

Research Status and Visualization Analysis of Historic Conservation Area

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To cite this article:

Wang Lianting, Zhang Lin. (2023). Research Status and Visualization Analysis of Historic Conservation Area. *Urban and Regional Planning*, 8(4), 87-97. <https://doi.org/10.11648/j.urp.20230804.14>

Received: November 7, 2023; **Accepted:** November 28, 2023; **Published:** November 29, 2023

Abstract: China is an ancient civilization with a long history and culture. There are numerous historic conservation areas in China. With the acceleration of urbanization, the research on the protection, renewal and activation utilization of historic conservation area has gradually become a focus in the field of urban design. And the awareness of top-down and bottom-up protection has been increasing year by year. Theoretical and practical research on historic conservation areas in the fields of architecture and urban planning is gradually becoming mature and perfect. In order to clarify the current research status of Chinese historic conservation area, the author of this article used literature analysis method and CiteSpace analysis software to conduct intensive reading and visual analysis of 264 core journal literature selected from CNKI. Combining tables and images, the author of this article has summarized the current research status of historic conservation areas from four aspects: research trends, research course, research scholars and institutions, and co-occurrence and clustering of keywords. In the conclusion section, the author points out the shortcomings of current research in non protected historic conservation areas, research themes, main users of spatial, evaluation research, management, and other aspects.

Keywords: Historic Conservation Area, Research Status, CiteSpace, Visualization Analysis, Research Review

1. Introduction

At present, the accelerated progress of urbanization and the economic-oriented development and construction mode have continuously changed people's production and life style, especially the historic conservation area. In addition, the renewal and transformation mode based on commercial development has gradually lost its original characteristics and vitality, causing people's sense of identity and belonging to historic conservation area to plummet.

Based on the above problems, both the government and academic circles put forward new requirements for the development and research of historic conservation area. In order to clarify the current research status and provide theoretical basis for future research, this paper analyzes and summarizes the selected documents by intensive reading and using CiteSpace, and analyzes the current research status and future research trends.

2. Basic Research

2.1. Noun Explanation

"Historic conservation area are in the middle of the three-level heritage protection system of" historic cities-blocks-cultural relics "in China. They are not only the embodiment of historical cities with a long history in the time dimension, but also the concentration of historical buildings and other relics in the space dimension." [1] We can see the importance of historical blocks in the protection system of historic cities, and it has also become a hot topic in the field of urban renewal design. However, the concept of "historic conservation area" was formally put forward relatively late. It was first put forward in the revised Law on the Protection of Cultural Relics in 2002, and then it was explained in the Regulations on the Protection of Historical Cities, Towns and Villages (2008), the Planning Standard for the Conservation

of Historic Cultural Cities (2019).

Judging from the research literature, there are many concepts related to or similar to "historic conservation area": historic area, historic district, conservation area, Style area etc.

Generally, scholars will use different terms and concepts for different research problems. At present, "historic conservation area" are common academic terms in the fields of heritage protection and urban design. (See Table 1).

Table 1. Explanation of academic terms.

Historic City	"Cities with particularly rich cultural relics and significant historical value or revolutionary commemorative significance that have been approved and announced by the State Council and provincial people's governments for preservation."
Historic District	"The area in a town that can reflect its historical development process or the style of a certain development period, covering the commonly referred to ancient urban areas and old urban areas. This standard specifically refers to areas with clear historical scope, well preserved patterns and features, and in need of protection."
Historic Area	"A region that can truly reflect the traditional style and ethnic and local characteristics of a certain historical period."
Historic Conservation Area	"The preserved cultural relics that have been approved and announced by the people's governments of provinces, autonomous regions, and municipalities directly under the central government are particularly rich, with concentrated historical buildings that can fully and truly reflect the traditional pattern and historical style, and have a certain scale of historical sites."
Townscape	"The overall appearance and landscape of the natural and artificial environments that reflect the historical and cultural characteristics of towns."

2.2. Research Methods and Data Sources

In this paper, the literature research method and CiteSpace, a visual analysis tool of literature, are mainly used to objectively and quantitatively present the current research status of historic conservation area in China.

In this paper, based on CNKI, China Knowledge Network, through "advanced retrieval" mode, with "historic conservation area" as the retrieval subject, SCI, EI, Peking University Core, CSSCI and CSCD as the periodical literature sources, and architectural science and engineering as the screening subjects, a total of 548 articles were obtained. In order to ensure the effectiveness of the research, the author once again screened the selected journal documents one by one, and excluded some documents unrelated to the research theme and research field, and finally got 264 documents. Literature research time has a long time span from 1998 to 2022. All the selected documents were put into Citespace software and an equal number of documents were obtained through operation and identification. Therefore, the above periodical literature is regarded as the literature database of basic research. Through intensive reading and visual atlas

analysis, the current research status of historic conservation area in China is presented intuitively.

3. Line Chart of Annual Literature Quantity Change

3.1. Annual Publication Volume

This article uses 264 selected literature as the data sample library for this study. In order to intuitively reflect the research trend and annual publication volume, the author calculate the annual publication volume from 1998 to 2022 and express the trend in the form of a line chart. (Figure 1)

Serve as the core and mesoscopic spatial level in the protection system of historical city, historic conservation area are an important link in the protection planning texts and implementation of updating practical strategies. They are also the spatial level that can best conduct research on spatial structure and environmental behavior from a human perspective. From the annual publication volume line chart, it can be seen that China's research on historic conservation area is generally on the rise.

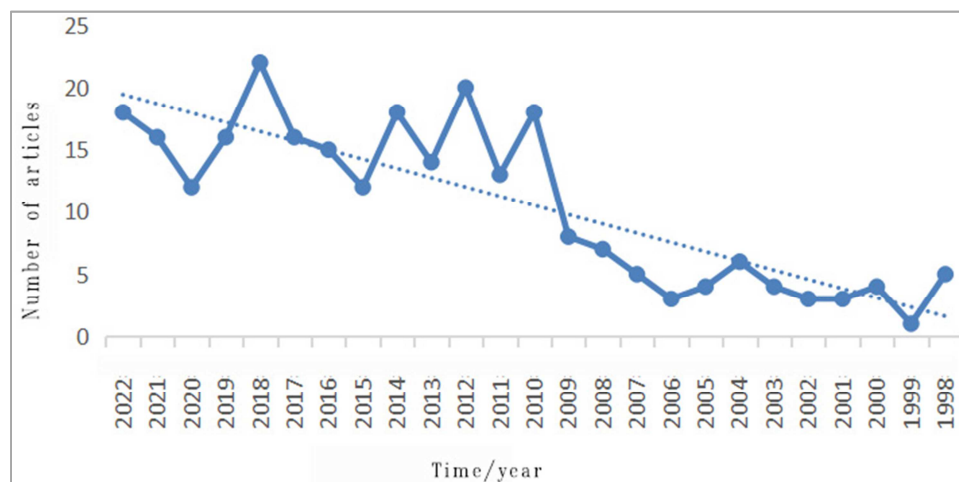


Figure 1. Line chart of annual literature publication volume in the study of historical and cultural blocks.

3.2. Research Course

Through intensive reading, combing and summarizing the literature, this paper divides the 40-year research process of historic conservation area in China into four stages:

The first stage: the initial stage of research: compared with foreign countries, the research in China started relatively late. Since the State Council announced the first batch of historical cities in the early 1980s, it marks the official start of the research on the protection system of historic city. [2] In 1985, at the "Academic Seminar on the Protection and Planning of the Six Ancient Capitals" held in the ancient capital of Kaifeng, the Historical City Study Group first explored the protection of historical cities from a planning perspective. The following year, the concept of "conservation area" was put forward in the second batch of historical cities, which laid the hierarchical research system of historical city in China. In 1996, the "Huangshan Conference" clearly pointed out that historical blocks are an important spatial level in the protection system, and then the establishment of relevant laws and regulations and special fund protection system. [3] The concept of "historic conservation area" was put forward relatively late, and it first officially appeared in the revised Cultural Relics Protection Law in 2002. Since then, "historic conservation area" have become legal protection objects. Then, relevant plans, norms and standards have been issued in various places. The planning research and space design of historic conservation area began to increase.

The second stage: the stage of steady development: At the end of 1990s, China initially established the protection system. [4] With the top-down policy and bottom-up social demand, and as the main spatial structure level that reflects the localization of policy planning and normative standards, historic conservation area in academic circles is expanding and the research content is increasing. It mainly focuses on the renovation and activation using. For example, Juer Hutong and Dashilar in Beijing; Tianzifang in Shanghai; Pingjiang Road in Suzhou; Small West Lake in Nanjing, etc. The renovation in the exploration stage pays more attention to the protection of the original spatial structure, the improvement of infrastructure and the utilization and functional replacement of traditional space, which is an objective basic research stage. The horizontal expansion with specific cases as the research object greatly enriches the research dimension of historical and cultural blocks.

The renovation in this stage are most based on the protection of the original spatial structure, improvement of infrastructure, and utilization and functional replacement of traditional spaces, which are relatively objective basic research stages. The specific cases as the research object greatly enriches the research dimension.

The third stage: Rapid development stage: With the gradual deepening and refinement of theoretical and practical research, the study of the material spatial structure and spatial elements has gradually become formalized, resulting in many unreasonable updates and renovations, such as severe commercialization and tourism development, which seriously

damaged the original regional characteristics and living atmosphere; At the same time, similar renewal and renovation strategies have caused many awkward situations of "one thousand cities, one side", greatly reducing the sense of identity and belonging of indigenous people to historic conservation area. This is precisely contrary to the original intention of protecting and updating historic conservation area.

The fourth stage: the reflection stage: in view of the contradiction between the protection and utilization of historical environment and the urbanization process in China, more and more people begin to reflect on the true significance of the renewal. The protection and renewal of historic conservation area is not a political task, but to give urban cultural genes to better realize sustainable development. In the study of people-oriented physical space environment, the environmental behavior and space quality of users have been studied emphatically, and the management mechanism has gradually developed from the original participation of the government and planning units to the multi-participation supervision mode including all users. The research focus has gradually changed from the original simple and specific material space environment to the study of space use and evaluation. In terms of research methods, there is a gradual shift from qualitative to quantitative research. The background of big data not only provides convenience for the comprehensive and diverse research of data, but also greatly saves labor and time costs, thereby greatly improving work efficiency.

4. Co-occurrence Network and Visualization

4.1. Author Co-occurrence Analysis

Based on the literature CitesPace, the article conducted a co-occurrence analysis of the authors. As shown in Figure 2, it can be seen that there are currently many scholars, but they have not formed strong studying connections. The research field is relatively large, involving a wide range of content and concerns, and it is necessary for scholars to form a close research cooperation relationship.

4.2. Co-occurrence Analysis of Authors and Research Institutions

To clearly present the main research institutions in this field and the strength of the association between the author and research institutions, this article further analyzes the co-occurrence graph between the author and the research institution (Figure 3). In the graph formation, "Author" and "Institution" are used as the analysis node types, and the time slice is "1". The circular nodes in the graph represent the institution and the author, and the node size represents the frequency of occurrence, The thickness of the connections between nodes represents the strength of relationship". [5] It is generally believed that a clustering module value $Q > 0.3$

indicates significant clustering structure; The average contour value $S > 0.5$ indicates reasonable clustering, while $S > 0.7$ indicates high clustering reliability. [6] The graph shows that

the clustering module value $Q=0.9617$ and the average contour value $S=0.9986$ in this study, indicating a high reliability and validity of the co-occurrence study.

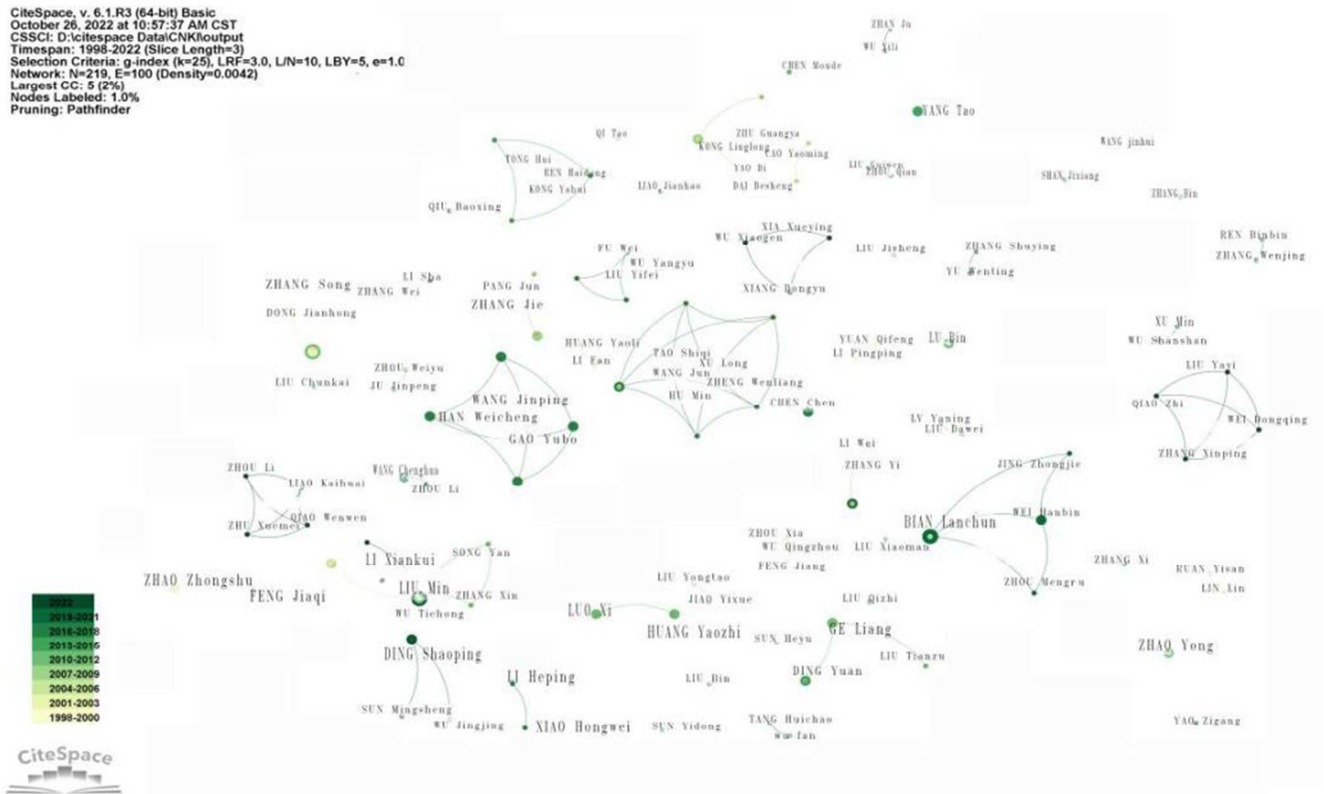
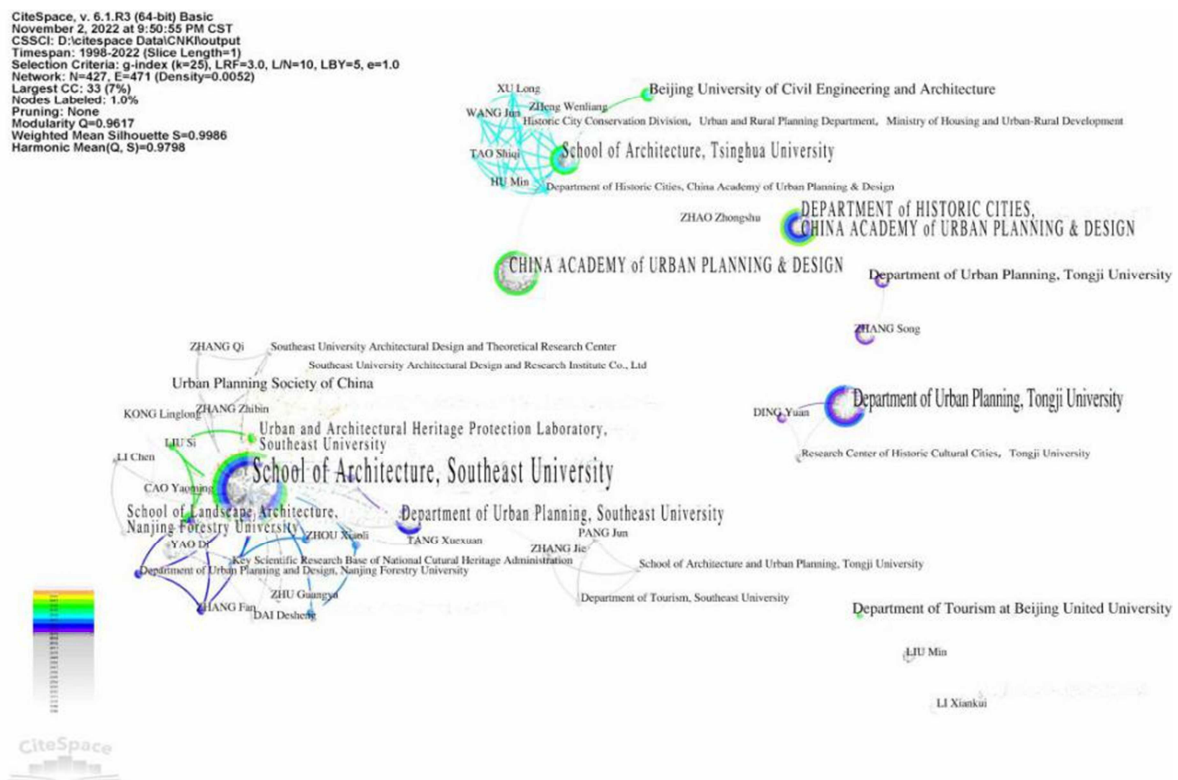


Figure 2. Author co-occurrence analysis.



order number	Co occurrence frequency/time	intermediary centrality	Time /year	keyword	order number	Co occurrence frequency/time	intermediary centrality	Time /year	keyword
4	10	0.33	1998	Protection planning	17	3	0.00	2005	governance
5	7	0.09	2008	overall protection	18	3	0.01	2000	transform
6	6	0.03	2014	the Grand Canal	19	3	0.01	2012	Fifth Avenue
7	6	0.04	2008	renew	20	3	0.02	2004	traditional block
8	6	0.07	2000	Public participation	21	3	0.02	2007	authenticity
9	5	0.01	2008	Landscape architecture	22	3	0.03	2011	historic urban areas
10	5	0.06	2015	Protect updates	23	3	0.03	2019	Big data
11	5	0.09	2007	cultural heritage	24	3	0.04	1998	historic area
12	5	0.20	2001	Beijing	25	3	0.05	1998	Protected Method
13	5	0.22	1998	urban design	26	3	0.28	2010	Guangzhou

4.4. Research on the Combination of Timeline View and Emergence of High-Frequency Keywords

In this paper, through the comparative study of the timeline view and emergence of keywords, different research hotspots and topics in different time periods are summarized.

The timeline view of keywords, also known as topic path map, can directly reflect the frontier hotspots and their derivative relationships in different time periods, so we can sort out the research direction and trend in this field quickly. [21] In the timeline view, the circular nodes representing keywords are concentrated in the year when they first appear in the way of frequency superposition. The size of circular nodes represents the frequency of occurrence. The connection line between keyword nodes indicates that it appears in a document.

The keyword timeline view in this study takes "keywords" as the node type, with a time slice of 1. It is composed of keywords with co-occurrence frequency greater than or equal to 2, resulting in 219 graph structure nodes, 288 network connections, keyword network density of 0.0121, clustering module value Q of 0.7448, and clustering average contour value S of 0.9423. The reliability of the co-occurrence graph is

high based on the above parameters. (Figure 5)

The emergence of keywords means that "the change rate of cited frequency or co-occurrence frequency of keywords in a certain period of time is high, which can be used to predict the future research direction in the field." [1] Reflect the relatively prominent research hotspots in a certain period of time. In this paper, the top 25 high-frequency keywords are screened (as shown in Figure 6). From the figure, before 2013, the research topics were basically concentrated in two dimensions: planning protection and renewal design. The high-frequency keywords under the planning protection dimension include "protection method", "protection principle", "protection planning", "ancient capital style" and "cultural heritage". The high-frequency keywords under the dimension of renewal design include "organic renewal", "conservation renewal", "urban renewal" and "urban design". After 2013, keywords such as "overall protection", "public participation", "cultural identity" and "big data" have appeared one after another, which shows that the research theme of historic conservation area in the research field has gradually changed from the macro protection and renewal to the specific dimension of how to protect and update.

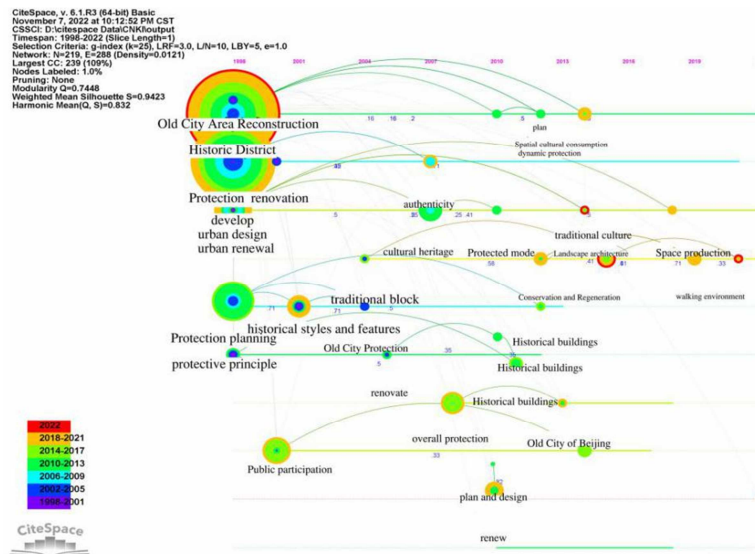


Figure 5. Keyword Timeline View.

Top 25 Keywords with the Strongest Citation Bursts

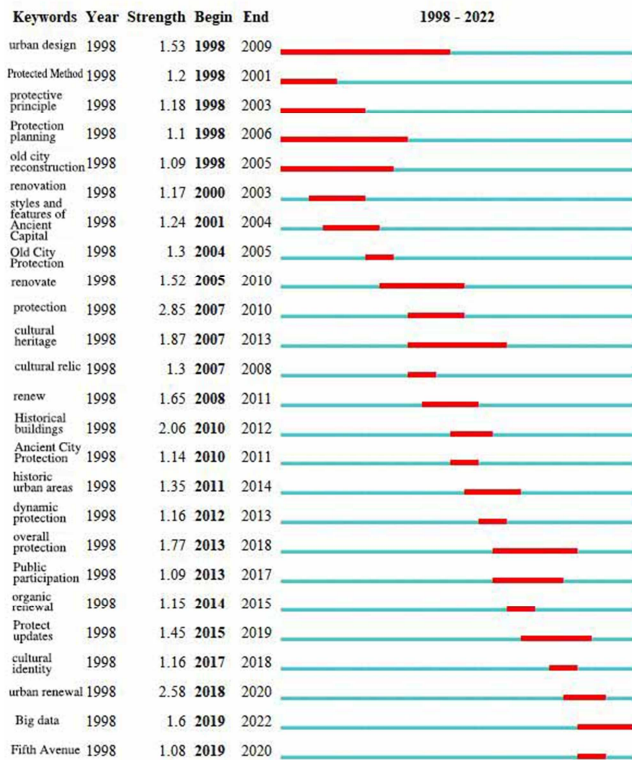


Figure 6. Keyword Emergence Map.

In order to clarify the stage changes of the research content, The author of this article makes a combined study on the timeline view and emergence of high-frequency keywords (as shown in Table 3), and divides the research content into three parts combined with intensive reading of key documents: the establishment and improvement of the research system; rejuvenation and utilization Research; The application of new theories and new ways. Summarized as follows:

The first part: the establishment and perfection of the research system. The study of historic conservation area abroad began in the 1960s, and the study of protection system of historic city in China officially began with the promulgation of the first law on the protection of cultural relics in 1982. The research on the protection system of historic conservation area only formed a clear idea and method in the late 1990s. In 2002, the concept of "historic conservation area" was formally put forward, and its research

system has gradually become perfect after 40 years of research.

The second part: rejuvenation and utilization Research. Around the 20th century, the protection planning of historic conservation area was gradually carried out throughout the country. Earlier, there were "25 historic conservation area protection in the old city of Beijing". "11 historic conservation area protection in Shanghai" and "37 historic conservation area protection in Guangzhou".

With the sweeping trend of urbanization, rejuvenation and utilization of historic conservation area across the country have been put on the agenda. At this stage, most historic conservation area have transitioned from traditional renewal and protection to commercial and tourism oriented spatial transformation. In terms of research dimensions, in addition to the study of space, the importance of cultural factors has gradually begun to be emphasized. In terms of research scope, it mainly focuses on specific historic conservation area or specific streets, such as Yandai Diagonal Street, Qianmen Street in Beijing; Shanghai Xintiandi; Shuangdong District in Yangzhou; Suzhou Warehouse bridge straight street; Cangqiao Straight Street in Shaoxing; Fuzhou Three Lanes and Seven Alleys.

The third part: the application of new theories and new research methods. In theoretical research, we no longer stick to the traditional renewal strategy, but combine interdisciplinary subjects to guide practice and analysis with new ideas and theories, such as urban acupuncture, catalyst theory, cultural memory, cultural landscape, urban historical landscape and spatial production. In terms of research methods, quantitative research began with big data and interdisciplinary software. For example, Yang Changming (2019)[22]used big data to quantitatively analyze the location characteristics of commercial hotspots in Shichahai and gave optimization strategies; Min Xu (2019)[17]and Li Jianhua (2020)[23]used multi-source data to evaluate the physical space environment of historic conservation area. From the above, it can be seen that the current research perspectives on historic conservation area are gradually diversified, and the research methods are gradually shifting from traditional qualitative research to quantitative research. With the support of big data, many traditional human research work has been eliminated, improving the efficiency of research.

Table 3. Combination and comparative study of high-frequency keywords and emergent keywords.

Time/Year	High frequency keywords	Emergent keywords
1998-1999 Text organization stage	Historical block (60); Protection (28); Protection planning (10); organization method (2); Protection principle (2); Urban renewal (14); Urban Design (5); historic area (3); Protection method (3); Development (3); Old City Renovation (2); Old City Renewal (2);	Urban design; Protection methods; Protection principle; Protection planning; Old City Renovation
2000-2015 Update protection and activation utilization stage	Overall protection (7) Protection update (7) Update (6) Grand Canal (6) Cultural Heritage (5) Heritage Protection (4) Historical buildings (4) Traditional neighborhoods (3) Renovation (3) Rectification (3) Public participation (6) Community participation (2) Ancient Capital Style (2) Landscape Planning (2) Landscape Architecture (5)	Renovation; The style and features of an ancient capital; Old city protection; Rectification; Protection; Cultural heritage; Cultural relics; Update; Historical

Time/Year	High frequency keywords	Emergent keywords
	Historical urban areas (3) Authenticity (3) Protection of ancient cities (2) Beijing (5) Guangzhou (3) Fifth Avenue (3) Xi'an (2) Beijing Old City (2) Nanluogu Lane (2) Kuanzhai Lane (2) Wuhan (2) Jiexiu (2) Old City Protection (2) Culture (2) Protection mode (2) Dynamic protection (2) Organic update (2) Marketplace Culture (2) Culture (2) Cultural Consumption (2) Traditional Culture (2) Historical Culture (2) Cultural Genes (2)	buildings; Protection of ancient cities; Historical urban areas; Dynamic protection; Overall protection; Public participation; Organic renewal; Protect updates;
2016-2022	Strategy (2) Narrative Space (2) Image Perception (2)	Cultural identity; Urban renewal;
Update stage of research theory and research methods	Strategy (2) Narrative Space (2) Image Perception (2) Big Data (3)	Big data;

4.5. Keyword Cluster Analysis

The current research on historic conservation area is gradually becoming more complex and systematic. To further clarify the complex research content, this section has processed its research content in a hierarchical and structured manner, and presented the current research structure in a clear table format.

On the basis of the research on key word co-occurrence, cluster analysis was conducted in this section. Currently, CiteSpace provides three clustering analysis algorithms, namely Likelihood Ratio Test (LLR), Mutual Information (MI), and Latent Semantic Indexing (LSI). LLR analysis is

commonly used. This article uses the above three algorithms to perform clustering analysis based on the timeline graph (as shown in Figure 7), and Table 4 shows the parameter indicators of the three clustering graphs.

Through the sorting and classification of various clustering terms (as shown in Table 5) and comparative analysis, combined with the intensive reading of highly cited papers, it can be seen that the current research on historic conservation area involves various levels, and the research system is gradually improving. The research hotspots still focus on protection and renewal, cultural inheritance, spatial quality, and other aspects.

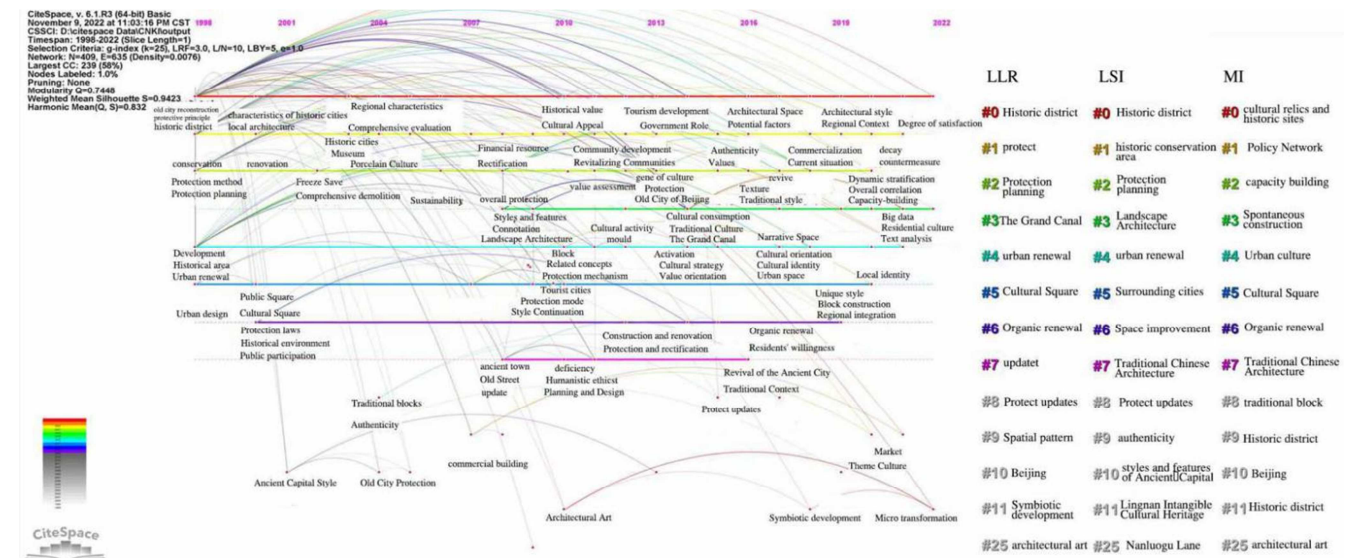


Figure 7. Historic conservation area Keyword Timeline Map+Cluster Comparative Analysis Chart.

Table 4. Keyword Clustering Parameters Table.

	LLR	LSR	MI
Module value Q	0.7448	0.7448	0.8752
Average contour value S	0.9423	0.9423	0.9833
node number	409	409	409
Network Connection	635	635	635
Keyword network density	0.0076	0.0076	0.0076

Table 5. Sorting, classification, and comparative analysis of various clustering terms.

Cluster	Top Terms (LSI)	Top Terms (LLR)	Top Terms (MI)
0	historic district; Sustainable development; Historical value; A historic and cultural city; Dynamic protection; Old city renovation;	historic district; Historical and cultural blocks; Overall protection; Cultural relics and historical sites; Cultural planning	cultural relics and historic sites; Cultural planning; Cultural ecology; Environmental view; Comprehensive evaluation

Cluster	Top Terms (LSI)	Top Terms (LLR)	Top Terms (MI)
1	Cultural relics protection units; Cultural relics and historical sites; Cultural harmony; historic conservation area; Policy network; Participate in the network; Governance research; Community development; Community participation; Participate in the network; A historic city; Governance research;	protect; historic conservation area; Renovation; Policy network; Characteristic Town	Policy Network; Characteristic towns; Ming and Qing Dynasty dwellings; Museums; Authenticity
2	Protection planning; Western history Cities; Freeze and save; Complete demolition; Residential environment; Overall protection; Traditional style and features; Dynamic stratification; Historical and Cultural City Landscape architecture; Empirical research; Spontaneous space; Heritage protection;	Protection planning; Preparation method; Overall protection; Capacity building; Building Owners	Capacity building; Building owners; Seminar; Ancient City; Urban Historical Landscape
3	Comprehensive revitalization; Historical and cultural blocks; Health assessment; Empirical research; urban renewal; Cultural identity; Cultural and economic integration;	the Grand Canal; Landscape Architecture; Historical blocks; Spontaneous construction; Big data;	Spontaneous construction; Text analysis; Fifth Avenue; Health assessment; Residential culture
4	Upgrade of business format; Urban space; Historical buildings; Historical and Cultural Conservation Area; Historical urban areas; Protection mechanism; Tengzhou Jieguan Lane	urban renewal; Cultural identity; Historical buildings; Historical blocks; Urban culture	Urban culture; Cultural conservation; Overseas Chinese approval files; Cultural and economic integration; Historical urban area
5	surrounding cities; historic urban areas; Urban design; Public squares; Cultural Square; History and culture; Unique style and features; Block construction; Regional integration; Space improvement; Improve the management system; Property rights sorting;	cultural square; Block construction; Surrounding cities; Public squares; cultural heritage	cultural square; Block construction; Surrounding cities; Public squares; cultural heritage
6	Historical and cultural blocks; Organic renewal; Protecting the law; Public participation; Historical environment; Development policies; traditional chinese architecture; historic district; Humanistic ethics;	organic renewal; Protecting the law; Space improvement; Public participation; Wenzhou	organic renewal; Protecting the law; Space improvement; Public participation; Wenzhou
7	Cultural inheritance; Planning and design; Anfeng Ancient Town; Qili Old Street; Planning and design; Cultural inheritance;	renew; Traditional Chinese architecture; Planning and design; Anfeng Ancient Town; deletion	traditional chinese architecture; Planning and design; Missing; Anfeng Ancient Town; Humanistic ethics
8	Protect updates; historic conservation area; Traditional district; Social space;	Protect updates; Traditional district; Microcommunity; Social space; Suqian City	Traditional district; Microcommunity; Social space; Suqian City; Protect updates
9	authenticity; Historical district; Historical style and features; Spatial pattern; Block scale; Theme Culture	Spatial Pattern; Historical style and features; Theme culture; Authenticity; Block scale	Historical district; Spatial pattern; Historical style and features; Theme culture; authenticity
10	Ancient Capital Style; historic conservation area; Beijing, the capital city; Old city protection; Historical blocks; historic conservation area; Urban development; Chaofu Street;	Beijing; The style and features of an ancient capital; Old city protection; Urban development; Capital Beijing	Beijing; The style and features of an ancient capital; Old city protection; Urban development; Capital Beijing
11	Lingnan Intangible Cultural Heritage; Historical district; Enning Road; Guangzhou; Symbiotic development	Symbiotic development; Guangzhou; Enning Road; Lingnan Intangible Cultural Heritage; Historical district	Historical district; Symbiotic development; Guangzhou; Enning Road; Lingnan Intangible Cultural Heritage
12	Nanluogu Lane; Commercial buildings; rchitectural art; historic conservation area; Siheyuan architecture; Protection of historic conservation area; Reflection on Development	Architectural art; Nanluogu Lane; Reflection on Development; Siheyuan architecture; Commercial buildings	Architectural art; Nanluogu Lane; Reflection on Development; Siheyuan architecture; Commercial buildings

To sum up, this study conducted three groups of co-occurrence analysis research: keywords co-occurrence and intermediary centrality analysis, timeline view and emergent analysis of keywords, keyword clustering analysis. By drawing tables and various graphs, the author presented the research content of historic conservation area in a structured manner.

5. Research Conclusion

In order to clarify the current research status of historic conservation area in China, The author of this article conducts an in-depth analysis and summary based on the selected 264 core journal literature, combined with CiteSpace and literature

analysis method. The following research conclusions are drawn:

5.1. Research Summary

1. Currently, China's research system on historic conservation area is gradually moving towards comprehensiveness and systematization, and the research methods are gradually transitioning from traditional qualitative research to a combination of qualitative and quantitative methods.

2. By drawing a line chart of annual publication volume, it can be seen that the current research on historic conservation area in China is on the rise year by year.

3. By carefully reading and summarizing the selected literature and its high-frequency co-cited literature, the development of historic conservation area can be divided into four stages: the initial stage of research; stable development stage; rapid development stage; reflection stage.

4. By combining with CiteSpace, this article mainly conducts a comprehensive and in-depth analysis of the author, author institution co-occurrence, and keyword co-occurrence network.

Firstly, it can be seen from the co-occurrence analysis graph of the authors that there are currently many researchers studying historic conservation area in China, but they have not formed close connections and cooperative relationships. The collaboration between authors and research institutions is mainly concentrated in three old University: Southeast University, Tsinghua University, and Tongji University. Other universities has not formed a common research trend.

Secondly, from the co-occurrence graph of keywords, it can be seen that the current research involves multiple and complex aspects. From the analysis of the frequency of keyword occurrences and intermediary centrality indicators, it can be seen that "conservation planning" and "urban renewal" are the two main themes that run through the research process. From the combination analysis of timeline view and keyword salience, The author of this article divides the research content into three parts: the establishment and improvement of the research system; protection, renewal, and activation utilization; application of new theories and methods. The current research structure has been summarized through comparative analysis and classification integration of different clustering graphs, cluster names, and corresponding keywords.

In summary, this article clarifies the development context, research structure, hot topics, and future research trends of historic conservation area in China.

5.2. Insufficient Research

Although the theoretical research system on historic conservation area in China is gradually systematized, there are still shortcomings:

Firstly, most of the current research focuses on protect blocks, while there is a little research on non-protected historic conservation area. From the perspective of urban sustainable development theory, both protected and non-protected blocks should become important research content for urban renewal design and sustainable development.

Secondly, the current research topic on historic

conservation area is still mainly focused on two aspects: "protection planning" and "urban renewal", without breaking through the traditional research scope. Looking at the research process, systematic research on the activation and utilization needs to be filled.

Thirdly, in terms of spatial design, there is no real focus on multiple spatial users or only a single spatial user, which largely leads to issues such as overall spatial design defects, low spatial utilization rate, and waste of spatial resources.

Fourthly, in recent years, there have been studies on the evaluation of the spatial quality of historic conservation area, but they have not formed a standardized systematic evaluation system. Fifthly, from the perspective of management mechanisms, there is still a lack of a relatively systematic and comprehensive protection system and management mechanism for the landing protection and management of historic conservation area in China. For example, property rights issues are a major obstacle on the road of protection and renovation of historic conservation area.

Sixth, current research on historical and cultural blocks is mostly based on specific street case analysis and evaluation at the block level, lacking comparative analysis and research on two or more cases, and has not formed a comprehensive research system at the block level.

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