Ten key words of discipline development of urban and rural planning 2023-2024

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Abstract:
Since the 18th Discipline Forum in 2021, the release of the annual top ten keywords of the discipline of urban and rural planning has formed the characteristic brand of the discipline development Forum. The discipline of Rural-urban planning itself constitutes an independent and professional body of knowledge, and the purpose of the Rural-Urban Planning Discipline Development Forum is to bring together and highlight the most emerging and forward-looking development focuses in the discipline's body of knowledge. On the basis of the previous two sessions, the 20th Forum further focused and condensed, and identified the ten key words for the development of the discipline of urban and rural planning in 2023-2024: Smart planning: AI empowerment; Discipline development: System architecture and knowledge expansion; Urban finance: urban renewal and sustainability; Urban resilience: combined with disaster; Spatial planning, refinement, optimization and scientific; Urban inclusion: aging and all-age friendly; Planning industry: professional development of planners; Historical heritage: conservation system; Urban-rural integration: factor flow; Collaborative planning: metropolitan area.

Key words: urban and rural planning; Discipline development; Knowledge system; Frontier hot spots; Key words

In the selection process of the top ten keywords in 2023, the emphasis is on the world's eyes on the land of China. Through the monthly tracking of the research hotspots of top journals at home and abroad in the past year, the editorial team selected 2,362 Chinese and English articles and 364 Chinese and English keywords from 18 top academic journals of planning at home and abroad. The keywords were clustered into 30 hot directions, and a total of 96 authoritative experts and professors, including editorial board, advisory editorial board and overseas editorial board, conducted heated discussions and nominations on research issues such as planning thought, practice and education, and finally formed the ten key words for the development of urban and rural planning discipline in 2023-2024 according to the order of the vote rate:

(1) Key word 1: Intelligent planning: AI empowerment (85.37%)

The empowerment of artificial intelligence (AI) and digital technology in the discipline of urban and rural planning was highly recognized by nearly 100 discipline experts this year, becoming the key research direction with the highest voting rate. To some extent, this phenomenon reflects the

widespread attention of the world to artificial intelligence. The widespread application of AI technology in academic, educational and scientific fields has been mapped to the discipline of urban and rural planning, and the need for AI empowerment has become a discipline consensus.

Urban and rural planning, as a discipline dedicated to providing future orderly solutions for human beings to cope with super complex inter-related problems in their own survival and development space, requires practitioners to have a high degree of intelligent technology application ability[1].

The research team comprehensively tracked 624 AI application tools (AIGP) in the field of planning, and selected 189 AI tools that have a significant impact on professional development, of which CHATGPT was rated as one of the most outstanding 30 tools. In this process, the planner should not only be the user of the tool, but also become the object of AI tool learning. Their thinking method and decision-making mode provide valuable reference for AI learning. The learning path of AI has gradually changed from the initial individual learning to the learning[2][3] of groups and social phenomena.

(2) Key word 2: Discipline development: architecture and knowledge expansion (78.05%)

In the whole territorial spatial planning system, urban planning, as a discipline with the longest historical accumulation and the most complete knowledge system, is the cornerstone of territorial spatial planning. Take Germany as an example, its perfect planning system "National Spatial planning System" has spread from urban and rural space to other spatial fields, and urban and rural planning has made a historic contribution to the development of observation, preparation, discussion and management methods. At present, the national spatial planning system is undergoing a profound change, which requires the original knowledge system of urban planning to be reconstructed on a large scale. The planning profession is facing four major challenges and four innovative areas.

These four challenges include the transition from traditional urban and rural planning to a more integrated territorial spatial planning, entering the mature stage of urbanization, demographic changes (especially the trend of fewer children and aging), and the impact of global climate change. The four major areas of innovation are: worldview innovation in planning education, innovation of knowledge system, updating of education methods, and diversification[4][5] of education objects.

The innovative knowledge system of planning discipline should expand the extension of knowledge, especially in the three cores, six extensions and one main line that runs through the whole time. The three cores are planning knowledge, spatial knowledge and natural knowledge, while the six extensions cover social organization, economic operation, history and culture, digital intelligence, engineering technology and governance knowledge. The main thread of the whole knowledge system is the evolution of human civilization, including the dynamic process[6] of survival, production and expansion. From urban and rural planning to national spatial planning, what is needed is a comprehensive and in-depth knowledge framework, and it is a period when scholars of urban planning can make great achievements.

(3) Key word 3: Urban finance: urban renewal and sustainability (75.61%)

In the process of urban renewal, sustainable urban financial management not only acts as the power engine to promote urban development, but also becomes the core support to ensure urban sustainability. The goal of this kind of financial management goes beyond the simple transformation of physical space, aiming to realize the coordinated symbiosis of economy, society and environment,

and realize the economic sustainability of the city.

Urban financial issues play a crucial role in urban renewal. Un-habitat has chosen this year's World Habitat Day theme "Resilient urban economies. Cities as drivers of growth and recovery". The theme of the UN World Cities Day is "Financing a sustainable urban future for all", which should be translated as "Financing a sustainable urban future for all", but it has been translated as "Pooling resources for a sustainable urban future". I don't know who lacks modern elements in their mind, and when they see Financing, they are at a loss. They must avoid the word "finance". However, the concept of finance and financial sustainability in urban governance are the watershed between traditional Chinese cities and modern cities. Only when Chinese cities face up to their financial problems will Chinese cities truly enter the modern city.

An analysis of the land finance data of various cities shows that in 2022, the GDP growth rate at the prefecture and municipal level has generally slowed down, and most cities still rely on land finance to a high degree. This phenomenon has aroused widespread concern, indicating the deep concern[7][8] of managers, scholars, practitioners and others for the financial health and sustainability of cities.

Compared with the construction of new cities, urban renewal faces more complex challenges. The construction of new cities is often carried out in uninhabited areas, while the renewal of old cities involves a large number of indigenous people. The intervention and management of capital is particularly complicated in the old urban areas [9]. Therefore, planners should have a deep understanding of and effectively convey the deep story behind urban renewal projects, which is not only related to the transformation of physical space, but also involves the comprehensive consideration of social structure, economic activities and cultural identity. Such in-depth understanding and effective communication are key to achieving truly responsible and sustainable urban renewal.

(4) Key word 4: Urban resilience: Combined with disaster (73.1% of the vote)

Urban resilience is defined as a city's comprehensive response and resilience in the face of various shocks and challenges. This includes not only the ability to resist, absorb, adapt and recover from disturbances, shocks or uncertainties, but also the ability to learn, adapt and self-organize in a crisis. The development of urban resilience requires five key transitions: from monomorphism to integration, from short to long term, from reactive to active adaptation, from static to dynamic, and from rigid to flexible[10][11]. In addition, the construction of urban resilience should be based on the interests of the people, while paying attention to the simultaneous development of cultural resilience, technological resilience and management resilience.

The capacity for urban resilience can be divided into four categories, ranging from the inability to withstand shocks to the wisdom of continuous learning and governance:

1) The first is the inability of cities to survive shocks, where a single shock can lead to the destruction of an entire city;
2) The second type: the city can gradually recover social operation after the impact, but the disaster is still likely to happen again due to the lack of learning ability;
3) The third category: the city reflects after the completion of disaster recovery, and the emergency response becomes more and more effective;
4) The fourth category: the city has continuous reflection, learning, summary and refining governance capabilities, which is wisdom and smart, but also the most ideal.

Resilient security systems in cities not only represent the latest development frontier of urban science, but also reflect new coping strategies required for the diversified challenges faced by modern urban construction. Strategies of particular interest are: how to integrate emerging technologies for disaster risk measurement, analysis, management and emergency response; And how to achieve accurate early warning of various environmental variables and emergencies. These practices are key to building a safe and resilient shared home and have now become a focus area of urban planning research. Through these advanced methods and strategies, we can more effectively improve the resilience and resilience of cities in the face of natural and man-made challenges, thereby ensuring the long-term stability and sustainable development of urban ecosystems.

(5) Key word 5: Spatial planning: detailed, optimized and scientific (65.85 percent)

Since the Urban Planning Journal published its first article on territorial spatial planning in 2015, the journal has published a total of 120 relevant papers. The classification and analysis of these papers reflect an increasingly refined, optimized and scientific understanding of territorial spatial planning. In the practice of spatial planning, refined design, systematic optimization and scientific methods together shape the future[12][13] of cities.

The digital intelligent transformation of modern national spatial planning includes five key elements: goal and vision, path selection, development power, accurate evaluation and iterative optimization. The soul of planning lies in the precision of its goal and vision positioning. With the help of machine learning of spatial development history, diversified target selection schemes can be provided for the national space and its production, life and ecosystem; Digital intelligence empowers the path selection of spatial planning to provide multi-mode prediction schemes through artificial intelligence to help decision makers and planners to foresee future trends and determine development paths; In terms of development momentum, intelligent resource allocation can be used to resolve the uneven distribution of resources within regions and stimulate the overall potential of urban clusters. In terms of accurate assessment, the new technology will carry out a detailed assessment of the comprehensive benefits of national land space after the implementation of the plan, based on the ecological, economic and social benefits of each plot; Any plan needs to be continuously optimized and self-improved, emphasizing the importance of evaluation and adjustment at all stages of the implementation of the plan. Together, these elements help to make spatial planning more detailed, optimized and scientific, and ensure the modernization[14] of territorial space governance.

(6) Key words: Urban inclusion: aging and all-age friendliness (63.41%)

Against the backdrop of a rapidly changing society, cities should become comfortable places to live for all ages. This requires that we not only provide convenient and safe living environments and rich community activities for the elderly, but also create vibrant Spaces for young people and children. Urban planning should focus on intergenerational communication and promote mutual understanding among different age groups through public space design, community services and the use of technology, so as to jointly build an inclusive urban environment.

While meeting the needs of specific groups such as the elderly and children, technological means such as artificial intelligence should be applied to optimize urban design and provide intelligent services and products. In addition, the creation of readable architectural Spaces, accessible waterfront Spaces, street Spaces for walking and green Spaces for rest is crucial to the

construction of an all-age friendly urban environment. These measures not only enhance the inclusiveness of cities, but also improve the overall quality of urban life, together contributing to a harmonious and sustainable urban environment that makes it an ideal home for residents of all ages.

Originally, the word could have been "all age friendly", including today's hot words "child friendly" and "age-appropriate renovation". In fact, a city's inclusiveness is not only based on age, but also includes the support for young immigrants' innovation, entrepreneurship and career development and tolerance for failure. Therefore, the vocabulary chosen this time is "aging and all age friendly". I hope that a series of discussions on "XX and all-age friendly" can be launched year by year in the future.

(7) Key word 7: Planning industry: Career development of planners (56.10%)

We used to be concerned about the city, and now many people are beginning to pay attention to the career development of planners. Planners are faced with unprecedented pressure in the new period. Many planners are brought into the planning profession by the wave of urban construction. Their income, social identity and even pride in their families are all boosted by the upsurge of urbanization. The main task of building new houses will be replaced by a series of new tasks. The planner must plan himself, the designer must design himself.

This year, we welcome more planners, especially those from the front line, to discuss and exchange the core competitiveness of the future development of the planner profession. Including the change of thinking methods, the renewal of labor skills, the diversity of service objects, the expansion of new knowledge, etc., can become the article of The Times.

(8) Key word 8: Historical heritage: protection system (56.10%)

The protection of historical heritage is considered to be a key component of the national land spatial planning system, especially in the national land spatial planning with Chinese characteristics, the integration of historical heritage protection elements is particularly important. In the process of dealing with historical and cultural heritage, we are often faced with two extreme modes of thinking: one is to completely demolish it, the other is to strictly preserve it. Both of these extreme approaches will have a negative impact on urban revitalization and historical and cultural preservation.

A city is a living entity with unique genes and cells. City genes, as the fundamental features that distinguish a city from other cities, include natural elements (such as rivers, sea breezes, etc.), historically important iconic man-made objects, and spatial textures that carry infrastructure (such as squares, etc.). These elements constitute the identity and character of a city and cannot be changed at will. Conversely, the cells of a city -- the parts that need to be updated over time, such as architectural structures and community organization -- are necessary to keep a city alive and[15][16] growing. Mistakenly treating these renewable cells as immutable genes during urban renewal will hinder the introduction of emerging life and innovation networks, ultimately leading to the loss of urban vitality. Identifying which are the city's unshakeable genes and which are the city's renewable cells therefore becomes an important task for planners. Only when this is clear can we ensure the continued viability [17][18]of our cities.

(9) Key word 9: Urban and rural integration, factor flow (56.10%)

In 2022, more than 920 million people, accounting for 65.22%, will live in urban areas, and about 490 million people, accounting for 34.8%, will live in rural areas. Two-thirds of the Chinese

people live in cities, which has reached a critical point.

The flow of factors of production is the core of integrated urban and rural development. To solve the problem of "people, land and money" between urban and rural areas, we need to speed up the removal of institutional barriers, give better play to the role of the government, and create favorable institutional conditions[19][20]. This includes establishing a unified market for factors of production between urban and rural areas, promoting rational flow and equal exchange of factors of production between urban and rural areas, and promoting market-oriented reform of factor allocation in different categories, and then promoting urban and rural economic circulation through rational flow, so as to integrate agricultural and rural development into the national economic circulation system[21].

It has always been believed that population flow between urban and rural areas is from the countryside to the city. Today, for the first time, it is possible to move from the city to the countryside. Any country that achieves modernization must have two-way flow between urban and rural areas. This era will definitely start from now on, some people to be new farmers, some people to be new citizens, more and more between urban and rural areas, will become an important topic of planning and discussion. "New farmers" will be an important keyword in the future.

(10) Keyword 10: Collaborative planning: metropolitan area (48.78%)

With the acceleration of the global urbanization process, the phenomenon of international urban expansion has gradually broken through their respective administrative boundaries. This phenomenon leads to the increasingly close social and economic ties between cities, and then gives birth to the formation of metropolitan areas, metropolitan clusters and metropolitan areas.

In this context, the traditional spatial governance model based on administrative division boundaries is no longer sufficient to support the future development[22] of these complex metropolitan structures. Therefore, it is urgent to conduct in-depth analysis on the phenomenon of urban cluster and its operating mechanism, and fully tap and make use of the positive interactive power within metropolitan area. Exploring the cooperative governance model between governments and administrative agencies has become the key way[23] to realize the mutual benefit and cooperative development of various entities within the metropolitan area.

The ten key words for the development of the discipline of urban and rural planning in 2023-2024 not only witness profound changes and continuous innovation in the field of urban and rural planning, but also reflect the forward-looking thinking of the discipline in responding to current and future challenges. We expect that in the future, these keywords will guide and inspire the research and practice of the discipline of rural-urban planning, and push the boundary expansion and knowledge deepening of the discipline. In addition, these research directions will have a long-term impact on sustainable urban and rural development, providing scientific guidance and practical support for achieving a more harmonious, inclusive and intelligent urban and rural space.

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