Using Baidu Index to Explore the Temporal Dynamics of Chinese Online Interest in the Thai Film Bad Genius

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Abstract

Objective: As the largest search engine in China, Baidu developed the Baidu Index, which is used to study Internet users' online search behavior and interests. This study aims to reveal the temporal dynamics and influencing factors of the film "Bad Genius" in China by analyzing its search trends on Baidu Index. **Methods**: This study used the Baidu Index, a publicly available database for accessing search query data systematically and quantitatively, to search using the Chinese keyword for Bad Genius. Search data were extracted from October 1, 2017, to March 21, 2025, to quantitatively analyze the temporal dynamics of public attention to the film. **Results:** The search trends shows three distinct phases: 1) The initial theatrical release peak (October 16-22, 2017)occurred three days after the premiere, confirming the chain reaction mechanism of "watching - dissemination - search" driven by social platforms; 2) A secondary peak emerged within 72 hours after the film's release on a streaming platform (December 1, 2017), specifically from December 4 to 10, 2017, reflecting the accelerated dissemination efficiency due to bullet-screen interactions; 3) Subsequent periodic fluctuations, such as during the 2019 Chinese GaoKao and the 2020 graduate entrance examination season, indicates that the film's narrative resonated with the issue of educational equity through the "social clock" effect, and triggered collective anxiety. **Conclusion:** The dissemination process of "Bad Genius" in China showed clear temporal dynamics: It garnered strong public attention and interactive participation during the initial theatrical release. Subsequently, its dissemination on streaming platforms broke through the traditional time threshold of word-of-mouth fermentation. The long-tail effect was characterized by precise resonance with the "social clock."

Keywords: Search Engine, Baidu Index, Bad Genius, Data Mining, Cultural Dissemination

1. Introduction

In contemporary society, films not only reflect social realities but also have the potential to spark widespread public discourse and garner significant attention at specific moments, serving as a vital medium of cultural dissemination. Since its release in 2017, *Bad Genius* has triggered heated discussions among the Chinese public as a recent cross-national film with an educational theme. Directed by Nattawut Poonpiriya and inspired by the sensational SAT cheating scandal in Asia in 2014 (Wang, 2017), the film utilizes a crime-thriller narrative to expose structural contradictions within the education system. Academic discussions surrounding *Bad Genius* have primarily focused on its narrative techniques (Wang, 2018), artistic expression (Guo, 2013), and critique of social class (Singh, 2025). However, few studies have investigated the temporal dynamics of the film's dissemination and impact. Analyzing the temporal dynamics of public engagement before and after the film's release can offer deeper insights into its dissemination trajectory and long-term social influence. In the digital era, internet search data provides a novel perspective for studying cultural dissemination. Big data contains rich and nuanced information—ranging from perceptions and behaviors to public concerns—offering a solid theoretical foundation for empirical research (Tan, Yang, Lu, He, & Teng, 2024). Mining such data allows researchers to infer public interest in specific topics or keywords.

Google Trends, for instance, has proven to be a valuable tool in various research domains, offering real-time data for analysis and forecasting. Cervellin et al. (2017) demonstrated its moderate reliability in tracking the epidemiology of common diseases with low media coverage, while Mavragani et al. (2019) proposed a methodological framework for employing Google Trends in infodemiology and public monitoring, emphasizing the necessity of methodological rigor for reliable results. Similarly, the Baidu Index—developed by Baidu, the most widely used search engine in China, offers a platform for capturing the behaviors and concerns of Chinese internet users. It has emerged as a powerful statistical tool for analyzing user behavior and characteristics in the Chinese digital context (Zhu & Xia, 2021). Although previous research has applied the Baidu Index in areas such as public interest in lifelong education (Tan, Ao, & Teng, 2024), knowledge management (Tan, He, & Teng, 2022a), children's mental health (Tan, He, & Teng, 2022b), and disease prevention and control (Wang et al., 2020), this study is the first to employ this big data approach within the domain of cultural dissemination.

By analyzing search trends for *Bad Genius* on Baidu Index, this study aims to uncover temporal changes in the film's popularity and explore the underlying social and psychological motivations driving public interest. Examining these temporal dynamics not only enhances our understanding of the film's dissemination pattern but also offers empirical and theoretical contributions to future research in film communication. Specifically, this study explores the temporal dynamics and influencing factors related to *Bad Genius* in China through Baidu Index search trend analysis. By leveraging data mining techniques, it identifies key dissemination phases and investigates correlations with media coverage, social events, and audience psychology. The findings offer valuable insights for the film industry's dissemination strategies and contribute to a broader understanding of public attention dynamics in the digital age.

2. Methods

Big data generated by Internet search engines, such as Baidu Index and Google Trends, has garnered widespread attention and application across various academic fields. Google Trends, in particular, has been validated as an effective tool for monitoring diseases, forecasting consumer behavior, and supporting research in big data analytics (Silva & Madsen, 2022). Similarly, Baidu—the largest search engine in China—maintains an extensive database of Chinese-language web content and offers rapid access to relevant search results (Bergemann, Bonatti, & Smolin, 2018). It has become a widely used tool for understanding public online interest in the Chinese context (Long et al., 2022). Building on this foundation, the present study utilizes Baidu Index to investigate the search trends related to the Thai film *Bad Genius* in China. Specifically, it quantitatively analyzes the temporal dynamics of public interest in the film by mining search data across 32 provincial-level regions, including provinces, municipalities, autonomous regions, and the Hong Kong Special Administrative Region.

To this end, the Chinese keyword for *Bad Genius* was selected as the core search term. The data collection period spans from October 1, 2017, to March 21, 2025. It is worth noting that the official theatrical release date of the film was October 13, 2017 in mainland China and August 17, 2017 in Hong Kong. Therefore, the dataset includes search data from early October 2017 to capture both pre-release trends and subsequent public responses.
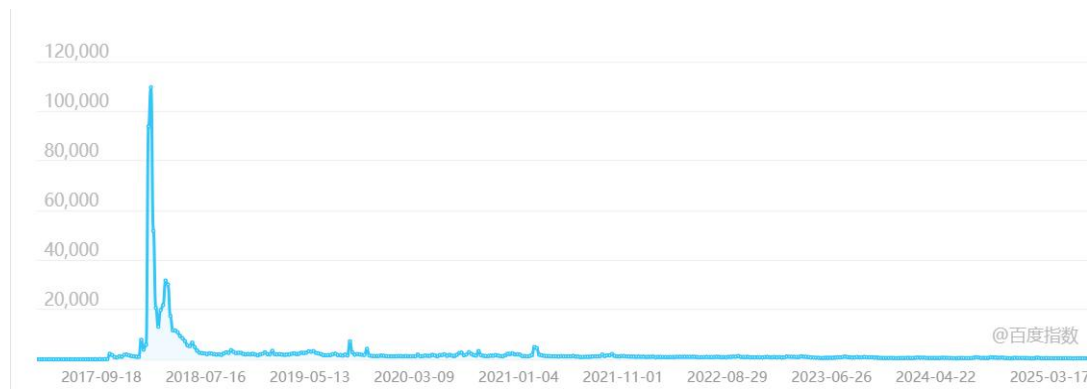
Figure 1. Chinese Online Search Trend for "Bad Genius" Since 2017
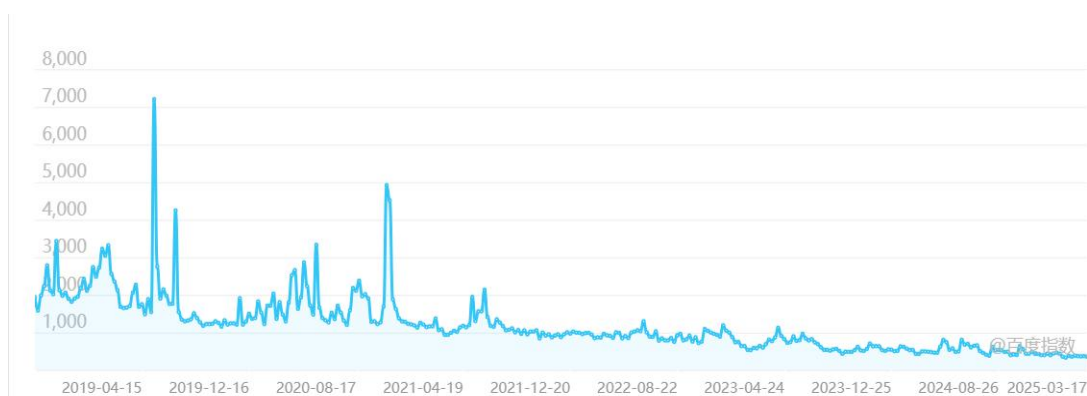
Figure 2. Chinese Online Search Trend for "Bad Genius" Since 2019

3. Results

The Chinese public's online interest in Bad Genius began to rise rapidly starting October 1, 2017, and peaked between October 16 and 22, with a search index of 109,616, before experiencing a sharp decline. A secondary peak occurred from December 4 to 10, 2017, reaching a search index of 81,718. In the subsequent years, the search index showed periodic fluctuations. For instance, slight increases were observed from May 13 to 19, 2019, July 1 to 7, 2019, and October 26 to November 1, 2020. Nevertheless, the overall trend remained relatively stable.

4. Discussion

4.1 Theatrical Release and AISAS Diffusion Model

Based on the analysis of dissemination trends using Baidu Index, this study identified three distinct phases of Bad Genius's diffusion in China. The first peak (October 16–22, 2017) occurred three days after the film's theatrical premiere on October 13, indicating a clear lag between viewing and public search behavior. This delay exemplifies the "watching → dissemination → search" chain reaction in the new media era. As the top-grossing Thai film of 2017, Bad Genius quickly gained traction on platforms like WeChat Moments and Weibo (Zhang, 2017). Notably, the film's box office peak did not occur on the release day, but followed a surge in online discussions. Viewers spontaneously shared their impressions, triggering a viral spread and driving the Baidu Index search volume past 100,000 within a week of release.

This temporal dissemination sequence aligns closely with the AISAS model (Attention–Interest–Search–Action–Share), originally proposed by Dentsu Japan for the digital age (Sugiyama & Andree, 2010). The model emphasizes the active role of consumers in information search and experience sharing following initial interest. In the case of Bad Genius, social media platforms functioned as key intermediaries, facilitating a three-tier diffusion process that mirrors AISAS logic. Platforms such as Weibo, Tieba, QQ, and WeChat enabled rapid film-related content dissemination, unmatched in timeliness and coverage (Yin, 2018).

4.2 Streaming Release and Bullet-Screen Acceleration

The second peak (December 4–10, 2017) emerged just three days after the film's release on the streaming platform iQiyi (December 1, 2017). This demonstrates an accelerated dissemination dynamic enabled by streaming media. Compared to the traditional 72-hour fermentation period associated with word-of-mouth in theaters, streaming audiences engaged in real-time interpretation through bullet-screen comments and social sharing. As noted by Zhang (2018), bullet-screen interactions have shifted the interaction ritual from physical co-

presence to virtual co-attendance, eliminating spatial constraints and forming steeper and more rapid dissemination curves.

4.3 Periodic Fluctuations and the Social Clock Effect

In addition to initial and secondary peaks, the Baidu Index data reveals several minor peaks corresponding with key educational time points. For instance, mid-May 2019 coincides with the Gaokao (national college entrance exam) preparation period, early July aligns with the Zhongkao (high school entrance exam) results announcement, and late October 2020 matches the graduate entrance exam registration season. These fluctuations suggest a "social clock" effect, in which the film's narrative—centered on exam-related anxiety and academic inequality—resonates with cyclical social experiences. This interpretation is supported by a review in Shenzhen Daily (2017), which observed that Bad Genius resonates across various demographics as a subtle social critique of educational injustice and corruption. In this context, the film becomes a touchstone for collective memory, reactivating emotional responses to high-stakes exams. As Özkul and Humphreys (2015) argue, mobile media reshape how individuals document and recall the past, enabling new forms of "mediated memory."

Therefore, film dissemination should not be viewed merely as a cultural consumption activity, but also as a social ritual in which individuals engage in meaning-making through search behavior. The evolving search patterns mapped via Baidu Index suggest a closed-loop system of media events → collective memory → digital archives, in which cultural artifacts like Bad Genius continue to accumulate social meaning through repeated circulation.

5. Conclusion

Based on the analysis of Baidu Index data, this study identifies three dynamic stages in the dissemination of Bad Genius in China. The first peak (October 16–22, 2017) coincided with the film's theatrical release. This surge in online interest was driven by word-of-mouth diffusion through social media platforms, occurring approximately three days after the initial viewing. This lag confirms a chain-reaction mechanism characteristic of the new media era— namely, viewing → sharing → searching. The second peak (December 4–10, 2017) appeared shortly after the film became available on the streaming platform iQiyi (released December 1, 2017). The rapid resurgence of interest suggests that bullet-screen interactions on streaming

platforms significantly accelerate the traditional cycle of word-of-mouth diffusion. The third stage is characterized by periodic fluctuations during key educational moments, such as the Gaokao season (May 2019) and the graduate entrance examination period (October 2020). These peaks indicate that the film resonates with institutionalized examination contexts, reflecting a "social clock" effect in cultural memory and online behavior. This study is the first to apply Baidu Index data to analyze the temporal dynamics of the Thai Film Bad Genius. The findings offer empirical evidence for developing cross-cycle dissemination strategies in the film and television industry, particularly by leveraging culturally significant time nodes anchored in the social calendar.

The limitations of this study are as follows. First, younger users are likely overrepresented in the data due to their higher frequency of Internet use (Adelhoefer, Henry, Blankstein et al., 2021). Second, the Baidu Index reflects public interest and attention, rather than actual viewing behavior, and therefore may not accurately indicate audience engagement levels. Third, the proliferation of social media platforms has diversified users' channels for accessing information (Newman et al., 2017). Moreover, the rise of generative artificial intelligence has further reduced users' reliance on traditional search engines, including Baidu, as a primary tool for information retrieval. Although Baidu Index data are limited to searches conducted on the Baidu platform, Baidu users account for approximately 78.2% of Chinese Internet users (CNNIC, 2022). Thus, the Baidu Index can still be considered a reliable source for reflecting the online interest patterns of the majority of Chinese netizens (Long et al., 2022).

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