Research Hotspots and Emerging Trends in Cultural Heritage Protection in China: A Visualization Analysis

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Abstract
This research examines studies related to cultural heritage protection in the China National Knowledge Infrastructure (CNKI) database from 2021 to 2024, offering valuable insights into the academic landscape surrounding cultural heritage protection studies. This research provides a comprehensive overview of studies on cultural heritage protection through bibliometric analysis methods. Key findings indicate that scholarly publications on cultural heritage protection are considerable; however, they exhibit discernible temporal variability and have not increased significantly in recent years. Song Junhua and Huang Yonglin have made significant contributions, while Sun Yat-sen University and Minzu University stand out as the most prolific institutions. The Journal of Cultural Heritage remains the leading core publication platform. Current cultural heritage protection primarily focuses on technology-enabled aspects, living heritage, spatial frameworks, and legal safeguarding mechanisms. This research delineates the scholarly landscape of cultural heritage protection research, offering integrated theoretical and practical guidance for advancing exploration in this field.
Keywords: Cultural Heritage Protection, Visual Analysis, Vosviewer, Research Hotpot, Research Trend

Introduction
In today's interconnected global landscape, the preservation of cultural heritage—both tangible and intangible—has emerged as a critical imperative in response to rapid sociocultural shifts, intensifying climate challenges, and accelerated technological transformation. Cultural heritage embodies the collective memory and identity of communities, functioning not only as a repository of historical knowledge but also as a dynamic resource for sustainable development and intercultural dialogue (Zhang et al., 2025; Bai & Zhu, 2024). As such, protecting cultural heritage is not merely a cultural or academic pursuit, but a strategic priority for international organizations, national governments, local communities, and cultural practitioners who increasingly recognize its multifaceted significance.

Among various forms of heritage, intangible cultural heritage (ICH) plays a particularly vital role in maintaining cultural continuity and fostering community resilience. Its living, performative nature facilitates creative reinvention, supports the revitalization of local traditions, and enables inclusive cultural participation. Moreover, the safeguarding of ICH contributes directly to regional economic vitality through cultural industries, promotes social cohesion by anchoring community identity, and enriches contemporary civilization through the transmission of values and knowledge systems (Pan et al., 2024; Lin, 2024; Li, 2024). Therefore, the study of ICH protection is not only timely but essential to understanding how cultural traditions adapt to modern contexts and generate new forms of value across social, economic, and academic domains (Fan & Huang, 2025).

Despite growing scholarly interest, systematic and comprehensive assessments of the intellectual landscape of cultural heritage protection—particularly within the Chinese context—remain limited. This gap restricts the ability of scholars and policymakers to grasp the thematic evolution, emerging priorities, and collaborative dynamics in this field. To address this issue, bibliometric visualization methods offer an effective solution, providing insights into the development, trends, and impact of scholarly work.

Visualization-based bibliometric analysis allows researchers to trace the evolution of research frontiers, detect emerging knowledge clusters, and map collaborative networks with analytical precision (van Wijk, 2005; Akbari et al., 2020). Among the available tools, VOSviewer stands out for its advanced capacity to generate clear, interactive visual maps that reveal hidden structures within scientific literature (Van Eck & Waltman, 2016). Its increasing use across disciplines demonstrates its utility in knowledge management and research evaluation (Chander et al., 2022; Ren & Abdullah, 2024a).

In this study, we utilize VOSviewer to examine the thematic development of cultural heritage protection research in China. Drawing data from the China National Knowledge Infrastructure (CNKI)—the country's most comprehensive and authoritative academic database—this study conducts a visual bibliometric analysis across five key dimensions: publication trends, influential authors and collaboration networks, high-impact journals, contributing institutions, and co-occurring keywords. By systematically mapping these dimensions, this study not only outlines the current academic landscape but also identifies knowledge gaps, research clusters, and potential directions for future inquiry.

Ultimately, this research aims to enhance the strategic utility of academic insights in guiding cultural heritage protection practices in China. It holds significance for scholars, heritage practitioners, and policymakers who seek evidence-based strategies for heritage preservation, knowledge transmission, and cultural policy development in an era of profound transformation.

Research Methods

VOSviewer version 1.6.18 was employed to conduct the bibliometric analysis and to generate knowledge maps of the literature (Ren & Abdullah, 2024a; Ren & Abdullah, 2024b). Data for this study were sourced from the CNKI. The retrieval strategy was defined as follows: topic terms ("cultural heritage protection" OR "cultural heritage inheritance"), document type (journal articles), and indexing criteria (CSSCI and Peking University Core Journals). An initial

dataset of 899 records was obtained. After removing 16 entries with incomplete metadata, a final sample of 883 high-quality articles was kept for detailed visualization and analysis.

Results and Discussion

Analysis of Annual Publication

Figure 1 illustrates the publication output related to cultural heritage protections from 2021 to 2024. Except for the year 2022, which experienced a low point with 191 publications, the other years maintained figures above 200. Consequently, the body of literature in this field is substantial.
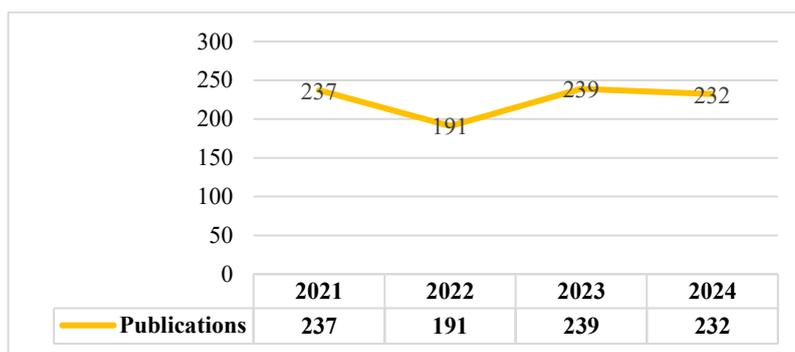

Figure 1. The publication output related to cultural heritage protection

Analysis of High-Contributing Authors

Figure 2 identifies scholars who have made significant contributions to cultural heritage protection by publishing five or more works. Song Junhua and Huang Yonglin have authored nine papers on cultural heritage protection to date. Lin Jifu and Lu Yong have contributed nine works, while Xu Tongyang has published seven. This highlights the strong research interest of Song Junhua, Huang Yonglin, Lin Jifu, Lu Yong, and others in cultural heritage protection, suggesting their solid expertise in this field. Figure 3 indicates that the authors demonstrate limited collaboration in publishing relevant research. This may stem from the belief among Chinese authors that working independently is the best way to showcase one's academic capabilities.

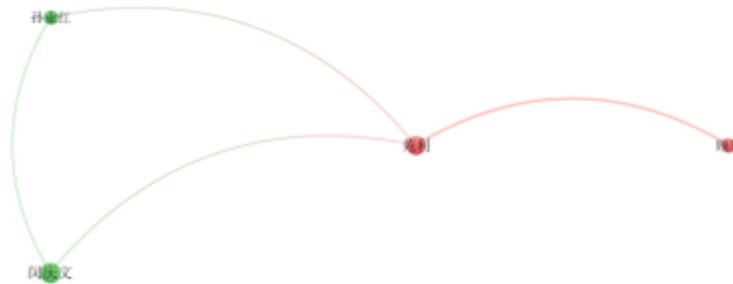Figure 2. The most contributing authors to cultural heritage protection studies

Figure 3. Author collaboration on cultural heritage protection studies

High-Contributing Institutions Analysis

Figure 4 illustrates the top ten institutions involved in cultural heritage protection studies. Sun Yat-sen University leads with 31 publications, while Minzu University of China and Northwest University publish 23 and 20 publications, respectively. This underscores the ecological imbalance caused by significant disparities in output and uneven distribution of resources, focus, and attention.
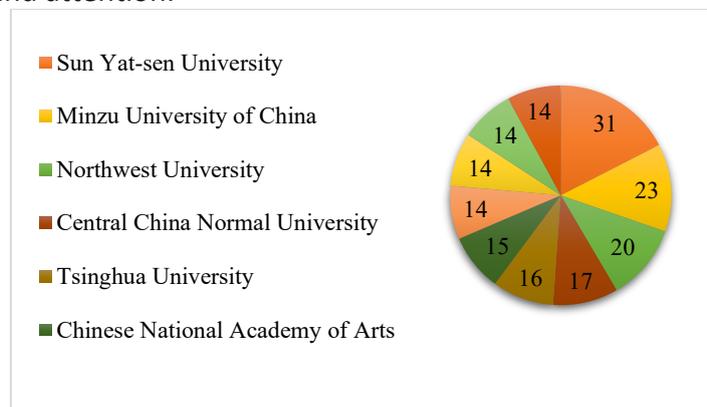

Figure 4. The top ten institutions contributing to cultural heritage protection studies

High-Contributing Journals Analysis

Figure 5 presents the top ten journals. Cultural Heritage has the highest number of publications on cultural heritage protection, totaling 50. Folklore Studies published 28 papers, while Ethnic Art published 22. Other journals published fewer than 20. This reveals the significant challenges in promoting academic research on cultural heritage protection.
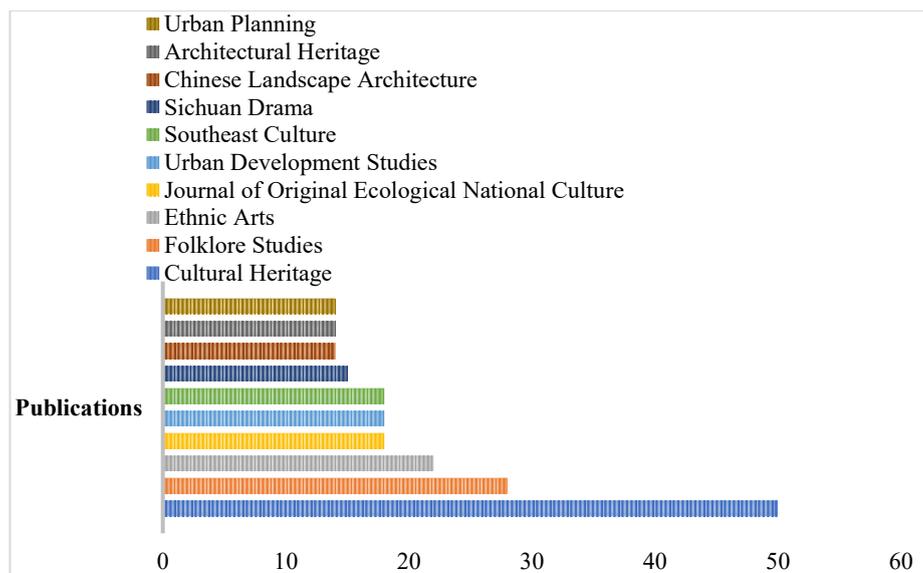
Figure 5. The top ten journals related to cultural heritage protection

Keyword Co-occurrence Analysis

Figure 6 shows a keyword co-occurrence network for studies on cultural heritage protection. Researchers established a minimum co-occurrence threshold of 6, resulting in 41 valid keywords after removing duplicates. In Figure 6, nine distinct clusters are identified, each highlighted in a different color. Cluster one (red), which includes 8 items, primarily focuses on agricultural heritage utilization for rural revitalization. The most prominent keyword is agricultural cultural heritage (total link strength=17, occurrence frequency=39), rural revitalization (total link strength=21, occurrence frequency=26), and protection of intangible cultural heritage (total link strength=5, occurrence frequency=24). Cluster two (green), represented by 8 nodes, is principally devoted to cultural heritage protection and spatial planning. Key conceptual markers include landscape architecture (total link strength=10, occurrence frequency=14), territorial spatial planning (total link strength=8, occurrence frequency=13), national cultural park (total link strength=9, occurrence frequency=11). Cluster three (blue), containing 7 nodes, investigates the digital documentation and legal safeguarding of sports-related intangible cultural heritage. Sports-related intangible cultural heritage (total link strength=15 occurrence frequency=22), Inheritance (total link strength=27, occurrence frequency=15), and digitalization (total link strength=15, occurrence frequency=15). Cluster four (yellow), composed of 5 nodes, centers on ancient texts preservation and academic foundations for cultural confidence. The predominant conceptual triad comprises cultural heritage (total link strength=62, occurrence frequency=104), cultural confidence (total link strength=9, occurrence frequency=11), and disciplinary construction (total link strength=10, occurrence frequency=10). Cluster five (purple), with 4 nodes, primarily examines living inheritance and productive safeguarding of intangible cultural heritage. The most frequent keywords are intangible cultural heritage (total link strength=144, occurrence frequency=246), living inheritance (total link strength=16, occurrence frequency=14), and cultural space (total link strength=8, occurrence frequency=10). Cluster six (cyan), which includes 3 nodes, focuses on the conservation of world cultural heritage and the integration of cultural tourism. Main terms include protection (total link strength=49, occurrence frequency=42), integration of culture and tourism (total link strength=10, occurrence frequency=10), and world cultural heritage (total link

strength=2, occurrence frequency=7). Cluster seven (orange), represented by 2 nodes, concentrates on the preservation of cultural relics from Chinese excellent traditional culture, excellent traditional Chinese culture (total link strength=6, occurrence frequency=7) and protection of cultural relics (total link strength=2, occurrence frequency=6). Cluster eight (brown), represented by 2 nodes, concentrates on dynamic conservation of traditional villages, traditional villages (total link strength=8, occurrence frequency=10) and living protection (total link strength=10, occurrence frequency=8). Cluster nine (pink), represented by 2 nodes, concentrates on holistic preservation of cultural-ecological protection areas, excellent traditional Chinese culture holistic protection (total link strength=12, occurrence frequency=10) and cultural ecological protection (total link strength=10, occurrence frequency=7), demonstrating relatively limited academic attention in current research dimensions.
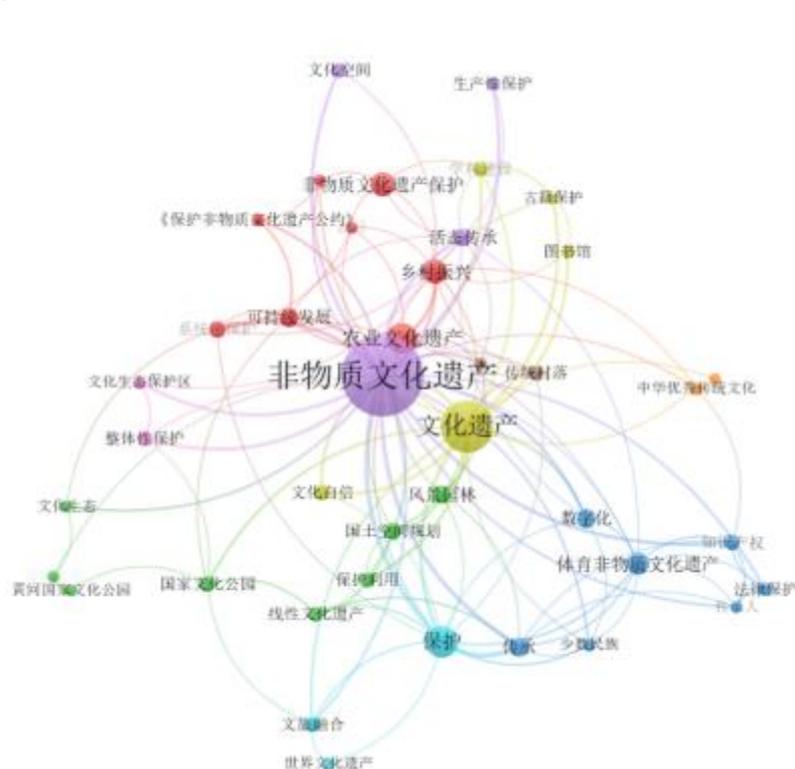

Figure 6. The keyword co-occurrence network of cultural heritage protection
(Figure note ： Figure 6 was generated using VOSviewer based on Chinese-language academic literature from the CNKI database. Since the dataset consists entirely of Chinese publications, the keywords are presented in Chinese.)

Figure 7 presents the keyword co-occurrence overlay network of cultural heritage protection. Using this network, researchers have identified five hot-topic terms in this field recently years: ancient texts conservation (occurrences=6, Avg. pub. year: 2023.67), intellectual property rights (occurrences=11, Avg. pub. year: 2023.18), Yellow River National Cultural Park (occurrences=6, Avg. pub. year: 2023.17)， excellent traditional Chinese culture (occurrences=7, Avg. pub. year: 2023.14) and digitalization (occurrences=15, Avg. pub. year: 2023.17). Based on the analysis of the latest popular keywords shown in Figure 7, it can be inferred that the current research focus on cultural heritage protection is concentrated on technology-enabled living heritage, spatial frameworks, and legal

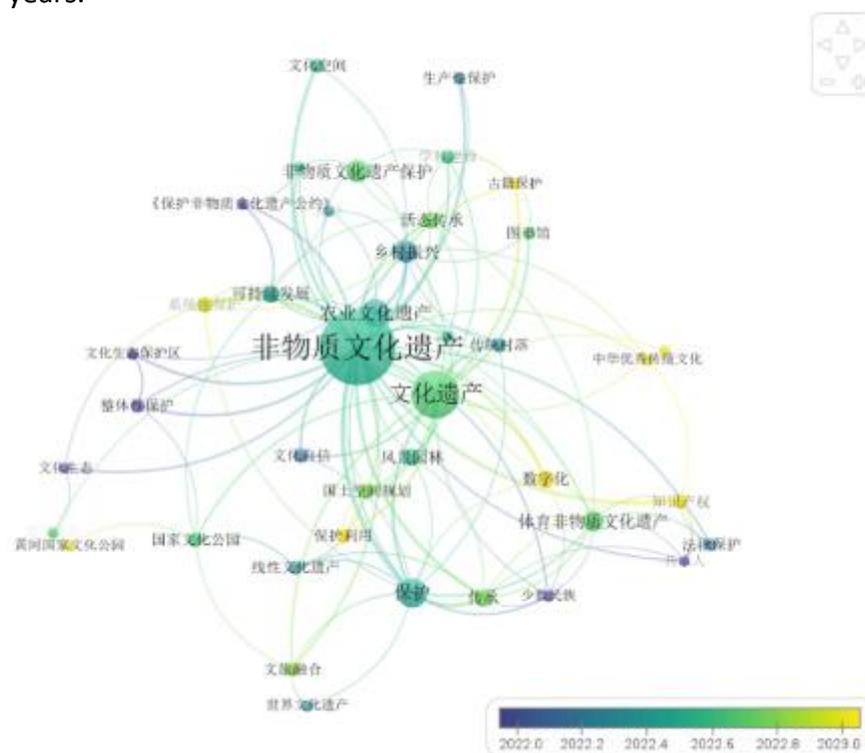safeguarding mechanisms. These topics are expected to become important research trends in the coming years.

Figure 7. The keyword co-occurrence overlay network of cultural heritage protection
(Figure note ： Figure 7 was generated using VOSviewer based on Chinese-language academic literature from the CNKI database. Since the dataset consists entirely of Chinese publications, the keywords are presented in Chinese.)

Conclusion
This research reveals that from 2021 to 2024, there is substantial scholarly output on cultural heritage protection, although it exhibits marked temporal fluctuations without notable sustained growth in recent years. Song Junhua and Huang Yonglin stand out as prominent contributors. Sun Yat-sen University and Minzu University of China are the most prolific institutions. Cultural heritage remains the leading core publication venue. This research examined five significant topics in the field of cultural heritage protection: the conservation of ancient texts, intellectual property rights, the Yellow River National Cultural Park, the excellent traditional Chinese culture, and digitalization. These topics are expected to remain dominant in cultural heritage protection research in the coming years. They not only reflect the current hotspots in this field but also reveal emerging trends for its future development. This highlights the current focus on technology-enabled living heritage, spatial frameworks, and legal safeguarding mechanisms in cultural heritage protection.

This research outlines the dynamic evolution of cultural heritage protection scholarship, yielding significant insights and potential research directions. Methodological constraints continue due to exclusive reliance on a single database, which may compromise comprehensiveness. Future investigations should strengthen methodological robustness through multi-source data integration, expanded literature retrieval, and transnational collaboration to enhance systematic rigor.

Disclosure Statement
The authors declare no potential conflicts of interest.

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