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The Hotspots and Trends in the Study of Xu Wei

NIU LIANG (1975-), China Jiliang University, associate Professor, Chinese thought and painting.

XIANG WEI* (1979-), Zhejiang International Studies University, lecturer, modern art history. 173216819@qq.com

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Email: artfrontier2023@outlook.com

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Niu Liang, Xiang Wei*

Abstract

An analysis of the hotspots and trends in the research literature about Xu Wei is helpful in providing some extended opportunities for the study of Xu Wei. In this paper, the keywords and abstracts of research literature about Xu Wei collected on the China National Knowledge Infrastructure (CNKI) are analyzed by co-word network and Latent Dirichlet Allocation (LDA) from 1961 to 2020. We found that the hotspots of Xu Wei research in the co-word network were keywords about "impressionistic painting" "natural color" and "Yangming philosophy". The keywords of the most prolific writers are somewhat different from the core keywords. LDA analyzes the abstract data to reveal that the main content of research focuses on "impressionistic painting" and "flower and bird painting". The use of quantitative methods to analyze research trends about Xu Wei complements traditional literature reviews.

Key Words

Co-word network, LDA, Xu Wei, impressionistic painting, natural color

Introduction

Thematic discovery and trend changes in the literature about a field are important for understanding the knowledge of that field. The traditional approach gives the direction of the research in the form of a manual literature review. This approach was used in research on Xu Wei. Fu Qiong conducted an overview analysis of the nearly century-long history of research about Xu Wei from 1912 to 2002, dividing it into three phases. The first phase (1912-1960) focused on the story of Xu Wei; the second phase (1961-1979) was an introductory text with more propaganda value than academic value; the third phase (1980-2002) focused on Xu Wei's aesthetics and artistic characteristics. 1 Chen Yuanyang divided research about Xu Wei's dramas into three stages, using 1949 and 1979 as the boundary, in which research about Xu Wei's dramas was in its infancy during the nearly 400 years before 1949. After 1979, scholars on the mainland made significant advancements in the study of Xu Wei's dramas from various perspectives. The central

topic of this period focused on the concept of originality in drama studies.2 Sun Xiaoting focused on the SouthernLyrics, arguing that since the 1980s scholars have studied the Southern Lyrics in greater depth, covering editions and documentation as well as the discovery of drama theory and its influence.³ Liu Yang researched Xu Wei's painting in mainland China and Taiwan from 1959 to 2009 and found that Xu Wei research focused on the exploration of painting style forms, and psychological studies of personality. 4 Li Yongqiang analyzed the changing status of the history of Xu Wei's painting in Chinese art history and painting history works. He argued that Xu Wei's status in Chinese art and painting history was dispensable before the 1970s, and that the 1940s and 1970s were influenced by the external evaluation criteria of realism. After the "reform and opening up", the evaluation of Xu Wei was gradually objective and rational, and Xu Wei's status in the history of painting was transformed into a representative figure of Ming dynasty bird and flower painting.5

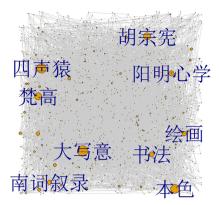


Figure 1. Keyword co-word network

The above review on Xu Wei research was obtained by means of manual reading. Since it is rare to read all the literature manually, the selection of representative literature becomes a common method used by researchers. But what kind of literature is representative? It is a matter of opinion. This type of literature review is prone to several problems. First, the selection of literature lacks criteria; second, the number of selected articles is small; third, the literature review can only select representative literature for interpretation, without capturing the rise and fall of research. In response to the problems of existing literature reviews, the shift from a subjective description of the literature to a bibliometric literature analysis with a focus on data visualization is a complement to the shortcomings of the traditional literature review. The bibliometric review method has been applied, and Yan Chengxi et al. constructed a co-word network with the topic of "library alliance" and made a reasonable projection of the trends in library alliance research. Li He et al. analyzed the current status and development trend of research on big data on the web of Science

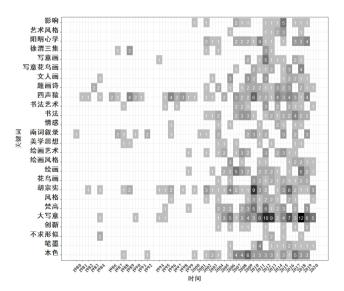


Figure 2. Heat map of core keywords.

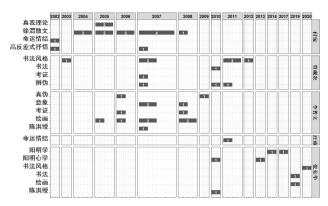


Figure 3. Heat map of keywords for high-producing writers.

platform by bibliometric analysis, visual analysis, and content analysis. This paper applied co-word network and LDA to reviews of Xu Wei in order to arrive at a comprehensive and objective analysis of Xu Wei research.

1. Data Source and Pre-Processing

The data were collected from the China National Knowledge Infrastructure (CNKI), using "Xu Wei" as the subject term and searching for all Xu Wei studies. The title, abstract, key words, year of publication, author's affiliation, and journal name were included in the title list. Keywords referring to the same terms were combined; for example "Xu Wenchang" "Qingteng Jushi" "Qingteng Lao" "Qingteng Daoist" "Tian Shui Yue" and "Tian Chi Shan Ren" are combined into "Xu Wei".

2. Keyword Analysis

Keywords are core words selected by the authors of a paper to represent the content of their research and reflect the topic of the study. If a keyword is repeatedly discussed by different pieces of literature, the idea represented by that keyword is an important idea in Xu Wei research; the co-word network was used to measure important ideas. Co-word networks can effectively detect core keywords, and a time-series visual display of these keywords can detect the evolution of these important keywords.⁹

2.1 Keyword co-word network

The keyword co-word network is constructed to display labels for keywords whose node degree centrality is greater than the threshold value, and the results are shown in Figure 1. The most frequently shared keywords were "four-sound ape" "natural color" "Yangming philosophy" "painting" "Van Gogh" "Hu Zongxian" and "calligraphy". Most of the papers on Van Gogh compare Van Gogh with Xu Wei. The *Four-Sound Apes* essay is an analysis of Xu Wei's dramas. Yangming philosophy explains the ideological origins of Xu Wei's work and identifies his concept of natural color as being influenced by Yangming. In terms of artistic style, researchers have positioned Xu Wei as the creator of the impressionistic painting.

Degree centrality reveals the importance of a keyword from the perspective of the word being connected; it ignores the role played by the word that connects it. Therefore, the core topics of Xu Wei research in terms of degree centrality is not comprehensive enough. The importance of nodes in a network is also measured by types of betweenness centricity, closeness centrality, and Eigenvector centrality. 10 The top 50 highest ranked words in terms of Xu Wei's co-word network degree centrality, betweenness centricity, closeness centrality, and Eigenvector centrality are then intersected, and the co-words in the intersection are the more important terms in Xu Wei research. These words were displayed in a heat map according to their rankings over time, and the results are shown in Figure 2. Among them, "Four-Sound Apes" and "Southern Lyrics" have been discussed by scholars for the longest time, and their annual distribution is basically the same, indicating that Xu Wei's dramas and his theories of drama are discussed more frequently in the academic community. In terms of the cumulative number and time span, Xu Wei research has intensified since 2000. The year with the highest number of word frequencies shows that "impressionistic painting" "literati painting" and "Yangming philosophy" are prominent in the distribution of word frequencies over the years.

In a chronological examination of the concepts of impressionistic painting, we find that no one mentioned the concept of impressionistic painting before 1984. One of the papers published in 1984 was "Xu Wei's Miscellaneous Flower Scrolls" by Min Xuelin in *New Art*. He argued that Xu Wei's ink paintings were characterized by the spirit of impressionistic painting, and sorted out the genealogy of ink painting from Li Cheng, Guo Xi, Su Dongpo, and Mi Yuanzhang to the Yuan Sijia and Bai Yang in the Northern Song Dynasty. After 2004, there was an upward trend in the study of impressionistic painting, with the first peak in 2012.

The influence of Yangming studies on Xu Wei involved his philosophy, painting, literature, and drama. The literature argues that Xu Wei's philosophical ideas originated from Yangming philosophy, and Song Kefu

proves the influence of Yangming philosophy on Xu Wei by examining his interactions with the images of Yangming philosophy. The literature has examined the factors of Yangming Xinxue in Xu Wei's ink and wash thoughts, and concluded that Xu Wei's ink and wash thoughts were influenced by Yangming philosophy. The literature has argued that Xu Wei's poetry is characterized as emotional and natural under the influence of Wang Yangming's philosophy. There is a comparative analysis of Xu Wei's drama compositions with those of Tang Xianzu from the perspective on Yangming philosophy. Research on the influence of Yangming philosophy on Xu Wei was blank until 2001; research on the influence of Yangming philosophy on Xu Wei reached its highest levels in 2011 and 2019.

The concept of natural color is also an important direction in Xu Wei research. In 1988, the literature first discussed "vernacular", revealing Xu Wei's idea of vernacular from the subject's homecoming, the materialization of the self, the flow of the heart and blood, and the extension of the personality on multiple levels. From 2006 to 2009, the discussion of Xu Wei's theory of natural color was on the rise, reaching its peak in 2009.

2.2 Keyword analysis of high-producing authors

High-producing authors tend to have more in-depth research on a topic and therefore more publications, yet does the research of high-producing authors constitute a directional guide for research such that other researchers expand new research dimensions from the questions generated by prolific authors? If the research topics of high-producing authors overlap with the research questions of an entire journal, then their findings are inescapable for researchers. Therefore, analyzing the high-producing authors and finding their keywords can be very helpful in explaining whether the highproducing authors are leading the direction of research. The top-ranking authors of Xu Wei research publications are Fu Qiong (21), Li Puwen (11), Wang Pei (11), Jia Yannong (10), and Zhang Donghua (6). The keywords of their papers are shown in Figure 3, with Fu Qiong's research focusing on the years 2002-2008, where he systematically analyzed the characteristics of Xu Wei's prose and its historical origins and reassessed its significance and status in the history of Chinese literature and Ming dynasty literature. The keywords are "Xu Wei's prose" "fate complex" and "high-contrast lyricism". Li Puwen's research focuses on Xu Wei's painting friendships and the authenticity of his paintings. Jia Yannong's research is similar to Li Puwen's in that he uses content analysis and a close reading of the text to

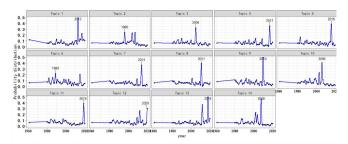


Figure 4. Topic year distribution.

examine the authenticity of Xu Wei's calligraphy. Wang Pei focuses on Xu Wei's cultural mentality, he examines the relationship between his individual mind, his fate, his ideological pathology and the social era, revealing his typical significance in the history of cultural mentality. Zhang Donghua applies the history of ideas to Xu Wei research, arguing that Yangming philosophy influenced the formation of Xu Wei's impressionistic painting. High-producing writers do not have many words that overlap with the hot keywords of the co-word network. In general, the high-producing writers did not produce research propositions consistent with the hot topics. Their research is a deep plowing of their familiar fields, and their contribution to the overall research on Xu Wei is not significant.

3. LDA of Abstract Data

Keyword analysis is helpful in revealing the topics of Xu Wei research; however, the limited number of keywords in an article makes it difficult to fully reveal the main ideas of the paper's research. To address these issues, the abstract data of the paper was chosen to examine the research topics. An abstract is a short text that aims to provide a synopsis of the content of the literature without commentary. Analysis of abstract data can provide a more comprehensive picture of Xu Wei research. The abstract data were processed to extract nouns, and important words were selected according to the TF-IDF technique to construct an annual document word frequency matrix, and then the annual topic distribution was calculated by Latent Dirichlet Allocation (LDA). The LDA model is able to present semantically related words in the form of topics.¹⁷ Since the LDA topic model expresses a document-topic, topic-terms hierarchy, the number of topics is very important; too many topics means many duplicate topics, and a small number of topics does not allow a correct classification of documents. In this paper, the maximum likelihood estimation method based on the summation average is used to calculate the optimal number of topics as 14, the

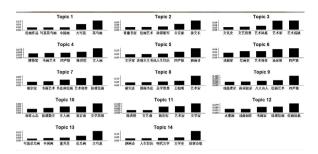


Figure 5. Topic terms.

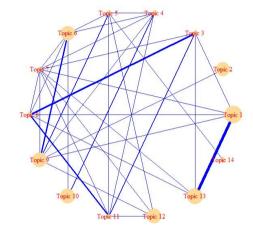


Figure 6. Topic network.

annual topic distribution is plotted, and the results are shown in Figure 4.

The years that correspond to the thematic peaks in Figure 4 are important years when the topics of interest to researchers are most prominent; 1989 was an important year for the study of Xu Wei's dramas, 2006 was an important year for the study of Xu Wei's literature, and 2013 was an important year for research concerning XuWei's bird and flower paintings. The important terms contained in each topic are shown in Figure 5.

Although LDA measures 14 topics, it is not known which of these topics is important. Measuring important topics allows us to quickly grasp the focus of Xu Wei's research by understanding the terms contained in these topics. Since different topics contain the same terms, the Pierce correlation of topics can be calculated based on the term probability distribution, and the topics with correlation greater than the threshold value are selected to establish connected edges to construct a topic network, with the edge width as the correlation coefficient and the node size as the topic contribution rate. By using the topic contribution rate and the strength of the relationship between the topics, it is possible to identify the key concerns of Xu Wei research. From Figure 6, it can be found that Topic 1 and Topic 13 are the most relevant and have a large topic contribution.

From the terms they contain, it can be understood that they focus on "impressionistic painting" and "flower and bird painting", and the years 2013 and 2018 are the most concentrated periods of research. The most relevant topics are Topic 6 and Topic 9, which focus on Xu Wei's dramas. The most prominent time periods are 1989 and 2010, with studies centered on "Four-Sound Apes" "Drama Theory" and "Tang Xianzu". The results are consistent with Xu Wei's position in history as a calligrapher, painter, and dramatist first and a literary scholar second, which is consistent with Xu Wei calling himself "the first in calligraphy, the second in poetry, the third in literature, and the fourth in painting".

4. Conclusion

This paper analyzes the progress of research about Xu Wei through keyword co-occurrence networks and LDA models, which are a more detailed thematic mining of Xu Wei research and a complement to the traditional literature review. Compared with Fu Qiong's review, the hotspot map from 1980 to 2002 shows that the hotspot topics are the "Four-Sound Apes", the narrative of South-ern Lyrics, aesthetic thought, Hu Zongxian, natural color, and literati painting; but Fu Qiong only mentioned Xu Wei's aesthetic thought and artistic characteristics as the focus of research, which is somewhat simplistic. Sun Xiaoting only categorized the research on Southern Lyrics, failing to show the trend of research in different years; however, this paper reveals how the Southern Lyrics has been studied over the years through the hotspot map.

The discrepancy between the results of the prolific authors' research and those of the co-word network indicates that their research results have not been followed by other scholars. Xu Wei research is focused on impressionistic painting, Yangming philosophy, natural color, and literati painting through LDA.

Despite the objectivity and repeatability of the bibliometric approach to literature review, the research process relies on the comprehensiveness and objectivity of the data sources. Due to the lack of book materials included in CNKI, the views contained in the monographs are not yet known, and future research may consider including digital books to do a more comprehensive analysis. These tasks are left for future papers to deal with. This study has some applicability and could be extended to other artists in the future in order to complement the traditional literature review.

China Jiliang University Zhejiang International Studies University

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NIU LIANG (1975-), China Jiliang University, associate Professor, Chinese thought and painting.

XIANG WEI* (1979-), Zhejiang International Studies University, lecturer, modern art history. 173216819@qq.com

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徐渭研究的熱點和趨勢

鈕亮,項瑋

摘 要:對徐渭研究文獻的熱點和趨勢進行分析,有利於為研究徐渭提供學術延伸的契機。本文以中國知網收錄的徐渭研究 文獻中關鍵詞和摘要為分析對象,采用共詞網絡和主題模型方法對 1961 到 2020 年期刊進行研究。共詞網絡探測到徐渭研究 的熱點主題是"大寫意""本色""陽明心學"等觀念,其中高產作家的關鍵詞與熱點主題有一定差距。摘要數據主題模型 揭示了徐渭研究集中在"大寫意"和"花鳥畫"方面。采用定量方法分析徐渭的研究趨勢是對傳統文獻綜述的補充。

關鍵詞:共詞網絡; LDA; 徐渭; 大寫意; 本色

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trade-offs between implementing land and art, revenue and ideals, and elimination and culture. As "accidental visitors" in the eyes of the villagers' community, they need to maintain the independence of their cultural stance while constantly compromising when meeting resistance. Intellectuals are active exiles whose destiny is to move around endlessly. They never return to a stable state of comfort and ease because of their perpetual longing for the ideal, and "sadly, never fully arriving, never becoming one with their new home or situation." ¹⁴

Therefore, although utopia exists only in the ideal, it exists more in the gap between their efforts and practices.

Songzhuang Contemporary Art Archive

LI YANG (1993-), Document Researcher, China Songzhuang Contemporary Art Archive. Master's degree of Dalian Polytechnic University. Research focus on the Chinese contemporary art history and art criticism.

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知識分子的桃源一夢:藝術介入鄉村的前瞻與困局

李洋

摘 要:中國的現代鄉村建設具有經濟主導的現代化與人文主導的現代性之分,在鄉村建設運動、新年畫運動、農民畫運動、 知識分子上山下鄉等早期的文化鄉建與社會運動之後,今天也出現了諸多藝術家自主介入鄉村的案例。藝術介入鄉村,并不 是藝術家選擇進入鄉村生活與創作,而是以有社會責任感的入世者身份參與到鄉村的文化建設之中,對已逐漸流失的鄉村文 化生態進行保護,與村民進行互動式的藝術交流,以促進或啓發鄉村的現代人文建設。

關鍵詞: 當代藝術; 社會介入性藝術; 藝術鄉建; 知識分子

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