

Article

# Research on the Evolution Logic of Controversial Campus Topics on Social Media: A Case Study of the "King Crab" Catering Incident in 2025

Wen Sun <sup>1,\*</sup>, Yining Wang <sup>1</sup>, Xinyu Yang <sup>1</sup> and Xin Gao <sup>1</sup>

<sup>1</sup> Qilu Institute of Technology, Jinan, China

\* Correspondence: Wen Sun, Qilu Institute of Technology, Jinan, China

**Abstract:** In the era of social media, the evolution of controversial topics triggered by campus incidents has become a crucial issue in global higher education governance. Based on the life cycle theory, this study takes the 2025 "999-Yuan King Crab" incident at Nanjing University as a case, crawls the relevant topic interaction data on the Weibo platform using the Octopus Data Collector, and constructs a sentiment analysis model with Python for text sentiment classification to systematically investigate the evolutionary stages and core characteristics of this controversial topic. The results show that the topic evolution of the incident follows a complete path consisting of four stages: incubation, outbreak, climax, and recession, with distinct characteristics in topic popularity, emotional tendency, and discourse themes at each stage. Meanwhile, due to China's unique social media ecosystem and the high social expectation for the public welfare attribute of universities, the topic has shown localized characteristics such as a short incubation period and a rapid outbreak speed, and the discourse logic follows a progressive path of "factual dissemination, value controversy, and rational reflection." This study verifies the applicability of the life cycle theory in the context of Chinese universities in the digital age, provides theoretical reference and practical experience for universities to carry out stage-based topic governance, and also offers cross-cultural insights for global higher education institutions to handle controversial campus topics.

**Keywords:** Controversial Incidents in Universities; Topic Life Cycle; Topic Governance

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## 1. Introduction

The continuous advancement of new media technologies has profoundly reshaped the global landscape of topic communication. The popularization of social platforms has broken the temporal and spatial boundaries of information dissemination, as well as its social circle boundaries. This endows local campus incidents with the potential to rapidly evolve into regional or even national public issues—a phenomenon that is prominent in the global higher education sector. For Chinese universities, the communication characteristics of social media overlap with the special social expectations for universities, posing unique challenges to their topic governance. Social platforms centered on Weibo have formed a communication synergy, which greatly accelerates the spread and influence of topics. At the same time, Chinese society endows universities with the strong attribute of public welfare and the mission of moral education and talent cultivation. Any university behavior deviating from this role orientation is likely to trigger public attention and discussion, thus forming a localized communication logic of university topics.

In November 2025, the canteen of Xianlin Campus of Nanjing University launched a 999-yuan king crab dish. The relevant topic quickly made it to the hot search list on Weibo, sparking extensive social discussions on issues such as "the boundary of commercialization of university canteens", "the rationality of campus consumption", and

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"the public welfare attribute of universities". The topic of this incident escalated rapidly in a short time with remarkable stage characteristics, making it a typical case for analyzing the evolutionary patterns of controversial incidents in Chinese universities.

Life cycle theory is a classic analytical framework for interpreting the evolutionary process of evolution of controversial topics. Existing studies generally divide the evolution of topic into stages such as incubation, outbreak, climax, and recession, providing a systematic perspective for understanding the complete process of topic from emergence to dissipation [1]. However, most existing studies focus on single national or regional scenarios. Although certain achievements have been made in research on university topic in China, the analysis of the specific characteristics and internal logic of each evolutionary stage remains insufficient. These studies fail to fully integrate China's unique social media ecosystem and social expectations for universities, and thus do not clearly present the consistency between university emergency topic and the classic life cycle model, nor its localized particularities.

Based on this, this study proposes two core research questions: First, what unique communication and emotional characteristics do the various stages of the life cycle of evolution of controversial topics of controversial incidents in Chinese universities present? Second, to what extent does the evolutionary path of topic of the "999-Yuan King Crab" incident at Nanjing University align with the life cycle theoretical model, and what are its localized particularities? This study aims to enrich the application of topic life cycle theory in the global higher education field through localized cases, clarify the evolutionary logic of evolution of controversial topics of university emergencies in China, and provide cross-cultural theoretical and practical references for Chinese and foreign universities to implement precise topic governance.

## 2. Literature Review and Theoretical Framework

### 2.1. Life Cycle Theory

Originating in the field of biology, the life cycle theory has been adapted into cross-disciplinary social science research as a classic analytical framework for interpreting the progression of events from emergence to resolution [2]. Within the realm of crisis communication, a widely recognized four-stage model—comprising the incubation, outbreak, continuation, and recovery periods—provides the theoretical foundation for understanding the dynamic stages of a topic [3].

By integrating this theory with localized communication characteristics, researchers have developed a mature system for analyzing the evolution of controversial topics. In the specific context of higher education, empirical studies indicate that the life cycle of over 90% of campus-related topic incidents in China is relatively brief, typically lasting no more than 19 days [4]. These incidents are generally categorized into four distinct evolutionary phases: formation, incubation, outbreak, and recession [5].

The incubation period refers to the brewing stage of a topic incident, during which relevant information circulates within a limited scope with low and slowly increasing popularity. At this stage, insiders or witnesses often release information through independent social media accounts, gradually fostering group resonance before a large-scale discourse climate has fully formed.

The outbreak period occurs when relevant information enters the broader digital public sphere. Driven by mainstream media and online influencers, the incident rapidly transforms into a major hotspot, characterized by a sharp surge in topic popularity and a nationwide scope of dissemination.

During the climax period, online discourse leaders shape the direction of the discussion, and thematic debates continue to expand through in-depth analysis of the core incident. Although the overall heat may decline slightly from its peak, it remains at a high level, making this a critical window for incident response and management.

In the recession period, media outlets and influencers gradually shift their attention to new social hotspots. The popularity of the topic declines steadily and eventually stabilizes, marking the conclusion of the topic's life cycle.

## 2.2. Text Sentiment Analysis

The rapid development of computer natural language processing technology has provided quantitative analysis tools for evolution of controversial topics research. As one of the core technologies, text sentiment analysis has been applied in the research on topic communication and public attitude [6]. At present, the commonly used methods of text sentiment analysis are mainly divided into three categories: lexicon-based methods, machine learning-based methods and deep learning-based methods. Among them, supervised machine learning has become the most widely used type in text sentiment analysis of topic due to its high classification accuracy and strong scene adaptability. In recent years, deep learning models such as BERT have achieved excellent performance in sentiment analysis tasks. However, considering the feasibility of sample size and computing resources, this study adopts the supervised machine learning method for the sentiment classification of topic texts.

## 2.3. Research Framework and Data Collection

The topic has obvious "living organism" characteristics, with a complete process from emergence, development and climax to demise, and there are significant differences in communication characteristics, core influencing factors and public emotional tendencies in different evolutionary stages. However, existing studies have not fully combined the unique topic ecosystem of Chinese universities to clearly present the consistency between the topic of university emergencies and the classic life cycle model as well as its own particularities.

Based on this, this study constructs a research framework of "stage division, characteristic analysis, law summary and governance suggestions". First, the evolutionary stages of the topic of the "999-Yuan King Crab" incident at Nanjing University are divided according to the life cycle theory. Second, the core characteristics of each stage are analyzed from three dimensions: topic popularity, emotional tendency and theme focus. Third, the evolutionary laws and localized particularities of evolution of controversial topics of controversial incidents in Chinese universities are summarized. Finally, targeted strategies for university topic governance are proposed in combination with the evolutionary characteristics.

To ensure the authenticity and validity of the research data, this study selects the Weibo platform as the core data collection object. Weibo is the most influential topic platform in China, and its hot search mechanism directly promotes the spread of hot topic, making it a typical sample for studying topic evolution in China. The Octopus Data Collector is used for targeted data collection, with the core keyword of "Nanjing University King Crab" and the collection time range from November 1 to November 11, 2025. The collected fields include core information such as username, text content, release time, likes and comments. After data verification and elimination of duplicate and invalid texts, a total of 1454 valid topic data were finally obtained, providing a solid data support for the subsequent analysis of topic evolution.

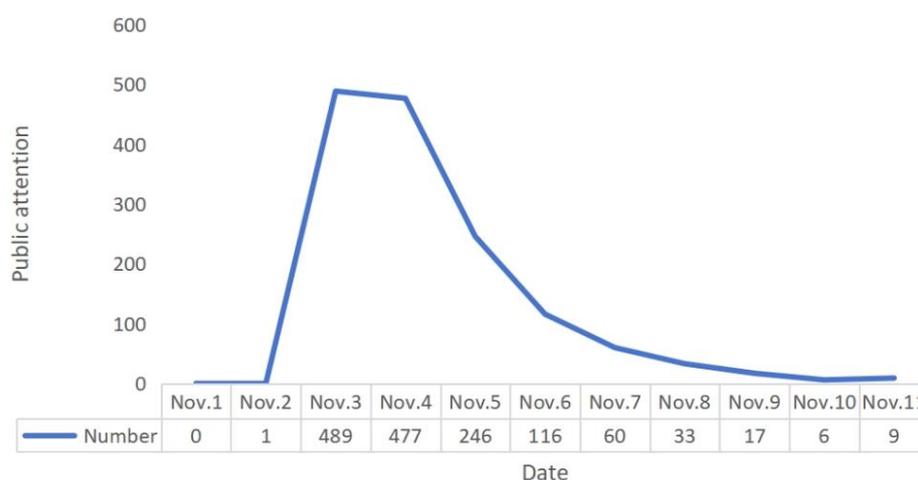
## 3. Analysis of Topic of the "King Crab" Incident

By sorting out the time line of the "999-Yuan King Crab" incident, it is found that the incident first appeared on the Weibo platform on November 1, 2025, and the number of posts tended to be stable and returned to the level before the outbreak of the incident around November 11. This study takes the daily number of valid posts on Weibo as the indicator of topic popularity, calculates the daily sentiment index with the sentiment analysis model, and extracts the theme words of each stage through word frequency

statistics, systematically presenting the evolutionary characteristics of the topic of the incident from three dimensions: popularity, emotion and theme.

### 3.1. Popularity Characteristics of Each Stage of the Topic life cycle

This study takes the daily number of valid posts on Weibo as the indicator of topic popularity and draws a line chart of topic popularity from November 1 to November 11, 2025 (see Figure 1).



**Figure 1.** Public Attention Trend of the "999-Yuan King Crab" Incident.

The discussion was strictly limited to the campus, without spreading to external public network platforms or attracting social attention, and the university management department failed to perceive the potential topic-related risks in a timely manner. This stage is the initial accumulation of topic energy and the small-scale dissemination stage, which aligns with the typical characteristics of the incubation period of topic evolution and serves as a key window period for pre-judging university topic-related risks.

#### Incubation Period (Nov.1 - Nov.2, 2025): Low Popularity and Small-Scope Dissemination

In this stage, the number of relevant posts on the Weibo platform remained at an extremely low level close to 0, with only a single-digit spread scale. On November 1, 2025, the seafood counter of the 9th Canteen of Xianlin Campus of Nanjing University was put into trial operation and launched the king crab dish. The combination of "high price + campus canteen" made the dish somewhat topical, but the relevant information only triggered small-scale discussions on the internal social platforms of Nanjing University, focusing on preliminary speculation about "why the campus canteen launched high-priced seafood".

#### Outbreak Period (Nov.3, 2025): Explosive Growth and Peak Popularity

In this stage, the topic showed a significant characteristic of explosive growth, with the number of relevant texts surging from nearly 0 in the incubation period to 489, forming an almost vertical growth trend, which marked the official entry of the incident's topic into the public vision and the peak of nationwide attention in a short time. Driven by mainstream media and online opinion leaders, the topic of "Nanjing University's 999-Yuan King Crab" quickly made it to the hot search list on Weibo and became a widely discussed public issue on the entire network. Negative emotions of netizens also emerged intensively at this stage, which is the most explosive key node in the evolution of this topic.

#### Climax Period (Nov.4 - Nov.5, 2025): High Volatility and In-Depth Controversy

In this stage, the topic popularity showed a characteristic of "high volatility and decline": the number of relevant posts was 477 on November 4, a slight drop from the

outbreak period but still at a high level; the number of relevant posts dropped rapidly to 246 on November 5, maintaining a relatively high spread scale on the whole. This stage is the core period of the in-depth discussion on this topic, transitioning from purely volume-driven attention to value-level debates, and also a critical window period for university incident response. On the one hand, social discussions on core controversies such as the boundary of commercialization of university canteens, rationality of campus consumption and adherence to the public welfare attribute of universities continued to ferment, with the topic voice remaining at a high level. On the other hand, the official response measures of Nanjing University became the core factor influencing the trend of topic, and the timeliness and pertinence of its response directly affected the effect of alleviating netizens' negative emotions.

#### Recession Period (Nov.6 - Nov.11, 2025): Gradual Attenuation and Return to Normal Popularity

Starting from November 6, the number of topic-related texts entered a steady downward channel, dropping gradually from 116 to a level close to 0, with a gradual attenuation trend in topic popularity. With the continuous emergence of new social hotspots, public attention was gradually shifted, the volume of discussions on the "999-Yuan King Crab" incident continued to decrease, and the social influence of the topic also faded gradually. By November 11, the number of relevant posts returned to the level before the outbreak of the incident, marking the official end of this topic incident, which is in line with the natural evolutionary characteristics of the recession period of evolution of controversial topics.

#### 3.2. Emotional Characteristics of Each Stage of the Topic life cycle

This study constructs a supervised machine learning sentiment analysis model based on Python programming language to carry out the sentiment tendency analysis of topic texts. First, a corpus of 1,000 Weibo posts was manually annotated and divided into positive and negative categories as the training set; the Support Vector Machine (SVM) method was used to train the sentiment classification model, and the ten-fold cross-validation accuracy of the model reached 86.3%. Then, the trained model was used to classify the sentiment polarity of 1454 valid topic texts.

On the basis of sentiment classification, an event sentiment index was constructed, with the ratio of the number of positive sentiment posts to the total number of posts on the same day as the core calculation indicator. The value range of the sentiment index is 0-1, with a higher value indicating a more significant positive sentiment. Usually, 0.5 is taken as the critical value of sentiment tendency: an index less than 0.5 indicates that negative emotions dominate, an index greater than 0.5 indicates that positive emotions dominate, and the greater the deviation of the value from 0.5, the stronger the intensity of the corresponding emotion [7].

Since there were no relevant posts on Weibo on November 1, 2025, the number of topic texts from November 2 to November 11 was counted as shown in the figure. During this period, the distribution of the sentiment index of the incident showed an overall characteristic of "steady decline - fluctuating adjustment - gradual recovery", with significant differences in emotional tendencies in each stage (Figure 2).



**Figure 2.** Emotion Index of the "999-Yuan King Crab" Incident.

The sentiment index remained at a high level of 0.90 in the incubation period. Since the relevant information was only disseminated within Nanjing University, the discussions were mostly curiosity and objective evaluations of the new dishes in the canteen, with no negative emotions formed and positive emotions absolutely dominant [8].

In the outbreak period (November 3), the sentiment index dropped slightly from 0.90 to 0.882. Although the overall public sentiment remained highly positive, the proportion of negative emotions began to appear and slowly increase compared to the incubation period. On the same day, the person in charge of the involved canteen of Nanjing University responded that "the king crab is actually a regular dish at the newly opened seafood counter of the canteen, not specially launched in response to students' comments, and the price of the king crab is lower than the market price with positive feedback from students at present". Although the response clarified the factual doubts, it failed to effectively respond to the value-level controversy on "whether the high-priced dishes are contrary to the public welfare attribute of universities", and thus failed to completely alleviate the negative emotions [9].

In the climax period (November 4 - November 5), the sentiment index continued to drop slightly, falling to 0.839 on November 4 and 0.81 on November 5, with the further spread of negative emotions. On November 4, the Logistics Service Group of Nanjing University issued an official announcement, clarifying the trial operation attribute of the involved counter and requiring the adjustment of dish supply. Although the official response alleviated the negative emotions to a certain extent, the negative emotions still accumulated slowly because the public discussion on the public welfare attribute of university canteens had formed a scale [10].

In the recession period (November 6 - November 11), the sentiment index showed a characteristic of "fluctuating adjustment - gradual recovery". It dropped to 0.78 on November 6, the lowest point of the sentiment index in this topic incident; then it fluctuated slightly, rising to 0.79 on November 10 and further to 0.82 on November 11. With the implementation of the school's rectification measures and the emergence of new social hotspots, the extreme controversies over the incident among the public gradually subsided, negative emotions were gradually alleviated, and the public's recognition and understanding of the innovation in university logistics services became the mainstream again.

On the whole, the sentiment index of this incident remained in the positive range above 0.5, indicating that although negative emotions emerged, they did not dominate the topic. This topic incident did not form a long-term negative impact on the brand image of Nanjing University, nor did it leave a lasting negative topic mark [11].

### 3.3. Thematic Characteristics of Each Stage

This study adopts the methods of word frequency statistics and word cloud analysis to mine the themes of the text content in each stage of topic, sort out the theme focus and evolutionary characteristics of topic in each stage, and clearly present the progressive logic of topic focus (see Table 1).

**Table 1.** Theme words and frequency of each stage of the "999-Yuan King Crab" Incident.

Stage	Date	Theme Words and Frequency
Incubation Period	Nov.1-Nov.2	King Crab (1), Nanjing University (1), Alma Mater (2), Postgraduate Study (1), Canteen (1)
Outbreak Period	Nov.3	King Crab (3121), Canteen (2877), Student (1406), Seafood (755), Price (684), Market Price (502), Cheap (471), Fresh (252), Taste (201)
Climax Period	Nov.4-Nov.5	King Crab (2068), Canteen (1649), Student (831), University (408), Dish (274), Price (228), Inappropriate (224), Seafood (188), High-end (145), Affordable (122)
Recession Period	Nov.6-Nov.11	King Crab (2068), Canteen (1906), Student (999), University (533), Price (359), Dish (316), Catering (218), High-end (160), Value (148), Controversy (140), Logistics (121)

The core hot words of this topic incident include "king crab", "canteen", "Nanjing University", "student", "price" and "seafood", which have the highest occurrence frequencies and constitute the main focus of Weibo discussions on the "Nanjing University King Crab" incident. Followed by the core incident, the thematic words also include discussions on controversial content such as "university", "dish", "inappropriate", "high-end" and "affordable", as well as attention to the school's response behaviors such as "response", "logistics" and "adjustment". This reflects that the topic not only focuses on the incident itself, but also extends to the in-depth discussion on the positioning of university canteens, public welfare attributes and logistics service management.

Through the analysis of the changes of theme-related words in different time periods and the retrieval of relevant Weibo posts, the incident received little attention from November 1 to November 2 in the incubation period, with a mixture of various irrelevant words. The relevant thematic words of this topic incident began to appear frequently on November 3 in the outbreak period, and the incident attracted widespread public attention. The outbreak period focused on the popularity of the incident itself and the relevant discussions on the response of the person in charge of the involved canteen of Nanjing University, pushing the topic of the entire incident to the focus.

In the climax period of topic, the number of controversial thematic words such as "inappropriate", "high-end" and "affordable" increased significantly, reflecting that the topic gradually extended to the value level such as the positioning of university canteens, as shown in the table (Table 2).

**Table 2.** Theme words and frequency of each stage of the "999-Yuan King Crab" Incident.

Subjects	Date	Core Content
Logistics Department of Nanjing University	Nov.4	The sale of king crab at a counter of the 9th Canteen is a publicity and promotion activity during the trial operation period. The university has required the relevant catering enterprises to adjust the dish supply to conform to the public welfare orientation of the university canteen and the trend of diligence and thrift.

Lizhi Commentary	Nov.4	The core of university canteens is to adhere to the public welfare attribute and ensure students' basic dietary needs. At the same time, they can appropriately carry out diversified service innovation to respond to students' personalized needs. The key is to strike a balance between the public welfare foundation and diversified exploration.
Jiupai News	Nov.5	University canteens have the attribute of public welfare and their operation relies on public financial subsidies, with the core mission of ensuring students' basic dietary needs. As a high-end consumer product, the 999-yuan king crab is beyond the reasonable scope of public financial subsidies and deviates from the basic positioning of university canteens.
Kandu News	Nov.5	The launch of high-priced king crab in university canteens is essentially a service innovation in response to students' needs. Equating it simply with conspicuous consumption is an underestimation and misunderstanding of college students' independent consumption capacity.

On the one hand, public discussions on core controversies such as the boundary of commercialization of university canteens and adherence to the public welfare attribute of campus consumption continued to ferment, with the topic voice remaining at a high level. On the other hand, the official response measures of universities became the core factor influencing the trend of topic, and the timeliness and pertinence of their responses directly affected the effect of alleviating netizens' negative emotions. In the recession period, the thematic words shifted to reflective content such as "value", "controversy" and "logistics", with no new hotspots emerging, the topic popularity falling steadily, the public discussions becoming rational, and the influence of the topic gradually declining.

On the whole, the thematic evolution of this topic follows the progressive logic of "factual dissemination - value controversy - rational reflection", which clearly presents the thematic evolutionary characteristics of evolution of controversial topics of controversial incidents in Chinese universities. It also reflects that the public's attention to university incidents has risen from superficial factual curiosity to in-depth examination of the governance logic, role orientation and service mode of universities [12].

#### 4. Discussion

Taking the "999-Yuan King Crab" incident at Nanjing University as a case, this study verifies the applicability of the classic topic life cycle theory to controversial campus topics in Chinese universities in the digital age. The results show that the four-stage evolutionary characteristics of the incident are highly consistent with the theoretical model. Meanwhile, affected by China's unique social media communication ecosystem and the high social expectation for the public welfare attribute of universities, the incident presents three major localized particularities.

First, the incubation period is extremely short and the outbreak speed is extremely fast. It only took 1-2 days for the incident to evolve from small-scale campus discussions to a national public issue, which is closely related to the algorithm recommendation of Weibo's hot search mechanism and the boost of opinion leaders, enabling local incidents to break through campus boundaries quickly. Second, the topics have strong extensibility and value controversy has become the core. The topic focus gradually extended from the factual verification of dish pricing to the discussion on the balance between the commercialization of university canteens and the public welfare attribute, and finally shifted to the rational reflection on logistics management and incident response. This reflects that the public's attention to university incidents has risen to the in-depth examination of the governance logic and social role of universities. Third, the university's

response plays a decisive role in the trend of topic. The factual clarification on November 3 failed to effectively alleviate negative emotions, while the official announcement on November 4 combined with the actual measures of dish adjustment significantly improved the topic sentiment index, which confirms that the effect of topic governance strategies is highly related to the timeliness, pertinence and authenticity of responses.

Based on the stage characteristics of the topic life cycle, universities need to construct a full-process and targeted incident response strategy. In the incubation period, a regular monitoring mechanism for campus topic should be established, focusing on pre-judgment of risks of small-scale communication hotspots on campus, and paying special attention to campus incidents involving sensitive topics such as "high price", "public welfare" and "fairness". In the outbreak period, the core is to disclose facts quickly and accurately to fill the information vacuum, while making it clear that pure factual clarification is difficult to resolve value-level controversies. In the climax period, universities should break away from pure factual clarification, accurately respond to the core value controversies of topic, balance the public welfare attribute of universities with public expectations, and implement practical measures to improve the credibility of responses. In the recession period, universities should do a good job in image restoration and experience summary, and incorporate incident response into the long-term governance mechanism. In addition, universities should establish a pre-assessment mechanism for topic-related risks in links such as logistics service innovation, balance the boundary between service diversification and the public welfare attribute of universities, and reduce the probability of topic triggers from the source.

## 5. Conclusion

The evolution of controversial university incidents exhibits obvious life cycle characteristics. The incubation period, outbreak period, climax period and recession period of the 2025 "999-Yuan King Crab" incident show different characteristics in topic popularity, sentiment index and thematic word distribution. The evolution of topic not only conforms to the general laws of evolution of controversial topics, but also presents characteristics such as fast outbreak speed and strong topic extensibility due to the particularities of universities. The climax period has become the core critical window period for incident response. The targeted response behaviors of universities directly affect the evolutionary trend of topic, and the timeliness, pertinence and authenticity of the response determine the effectiveness of topic governance.

To manage controversial topics, universities should base their strategies on the evolutionary characteristics of the topic life cycle, achieve accurate early warning in the incubation period, make rapid responses in the outbreak period, grasp the key of response in the climax period, and do a good job in image restoration in the recession period. At the same time, universities should make efforts in various aspects such as topic monitoring, mechanism construction and internal management to build a comprehensive and multidimensional topic prevention and management system. This will not only improve the professionalism and effectiveness of universities in responding to evolution of controversial topics, but also resolve topic-related risks from the source, promoting the healthy and stable development of universities.

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