Research Hotspots and Trend Analysis of Jiangnan Gardens Based on CiteSpace
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Abstract
Jiangnan gardens have both natural vitality and artificial artistic charm, and are a member of the world cultural heritage. This paper takes the relevant literatures of Jiangnan gardens from 1991 to 2020 as the research objects, carries out research for the cultural thoughts, gardening techniques, and artistic value of Jiangnan gardens with bibliometric method, orders the development process of Jiangnan gardens, obtains the current situation and hotspots in the research field of Jiangnan gardens, in order to provide methods and theoretical references for the further research of Jiangnan gardens.

Keywords
Jiangnan gardens; CiteSpace; Heritage protection.

1. Introduction
China has long been known as the “mother of gardens”. Chinese gardens are the cultural treasures of our country, especially the Jiangnan gardens are the best. Therefore, there are countless researches on Jiangnan gardens. With the arrival of the era of cultural renaissance, the global cultural heritage protection movement has developed deeply, and the researches on Jiangnan gardens have continued to deepen and become increasingly perfect. In recent years, with the continuous maturity of research methods, new progress has been made in the researches on Jiangnan gardens. Shen Han [1] used software to restore the disappeared East Garden, provided a case for the restoration of classical gardens; Liang Huilin [2] and others analyzed the application of 3D digital mapping and information management technology in gardens, and explored new directions for the protection of garden cultural heritage.

The keywords and research hotspots are summarized through the retrieval, screening, and cluster analysis of the relevant literatures of researches on Jiangnan gardens in the past 20 years, so that researchers can accurately grasp the research state, hotspot distribution and cutting-edge trends in this field, and provide methods and theoretical references for the further researches of Jiangnan gardens.

2. Data Sources and Research Methods
2.1. Data Sources
"Jiangnan Garden" as the subject word (1991~2020) and is retrieve on the CNKI. A total of 1475 papers are retrieved, and 792 papers are obtained through manual screening, including 531 academic journals and 237 dissertation journals.

2.2. Research Methods
(1) Literature synthesis method: scholars collect and analyze relevant literatures, extract useful information from them, and then re-categorize, study, sort and draw conclusions on the extracted dliteratures [3].
(2) Bibliometric method: The bibliometric tool used in this paper is CiteSpace. CiteSpace can visually analyze the literatures to obtain research hotspots and trends of subject development cutting edge.

3. Paper Types and Research Process

The analysis shows that the paper types include 531 academic journals, 22 doctoral dissertations, and 215 master's dissertation, academic journals account for more than 50% of the total research literatures; the next is master's theses. The research process of Jiangnan gardens can be roughly divided into three stages: the initial stage (1991~2001); the rising stage (2002~2015); the research stage (2016~2020).

4. Analysis of Research Theme

4.1. Gardening Elements and Techniques

The gardening elements include the water body [4], plant [5], building [6], mountain and rock [7] four elements, as well as scenery wall [8], plaque [9] window [10], and other elements. The researches on analyzing space design of Jiangnan gardens are increasing in gardening techniques. For example, Wei Kewei [11] took the Lingering Garden and the Humble Administrator's Garden as examples to analyze the visual control of the 60° horizontal view angle at the highest place; Guo Jiaxi [12] and Zhu Lingqian [13] used information technology to analyze the garden landscape of Jiangnan gardens.

4.2. Aesthetic Characteristics and Idea Connotation of Gardens

Gardens are inseparable from poetry and painting. Chen Yuxing [14], Wang Shuyang [15], Qiu Wenying [16] and Guo Lingjie [17] explored the art characteristics of Jiangnan gardens from the angles of painting, poetry, calligraphy and music; Chen Wei [18] analyzed ancient city development and water conservancy projects to explore the cultural thoughts of "mind" in Jiangnan gardens.

4.3. Garden Protection and Inheritance

Suzhou classical gardens are listed as the world cultural heritage list, which makes the protection of cultural heritage enter people's field of vision. Chen Shuqiang [19] and Yang Jun [20] summarized the protection models of current situation from angle of the individual cases and whole, and put forward development trends and protection suggestions. Zhang Qingping [21] proposed to establish database of cultural resources of Jiangnan gardens, and use digital technology to study and protect garden cultural heritage.

5. Summary and Outlook

The following conclusions are drawn by analyzing papers with theme of Jiangnan gardens in CNKI: 1) domestic researches on Jiangnan gardens is increasing year by year, with the development of science and technology and the advancement of research methods, the research contents are getting deeper and more comprehensive; 2) According to keyword cluster analysis, it can be found that the research focuses in different periods are different, the literatures on Jiangnan gardens published in 1991-2001 are mostly based on the research of gardening ideas, garden aesthetics, other gardening elements and spatial layout, in the past few years, and the application of 3S technology in the spatial dimension of the landscape is weighted. The research direction has been focused on culture, artistic conception, plant configuration, garden layout, etc. Therefore, the future can be studied from three aspects: 1) the improvement of research indexes. Expanding the scope of research objects is not limited to popular gardens and the improvement of internal research indexes of existing research objects; 2) more scientific
research methods. The digital technology is reasonably used based on historical data research; 3) garden protection and inheritance: strengthen the construction of the garden protection system, establish the garden archive management system, and balance the relationship between garden heritage protection and regional development.

Note: the pictures in the text are drawn by the author.

References


