efficient, convenient and secure cross-border data flow mechanism."[27] This points out the direction for the technological upgrade of empowering the modernization of public service governance with generative artificial intelligence technology.

Build a national-level intelligent computing power network. The national-level intelligent computing power network is the material foundation supporting the intelligent governance system. To achieve efficient allocation of computing power resources, advanced algorithm models and hardware facilities need to work together.[28] The imbalance of grassroots public infrastructure in our country includes computing power resources, showing a distribution feature of excess in the east and shortage in the west, which leads to obvious shortcomings in the practical application of artificial intelligence technology. Rationally allocate computing power resources, enhance the overall level of artificial intelligence technology, and provide a solid material foundation for the integration of artificial intelligence into public services.

The interpretability of an algorithm, as the technical foundation of algorithmic transparency, is defined as "the extent to which humans understand the reasons for decision-making".[29] The improvement of interpretability not only helps to reveal the internal logic of algorithmic decision-making and ensure the transparency of the algorithmic decision-making process, but also provides necessary information for regulators and users to supervise and evaluate algorithmic behavior. When problems or disputes arise in algorithmic decisions, interpretability enables us to trace the entire process of algorithmic decision-making, clarify the responsible party, and then take corresponding corrective measures. When building an algorithm supervision system, great importance should be attached to the construction of the explainability of algorithms. Through the dual efforts of technical means and policy regulations, the explainability level of algorithms should be continuously improved, so as to more effectively achieve the accountability of algorithms and promote the development of algorithm supervision in a more scientific, reasonable and efficient direction.[30]

6.2 RESPONSIBILITY LEVEL: ESTABLISH A RESPONSIBILITY SYSTEM WITH PEOPLE AS THE MAIN BODY

When widely applying artificial intelligence technology in grassroots public services, it is necessary to clearly define its responsibility boundaries, avoid over-reliance on models for decision-making intervention, and ensure service quality while improving service efficiency. On the one hand, staff members need to establish a sense of subjectivity, rationally utilize artificial intelligence as an auxiliary tool rather than replacing their own judgment, and avoid blind reliance. In grassroots governance, the demand for humanistic care pervages everywhere. It is necessary to avoid excessive worship of the output of technological results, enhance the value perception in the application process of digital and intelligent social workers, strengthen the degree of value rationality, pay more attention to social values such as personal beliefs, moral norms, and values, adhere to the humanistic thought, and implement the development concept centered on the people throughout the entire process and all aspects of grassroots governance.[31] On the other hand, the application of technology must take effectively addressing the needs of the people as its core goal and focus on reducing discrimination that may be caused by algorithmic bias. At the same time, it is necessary to guarantee the people's right to participate and express themselves in the decision-making process of public services, smooth the channels for their demand feedback, and ensure that their demands are heard and effectively responded to.

6.3 INSTITUTIONAL LEVEL: IMPROVE THE REGULATORY SYSTEM AND EVALUATION SYSTEM

Establishing a hierarchical and classified data supervision system for artificial intelligence is a key foundation for ensuring its safe, controllable and responsible development. This system aims to scientifically and precisely classify and grade the data involved in the entire life cycle of artificial intelligence based on data sensitivity and the risk level of application scenarios. On this basis, it is necessary to formulate differentiated regulatory rules and security standards for the links of data collection, storage, transmission, use, sharing and destruction. By clearly defining the processing permissions, security protection requirements and compliance

boundaries for data of different levels and categories, it is possible to effectively prevent the risks of data abuse and leakage, suppress algorithmic bias, and enhance the transparency and interpretability of the model. To establish and improve this system, it is necessary for the government to take the lead and collaborate with technology developers, industry organizations and research institutions to jointly promote the construction of institutional norms, technical tools and regulatory capabilities, ensuring that while artificial intelligence empowers economic and social development, its data application is always within the framework of effective regulation and compliance.

Build a public participation mechanism empowered by technology. The public plays a dual role as both a participant in public service governance and a major bearer of technical risks. It is urgent to strengthen their subject status and enhance their awareness of data rights in the process of technology application. Given the significant differences in public digital literacy, efforts should be made to establish multi-level and inclusive participation channels. On the one hand, it is possible to explore the establishment of an artificial intelligence technology supervision organization involving the public, and select representatives with professional technical knowledge and a sense of public responsibility to serve as the public's "technical spokespersons", deeply participating in key links such as algorithm review and risk assessment, and exercising the right of supervision on behalf of the public. On the other hand, it is necessary to vigorously improve the convenient and efficient online supervision platform and feedback system, lower the technical threshold for public supervision, and enhance their ability to identify technical risks and exercise regulatory rights through publicity and education. The core objective of this mechanism is to bridge the digital divide through technological empowerment, ensuring that the public has substantive rights to information, participation and supervision in decisions where artificial intelligence affects their rights and interests, and promoting technological development to truly serve the public interest.

VII. CONCLUSION

As an emerging science and technology, generative artificial intelligence should be embraced with an open and inclusive attitude. Its core value lies in its ability to be effectively applied as a technical means in specific links that provide convenience for the public and reduce the burden on grassroots workers. Although this technology has obvious limitations, the numerous benefits it brings are equally undeniable. Therefore, in the application process, it is essential to always emphasize and enhance human subjectivity. Only in this way can we better manage this tool, make it truly serve the well-being of the people, enhance the efficiency of public services, and ultimately contribute to the improvement of people's happiness levels.

REFERENCES

[1] Ding, H., New Developments in Contemporary Western Public Administration Theory: From New Public Management to New Public Service, *Journal of Guangdong Administration Institute, (06),* 2005, 5-10.

[2] Xi, J. P., Hold High the Great Banner of Socialism with Chinese Characteristics and Unite in Striving for the Comprehensive Construction of a Modern Socialist Country - Report at the 20th National Congress of the Communist Party of China, *Rural Work Communication, (21),* 2022, 4-22.

[3] Wang, C. Y., et al, Embedding Generative Artificial Intelligence into Agile Government Construction: lmpacts, Risks, and Responses, *Journal of Beijing Administration Institute, (03),* 2024, 73-83.

[4] Mi, J. N., et al, "Digital Space Government" Research Program Government Reforming Caused by the Fourth Industrial Revolution, *J Public Manag, 17(01),* 2020, 1-17+.

[5] Li, S. Z., et al, Issues of Conservation, Development and Well-Being from the Perspective of Public Policy-The Proposal and Application of an Interdisciplinary Research Framework, *Journal of Public Administration, 18(02),* 2021, 23-33+165-166.

[6] Deng, L., & Wang Z. Y., Embedded Collaboration: The Cross-Regional Collaboration and Dilemma during the Initiatives of "Internet + Government Services", *Journal of Public Administration, 17(04),* 2020, 62-73+169.

[7] Meng, T. G., et al, Social governance innovation driven by government hot-line in megacity—a case study on beijing's reform of responding to whistles, *J Public Manag, 18(2),* 2021, 1-12.

[8] Shen, F. J., The Risks and Governance of Generative Artificial Intelligence: Addressing the "Collingridge Dilemma, *Journal of Zhejiang University(Humanities and Social Sciences), 54(06),* 2024, 73-91.

[9] Yao, Z. W., & Li Z. L., Legal Regulations on the Risks of Generative Artificial Intelligence Content, *Journal of Xi'an Jiaotong University(Social Sciences), 43(05),* 2023, 147-160.

[10] Zhao, Z. Y., Rights Protection in Intelligent Social Governance: Dilemma, Challenge and Optimization, *Journal of Social Sciences, (06),* 2022, 106-118.

[11] Wang, H. M., et al. The Evolutionary Logic of China's Public Service Policy from the Perspective of Gradual Institutional Change Theory, *Journal of Dalian University of Technology(Social Sciences), 46(03),* 2025, 99-109.

[12] Yang, B., On the Evolution Characteristics and Change Logic of Equalization of Basic Public Services: Based on the Analysis of Policy Texts from 2006 to 2018, *Journal of Southwest Minzu University(Humanities and Social Sciences Edition), 40(05),* 2019, 196-202.

[13] Li, X. H., & Huang, J. X., Building a moderately prosperous society in all respects-regional coordination, *China Economist, 15(01),* 2020, 72-107.

[14] Deng, W., & Wang, Q., On the Modernization of the Governance Capacity of the Grass-roots Government, *Yangtze Tribune, (02),* 2018, 55-58.

[15] Li, X. B., The Predicament of Multi-subject Relationships in Urban Communities and the Legal path to solve it, *Leadership Science, (18),* 2020, 24-27.

[16] Xu, Z., & Mao, C. H., The practical forms, current predicaments and optimization paths of the modernization transformation of grassroots public services, *Journal of the Party School of CPC Zhengzhou Municipal Committee, (05),* 2024, 82-86.

[17] Zhang, Y. H., & Zhao, L., Research on Urban Public Service Facility Planning from a Human Centered Perspective, *Journal of Xinxiang University, 41(04),* 2024, 62-64.

[18] Luo, X. R., The problems, reasons and countermeasures of public service of grassroots government, *China National Conditions and Strength, (09),* 2018, 38-41.

[19] Liu, M. A., et al, Government in digital space: Futian model of government service reform, *J Public Manag, 18(02),* 2021, 13-22.

[20] Jia, Y., Lan, Z. Y., & Liu, R. Z., Exact Senior Care: A New Senior Care Model Driven by Big Data, *J Public Manag, (17),* 2019, 95-103.

[21] Liu, X. C., et al, Digital Technology Empowering Administrative Approval Reform: A Case Study of Shenzhen's Instant Approval, *Journal of Management, 38(01),* 2025, 21-34.

[22] Dong, Z. H., The Application and Prospects of AI Large Models in the field of smart cities, *Communications World, (17),* 2023, 39-40.

[23] Xu, H., et al, Forecasting to Empower Decision Making: A Solution from Traditional Models to Big Data's Scheme-The Insights of Judgement of COVlD19's Epidemic Trend, *J Public Manag, 18(04),* 2021, 116-125+173.

[24] Bi, K., & Zhang, H. L., Algorithms, data and computing power: The Technical Support for the Artificial Intelligence Risk Governance Paradigm, *Jiangsu Social Sciences, (03),* 2025, 110-117.

[25] Wu, Y. X., & Liu, H., Governance Illusion of Digitalization: Effectiveness Paradox and Generative Mechanism in Grassroots Digital Governance-Case Study of City B, *J Public Manag, 22(02)*, 2025, 36-48+169-170.

[26] Huang, X. Z., & Dong, Z. Q., At the Historical Juncture between the Conclusion of the 14th Five-Year Plan and the Convergence of the 15th Five-Year Plan Blueprint: Whither Digital Government?-Overview and Reflections from the 2nd Digital Government Forum of 40 Experts, *J Public Manag, 22(03),* 2025, 158-163+176.

[27] The Decision of the Central Committee of the Communist Party of China on Further Comprehensively Deepening Reform and Promoting Modernization with Chinese Characteristics, *People's Daily, 2024-07-22(001).*

[28] Li, L. Q., & Luan, W. T., The Mechanism of Action and Risk Prevention of Embedding Generative Artificial Intelligence into Public Service Governance, *Journal of Nanchang University(Humanities and Social Sciences), 56(03),* 2025, 113-124.

[29] Miller. T, Explanation in artificial intelligence: Insights from the social sciences, *Artificial intelligence, 267,* 2019, 1-38.

[30] Su, J. B., & Ni, Z. Y., Accountability and interpretability from the perspective of algorithmic governance, *Youth Journalist, (12),* 2024, 13-19.

[31] Wang, L. Z., & Li, H. Y., Empowering Community Public Services through Digital Social Work: Roles, Logic, and Optimization, *Journal of Beijing Administration Institute, (04),* 2025, 55-64.