



Evolving Trends of Hot Spots in Chinese Animation Subculture Research: A Bibliometric Analysis

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Abstract. With the development of Chinese society, animation subculture and subculture group have increasingly garnered attention from scholars. Methodologically, this article employs Citespace to conduct a bibliometric analysis of 321 journal articles sourced from the CNKI database, systematically identifying research hotspots, developmental history, and frontier fields within the realm of Chinese animation subculture from 2005 to 2024. Three key findings emerge from this analysis: (1) The number of published works exhibited significant fluctuations over time, forming the initial period, the first peak period, the second peak period, and the decline period; (2) The scholarly attitudes towards animation subculture have evolved over time, transitioning from negativity and uncertainty to positivity and affirmation; (3) Animation subculture and fan communities have progressively shifted from niche topics in earlier years to mainstream subjects of interest. Furthermore, this article discusses the advantages and limitations of bibliometric analysis within this field and offers predictions for future research hotspots, which is likes social phenomena, cultural industries, media and information dissemination, social psychology, and mental health.

Keywords: fandoms, animation subculture, bibliometrics, social media

1 Introduction

Animation subculture's members are often eager to spontaneously generate fan works within their subcultural communities.^[1] Generally, their methods of creation and interaction encompass the production of fan art, the writing of fan fiction, and role-playing^{[2][3]}. He cherished works for these fan groups is diverse, encompassing cartoons, movies, operas, and even sports programs^[4]. And people who share the same favorite works come together to form their respective fan bases and build their own "fandoms" communities^[5]. Meanwhile, Cultural differences and the rich tapestry of artistic works from around the globe have given rise to various subcultural groups in different countries. For instance, in the United States, such as fandoms of Star Trek and My Little Pony: Friendship is Magic have spontaneous gathered and form some huge subculture groups^{[6][7]}.

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In China, the subculture surrounding film and television animation emerged relatively late. Following the Chinese government's implementation of reform and opening up policy, East Asian animation, particularly from Japan, gained popularity in the country. As the fan base expanded, enthusiasts of these anime gradually congregated, forming corresponding subcultural groups^[8]. Among these, the larger anime subculture groups include works such as "Naruto" and "One Piece," which have garnered a wide audience and are colloquially referred to as "labourer's comics." The term "labourer's comics" is defined as works that attract non-animation enthusiasts, either due to the herd effect or other factors, ultimately resulting in a substantial viewing demographic. Generally, works exhibiting such characteristics can be categorized as "labourer's comics"^[9]. Additionally, with the increasingly close exchanges among global netizens, many influential film and television animation works have gradually developed significant subculture groups in China, such as Harry Potter or Pokémon series^{[10][11]}.

The active participants within these subcultures exhibit remarkable enthusiasm and dedication to the works they cherish^[12]. For instance, during the early days, proactive civil society subtitle groups translated foreign language works at no cost, thereby reducing the barriers to accessing foreign works due to language challenges for people. This initiative facilitated the rapid growth of related subculture communities^[13]. In recent years, as the quality of local digital art production in China has improved, new subcultural communities centered around local animation have emerged, such as Qinshi Mingyue^{[14][15]}. Moreover, with the swift advancement of digitalization and technological innovation, fan groups within China's ACGN and animation subcultures have begun to produce a substantial volume of fan works, which have gained popularity in the country^{[16][17]}. In the early years, Chinese scholars were concerned that the subculture would affect young people^[18], but with the development of society, scholars have specialized their views on the group from negative to positive^[19].

These studies help analyze the roots of animation subculture phenomena, potentially improving social policies and happiness. However, as this subculture is relatively new to China's mainstream, bibliometric analysis is scarce. Meanwhile, the study can reveal societal attitudes changing in Chinese society with these subcultures.

2 Methods

2.1 Methods of Analysis

The primary research method employed in this article is word frequency analysis within the context of bibliometrics. This method identifies significant keywords according to keywords' frequency of occurrence, centrality and burst keywords^[20]. And this study uses Citespace 6.3.R1 to analysis.

2.2 Methods of Analysis

his study exclusively analyses articles of published Chinese academic journal pertaining to the anime subculture. Excluded from this analysis are essays of published newspapers, non-academic essays, conference papers, and research articles of other non-journal publications, as well as any articles that do not align with the theme of anime subculture or are not written in Chinese.

2.3 Methods of Analysis

The data source for this study is the China National Knowledge Infrastructure (CNKI), which serves as China's authoritative paper retrieval platform. The search timeframe extends from the establishment of the database until July 20, 2024. The search strategy was constructed using keywords pertinent to the research. Search strategy: (theme: ACGN subculture + Animation culture + ACG clture)OR(theme: cartoon + Fandoms Animation + Animation fans+ Otaku). Ultimately, a total of 1,218 documents were retrieved. Following the inclusion and exclusion criteria, conference articles, news and non-academic essays were excluded. Finally, 321 articles were included the study (Figure 1).

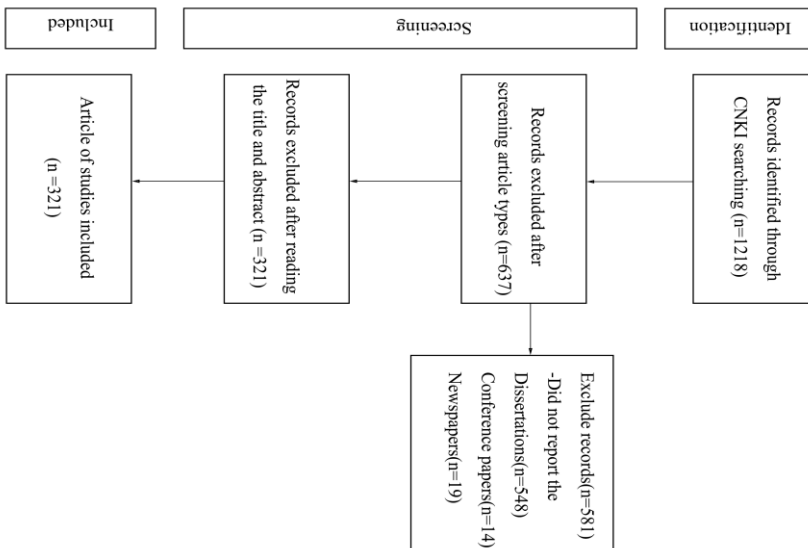


Fig. 1. Flow diagram of the study process.

3 Results

3.1 Publishing Trends

Through data analysis and the line graph of trends in the number of articles published (Figure 2), it can be concluded that the first article was published in 2005 and between

2005 and July 20, 2024, a total of 321 journal articles were published, averaging approximately 17 articles annually on related topics. Overall, the number of articles published in this field is relatively small, with fewer than ten articles published in some years. Consequently, the field animation subculture can be considered as a relatively underexplored research field. The publishing trend in this field can be categorized into four distinct stages: the initial period, the first peak period, the second peak period, and the decline period. An analysis of all published articles indicates that from the publication of the first paper to the present, the volume of publications in this field has experienced significant fluctuations, and the research focus has shifted accordingly. However, considering the overall number of publications, this field is unnoticed in China.

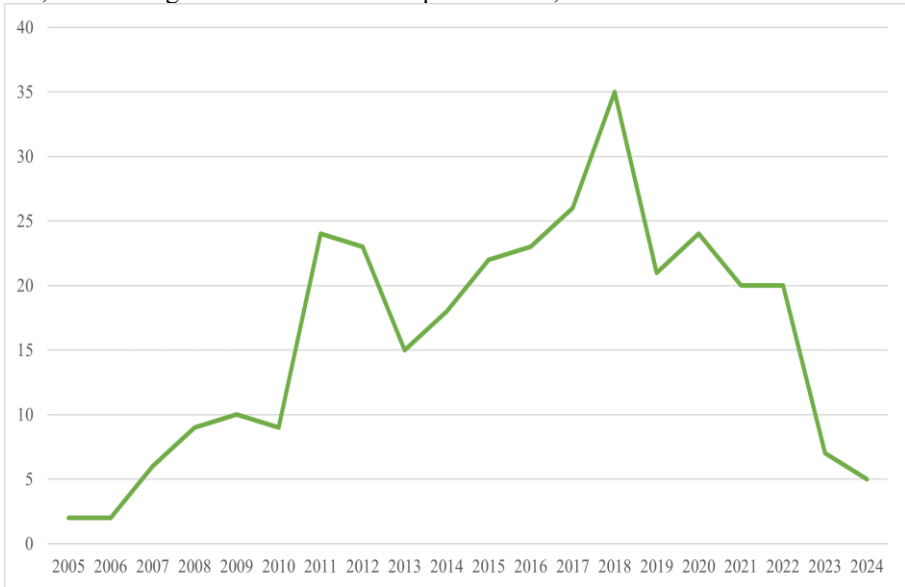


Fig. 2. Line graph of trends in the number of articles published.

3.2 Publishing Trends

This study will import standardized sample data into the software Citespace, covering the time range from 2005 to 2024, having a 1 year of time-slicing. For each time period, a default retention of Top N=50 will be applied, with 'keywords' selected as the analysis project. A co-occurrence map of keywords related to the field of Chinese animation subculture from 2005 to 2024 will be generated. The size of the nodes in the graph corresponds to the frequency of keyword occurrence (the more frequently a keyword appears, the larger the node), while the connections between nodes illustrate the frequency of co-occurrence among different keywords. The resulting graph comprises a total of N=216 nodes and E=233 connections, Density=0.01 (Figure 3).

In exploring the impact of animation subculture on society, Fang(2011)'s^[19] highly cited paper published in *China Youth Study* in 2011 raised concerns regarding the subversion, resistance, and alienation of youth subculture from mainstream culture. Similarly, Sun (2013)'s^[21] influential paper published in the journal *Today's Mass Media* in 2013 discussed the significant branch of the field known as "cute culture," which originated in Japan and is closely associated with many Japanese animations. Sun (2013) adopted a positive perspective, asserting that "cute culture" has begun to proliferate in China as a representation of youth subculture and has been embraced by mainstream culture. Concurrently, in the economic domain, the animation industry has emerged as a focal point for research due to its expanding group size and increasing social influence. With the advancement of China's animation industry, various new related industries have also emerged. For instance, in recent years, Bilibili video platform, a platform catering to "otakus," has developed alongside the growth of the subculture community, additionally, these emerging platforms and communities have fostered a range of interactive methods. For example, bullet screen, a public interactive technique, has noticed with the platform's development and has gradually become a new research hotspot.

3.3 Cluster Analysis of Keywords

In this study, standardized data from sample research was imported into the software CiteSpace, with the time period selected spanning from 2005 to 2024. The top 50 keywords (Top N=50) were retained for each time period. The analysis project focused on "Keywords." The software generated a clustered graph, resulting in a keyword clustering map related to Chinese animation subculture research from 2005 to 2024 (Figure 4). The data indicates that the clustering module value of the keyword clustering map exceeds 0.3, signifying a significant clustering structure; furthermore, the average silhouette value (S) meets the requisite criteria ($S > 0.7$), confirming the credibility of the clustering results.

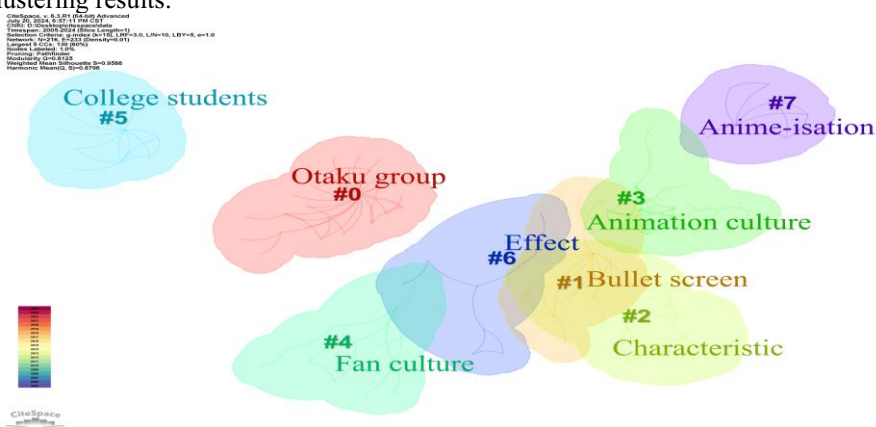


Fig. 4. Cluster analysis chart.

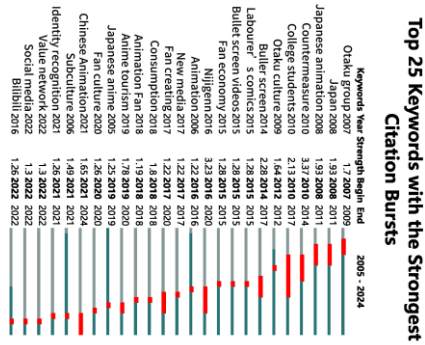


Fig. 5. Bursts keywords of top 25.

The clustering map reveals a total of eight clusters, with specific results illustrated in Figure 4 and Table 2. Analysis of the cluster diagram and the primary members of each cluster reveals that the key research directions in the field of animation subculture in China encompass: population characteristics and cultural phenomena (#0 Otaku group, #4 Fandom culture, #5 college students), community communication forms (#1 Bullet screen), animation works, animation culture, and related industry development (#3 Animation culture, #7 An), as well as subculture groups and their social influence (#2 Characteristic, #5 College students, #6 Effect).

Table 2. Detailed data for cluster analyses.

CL	NO	SV	AY	Main clustering members (LLM)
0	25	0.984	2011	Otaku group 17.79, 1.0E-4; Commonality 6.33, 0.05; Subculture 5.28, 0.05; Communication and dissemination mode 3.15, 0.1; Baidu BBS of Animation 3.15, 0.1
1	14	1	2016	Bullet screen 21.1, 1.0E-4; Subculture 16.61, 1.0E-4; BiliBili 6.87, 0.01; revelry 6.87, 0.01; <i>Complain talk show</i> 3.41, 0.1
2	13	0.914	2012	Characteristic 13.72, 0.001; Animation Fandoms 9.11, 0.005; consume 9.11, 0.005; Post-subculture 9.11, 0.005; Animation 7.45, 0.01
3	13	0.911	2010	Animation culture 14.31, 0.001; Animation industry 9.46, 0.005; Creative industry 9.46, 0.005; Aesthetics 4.69, 0.05; cultural defence-line 4.69, 0.05
4	12	0.912	2014	Fun culture 7.3, 0.01; Media metaphor 5.43, 0.05; Fan creation 5.43, 0.05; semiotic consumption 5.43, 0.05; Anime tourism 5.43, 0.05
5	11	0.977	2011	College students 23.83, 1.0E-4; Countermeasure 9.73, 0.005; Otaku group 4.6, 0.05; Otaku lifestyle 4.6, 0.05; Reason 4.6, 0.05
6	10	0.882	2011	Effect 6.87, 0.01; Adolescent .03, 0.05; Values education 6.03, 0.05; Commercialisation 6.03, 0.05; Internet 6.03, 0.05
7	7	0.987	2022	Animeisation 8.41, 0.005; Network Literature 8.41, 0.005; 8.41, 0.005; Chinese animation 8.41, 0.005; Otaku group 0.68, 0.5

CL= Cluster; NO = Nodes; SV= Silhouette value; Average year =AY.

3.4 Analysis of Burst Keywords

Figure 5 shows the top 25 keywords from a Citespace burst keywords. From 2005 to 2012, Chinese research focused on the impact of Japanese anime on society, viewing anime fans as a subculture of interest. The research emphasized the characteristics of otakus and their influence on China. From 2014 to 2016, with the rise of personal Internet devices, bullet screen videos and their popularity among youth led to a surge in related studies, meanwhile, anime fans started to be recognized by mainstream society. From 2017 onwards, scholars began to see animation fans as a significant cultural force, examining topics like identity, social networks, and fan creation, and exploring the economic benefits of Chinese animation and its fan base.

4 Conclusions

This study employs bibliometric analysis methods and utilizes Citespace software to systematically analysis the current research landscape in this field, providing an in-depth analysis of the publishing trends and evolving hotspots within the domain of Chinese animation subculture, thereby summarizing the current research status. These insights will aid other researchers in understanding the development of China's animation subculture, enabling them to identify key hotspots for more detailed investigation. Additionally, this study offers bibliometric data support for future researchers.

4.1 Prediction of Research Hotspots

Through this bibliometric analysis, we can confidently infer that future research hotspots may encompass social phenomena, cultural industries, media and information dissemination, social psychology, and mental health.

The evolution of research topics indicates a shift from, with the increasing acceptance of animation subculture by mainstream society, most scholars no longer perceive it merely as a niche group for case analysis; instead, they have begun to investigate the impact of animation subculture on society^[22].

The rise of anime subculture and its societal implications may emerge as a research hotspot in the future. As fandoms and there subcultures gain greater acceptance within the mainstream, the cultural industry has also become a significant topic of interest in recent years. Research themes related to cultural industries, such as consumer behavior of anime-related may also attract scholar's attention in future.

Furthermore, as the animation subculture group rapidly expands in China, new media platforms, including barrage videos, have developed swiftly. This growth has also makes some unique methods of information dissemination within the subculture communities. Therefore, media and information dissemination may become an important research hotspot in the field of animation subculture.

In the initial phases of the animation subculture's introduction to China, scholars exhibited varying attitudes towards it. Some argued that certain animations could foster the aesthetic development of teenagers while also providing gentle educational opportunities. However, they also expressed concerns that specific anime might negatively

impact the mental health and psychological development of adolescents^[23]. In recent years, as animated works have gained wider acceptance, the animation subculture has increasingly integrated into mainstream culture^[25]. Consequently, many scholars have shifted their focus to examining the effects of animated works and the animation subculture on social interaction, identity formation, and the mental health problems faced by some members of this subculture.^[24]

4.2 Limitations and Implications

The evolution of research topics indicates a shift from the relatively niche focus on otakus, otaku culture, subcultures, and countermeasures in earlier years to a broader examination of macro values and niche in recent years. With the increasing acceptance of animation subculture by mainstream society, most scholars no longer perceive it merely as a niche group for case analysis; instead, they have begun to investigate the impact of animation subculture on society.

However, this study has limitations, it only included articles in CNKI. Additionally, CNKI doesn't has standard terms about the topic, so the reason may lead to some research excluded^[26].

In any case, this study still finds that the interest in anime subculture in China is increasing rapidly despite being a niche field of study, and that scholars' research has become more in-depth, and that this topic will provide a new entry point for scholars to study social change in China.

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