

The Credibility of News Content Generated by DeepSeek: Analysis of Comparative Experiments Under Different Genres

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Abstract

Credibility is an important factor affecting news function. As AI technology has gradually penetrated the news field, understanding the credibility of the news content generated by AIGC has become important. As a recently popular AIGC tool, the credibility of the news generated by DeepSeek is worth exploring. This paper analyzes and compares the factors influencing the credibility of news content generated by AIGC and traditional news content and conducts a comparative experiment: the news genre is set as a variable, the traditional news of different genres is selected, and keywords are extracted as instructions for DeepSeek to generate news content to compare the two news articles. The experimental results show that, as a cutting-edge AI in China, DeepSeek outperforms news and comments in two genres, but on the whole, the credibility of the news content generated by DeepSeek is lower than that of traditional news content and is most affected by the clarity of information. When the information is clear, its credibility can be comparable to that of traditional news.

Keywords

news content generated by AIGC, traditional news content, credibility influencing factors, DeepSeek, comparative study

1. Introduction

In recent years, with the further development of artificial intelligence (AI), such as ChatGPT, which has been constantly updated after its launch in 2022; DeepSeek, which became extremely popular since 2025; and Pictory, which can convert text content to text and video, the content generated by AI (artificial intelligence-generated content (AIGC)) has penetrated all walks of life. From the paper “The Impact of the Application of Artificial Intelligence Technology on News Production and Dissemination” (Tang, 2025), we can see that the shadow of AIGC has appeared in all chains of the news industry: news capture and collection, news content writing, and news broadcasting. Information dissemination and the reporting of the latest facts are important functions of news. To realize these functions, the high reliability of news content for news readers must be maintained. When cooperation between humans and AI has become common, the news content generated by AIGC has become increasingly common. We can find a balance between humans and

machines in the news industry by comparing the credibility of news content generated by AIGC with that of traditional news content.

The credibility of AIGC-generated news has long been a research hotspot in the journalism industry. However, there is still much debate regarding which is more credible: AIGC-generated news content or traditional news content. Some researchers believe that in AIGC writing, the news perception reliability of AIGC is greater than that of human reporters (Yao & Zhou, 2022). However, some researchers believe that the news produced by AIGC has limitations such as defects in semantic understanding, and its credibility is lower than that of human reporters (Li, 2018). However, most studies have focused on users' perceived reliability of news and used the news byline subject as a variable, for example, Waddell (2018) and Jiang et al. (2022), etc. Few studies have used the news writing subject as a variable to directly compare the credibility of the news generated by the AIGC and the news by human reporters. On the basis of previous research, in terms of sports news, AIGC has been able to maintain high objective credibility and perceived credibility, which is as good as or even better than traditional news. Jiang et al. (2022); however, there is still no consensus on the performance of AIGC in social news. DeepSeek is a representative of the frontier technology of AIGC in China, but owing to its introduction and widespread use for a short time, few related studies exist. Therefore, this paper focuses on the difference in credibility between the news produced by DeepSeek and the news written by human reporters under the social news of different news genres.

2. Analysis of Credibility Influencing Factors

Credibility can be divided into two dimensions. Dimension 1 is the objective credibility of the news content itself, which depends on the correctness of the news itself, referred to as objective credibility, and dimension 2 is the credibility felt by the receiver (perception for short). Credibility. Various factors affect the credibility of news content, which can generally be divided into three aspects: the news itself, the disseminator, and the receiver.

2.1 The Similarity in the Influencing Factors of the Credibility of AIGC-Generated News Content and Traditional News Content

2.1.1 The News Itself

From the perspective of the news itself, the influencing factors include the difficulty of processing the news, the clarity of the information and the difficulty of writing.

The difficulty of news processing and the clarity of information influence the judgment of the disseminator on the news and thus affect the objectivity and credibility of the news. The lower the difficulty of news processing is, the lower the error rate of news reports and the higher the objective credibility. For example, the news released by People's Daily (2025) on February 24, when the Ice and Snow World was officially closed on the 26th, requires less information to be processed and is less difficult to process; therefore, the objective credibility is extremely high. When the disseminator can obtain a large amount of clear information before writing the news, we call this information highly clear. The greater the clarity of the news information is, the easier it is for the disseminator to form a correct judgment on the news and the greater the objectivity and credibility of the news.

The difficulty of news writing affects the quality of news, with higher-quality news having greater perceived credibility.

2.1.2 Transmitters

From the perspective of the communicator, the influencing factors include the stance, professional ability, authority and information transparency of the communicator.

- When the disseminator is more objective, the objectivity and credibility of the news content are greater.
- When the professional ability of the disseminator is stronger, the news quality is greater, and the perceived credibility is greater; when the disseminator is more authoritative, the perceived credibility

of the news is greater. For example, as the organ newspaper of the Central Committee of the Communist Party of China (CPC), the People's Daily enjoys very high authority in China; therefore, the perceived reliability of its news reports is very high; when the information transparency of the disseminator is at the medium level, the recipient's perceived credibility will reach its peak (Wu & Wu, 2024).

2.1.3 Recipient

From the perspective of the recipients, the influencing factors include the similarities and differences of the readers' viewpoints and the individual characteristics of the readers.

The receiving side influences the perceived credibility of news content. The similarities and differences of readers' opinions affect the perceived credibility of news content. If the receivers mostly have the same views and agree with the news content, then the perceived credibility of the news will be greater. Readers' individual characteristics, such as judgments and personal standpoints, profoundly affect the perceived credibility of news content.

The influencing factors mentioned above are common to both the news content generated by AIGC and the traditional news content. Therefore, what is the difference between the credibility influencing factors of the two?

2.2 Differences in the Factors Influencing the Credibility of News Content Generated by AIGC and Traditional News Content

2.2.1 The News Itself

From the perspective of the news itself, the knowledge production of generative AI approaches a public average value (Yu et al., 2024), with broad knowledge but not specialization. Therefore, in the production of news content, the AIGC is more restricted by the news itself than traditional journalists are.

2.2.2 Transmitters

From the perspective of the disseminator, compared with traditional news content, the news content generated by AIGC is less restricted by the author's personal standpoint. When AI does not receive a clear position instruction, it usually analyzes materials and generates news from an objective perspective. On the other hand, although traditional news content consciously maintains objectivity, it is still relatively more subjective. Some scholars have also elaborated the relative objectivity of AI writing. The objective credibility and perceived credibility of news content generated by AIGC are also affected by the development level of AI technology and the application experience of AI in the news industry. Mr. Yao's (2024) paper "Applications and challenges of AI in news content generation" clearly pointed out that "AI technology will lead to information distortion due to deviations or errors in the training data", which confirms that the immaturity of AI technology will greatly reduce the objective credibility of the news content generated by it.

2.2.3 Recipient

From the perspective of the recipient, compared with traditional news content, the perceived credibility of news content generated by AIGC is additionally affected by the interaction experience between the recipient and AI and the algorithm literacy of users. The paper "Study on Algorithmic News Perception and Its Influencing Factors" (Ni & Su, 2023) showed that there is a negative correlation between algorithm literacy and perceived credibility, people with higher algorithm literacy gave a lower evaluation of news credibility.

3. A comparative Study of the Credibility of News Content Generated by DeepSeek Under Different News Genres

In this paper, from the perspective of the news itself, the similarities and differences between the credibility of the news content generated by DeepSeek and the credibility of traditional news content are studied.

3.1 Experimental Description

3.1.1 Experimental Design

The control variable method was used for comparison. Because different news genres are quite different in terms of processing difficulty, information clarity and writing difficulty, the news genre was designed as a variable in the experiment. Different genres of social news were selected, keyword entries were extracted as instructions, and DeepSeek was used to generate news according to the instructions. The original news was set as the control group, and the news generated by DeepSeek was set as the experimental group. The difficulty of processing the two news articles, the clarity of information and the difficulty of writing the two news articles were expressed as the evaluation points to compare the credibility of the two news articles.

3.1.2 Explanation of the Evaluation Criteria

The evaluation of the difficulty of response news was based on the accuracy of the basic views of the news based on the existing information. In the experiment, the information provided by the instruction words was the existing information. The evaluation of the clarity of response news was performed to compare the processing of fuzzy information in the news. In response to the difficulty of writing, we compared two news articles and judged which one was of better quality.

3.1.3 News Selection

In 2019, significant breakthroughs were made in global AIGC technology. To minimize the influence of AI technology on the news of the control group, the news of the control group was released before 2019.

3.2 Experimental Procedure

a) Genre 1: Message

b) Selected news: “National retail and catering enterprises’ sales exceed 900 billion yuan; bright spots emerge for emerging consumption during the Spring Festival” (Du, 2018).

Command word: Suppose you are in February 2018, please write a news report based on the two keyword terms of national retail and catering companies’ sales exceeding 900 billion yuan and emerging consumption during the Spring Festival and your own database.

c) Analysis: Processing difficulty performance: the basic judgments of the news generated by DeepSeek and the traditional news are roughly the same, and there is no significant difference between the two; the performance of the information clarity response: traditional news is more objective and credible than the news generated by DeepSeek. When DeepSeek did not receive the reporter’s name in the instruction, it indicated at the end of the article that our reporter was Zhang Wei and fabricated the reporter’s information; it responded to the difficulty of writing: the two news articles explained the core information at the beginning, which met the writing requirements for the news. The central sentence of the traditional news paragraph is neat, and the overall writing approach is innovative. The four aspects are “rich and varied market supply, more emphasis on quality of commodity consumption, more emphasis on the taste of the year on catering to consumption, and more emphasis on cultural and leisure”. The overall writing ideas are more innovative. The news generated by DeepSeek is mainly elaborated from two aspects: traditional shopping and food consumption and culture and tourism consumption, that is, traditional and new consumption. Under the premise of ensuring the two requirements of “authenticity” and “timeliness,” the criterion for judging the merits of a news text is to provide readability to the maximum extent (Li, 2018, from the perspective of the news narrative). Therefore, from the perspective of the readability and innovation of articles, traditional news performed better, and its perceived reliability was greater. On the basis of the performance of the three aspects, the objective credibility and the perceived credibility of traditional news are both greater than those of the news generated by DeepSeek.

a) Genre II: Reviews

b) Selected news: “Private mooncakes need quality supervision” (Huang, 2017).

c) Command word: Suppose you are in September 2017, and you were asked to write a review on the basis of the following information: “the quality of private mooncakes was poor”.

Analysis: Performance in response to difficulty: the two had the same point of view and were similar in performance; performance in response to information clarity: neither of the two had the phenomenon of fictitious information, and their performances were not significantly different; performance of difficulty in writing: The traditional news content used the concession argument that “it is undeniable that there are some shoddy products on the market”, with more rigorous logic. The overall structure of the news generated by DeepSeek is clearer, and the angles are more diverse. Each has its own advantages and performs equivalently. In general, the difference in credibility between traditional news and the news generated by DeepSeek is relatively small, and there is no obvious difference between good news and bad news.

a) Genre III: Communication

Selected news: “I’ll be Homesick When I’m Not in China——Interview with Peruvian sinologists and translator Ji Yemo” (Chen & Wang, 2016).

b) Command words: Suppose that in November 2016, you visited a Peruvian sinologist and translator Ji Yemo, please write a character communication.

c) Performance in response to processing difficulty: the basic views of the two news articles were correct; the performance of information clarity: when processing fuzzy information, DeepSeek chose to query relevant information from the database, but DeepSeek’s database data had errors: DeepSeek believes that Ji Yemo. It is true that he won a scholarship to study Chinese in Taiwan region and that Ji Yemo translated “A Dream of Red Mansions”, but this is the diametrically opposite reality. As a result, the news content generated by DeepSeek contained a large amount of erroneous information, and the objective credibility was very low; the difficulty of writing to address the issue: Due to the excessive amount of error information in the news content generated by DeepSeek, the integrity of the article was severely damaged after the erroneous part was deleted, which is not comparable. In general, the objective credibility of traditional news content is significantly greater than that of the news content generated by DeepSeek.

a) Genre four: Close-up

Select news: “Close-up of Battlefield | From the old streets of the “Dead City” to the battlefield in northern Myanmar: Fighting during the day, scolding at night” (Huang & Cheng, 2015).

b) Command word: Since February 9, 2015, the Kokang Allied Army and the Burmese government army have once again clashed. You are a reporter and have conducted interviews at the settlement points, the front lines and the headquarters of the Allied Army on the Chinese border. Please write a close-up on the battlefield.

c) Analysis: Performance in response to difficulty of processing: the basic positions of the two news articles were both correct; performance of information clarity: owing to the particularity of the close-up genre, many details in the article could not be verified and compared; performance in response to difficulty in writing: traditional news articles more varied angles, more three-dimensional character presentation, and more detailed description of scenes. DeepSeek strictly implemented the instructions, and the articles echoed the location information in the instructions, using the transfer of locations as the clue, and its writing depth and breadth were inferior to those of traditional news content. The perceived reliability of traditional news content is greater than that of news generated by DeepSeek.

3.3 Experimental Conclusions

3.3.1 Self-comparison of DeepSeek’s Credibility Under Different News Genres

A comprehensive comparison of the four genres revealed that DeepSeek performed better on the two genres of news and comments. This is because the writing ideas of news and comments are divergent thinking based on less information. It is similar to the operating logic of DeepSeek, which generates news on the basis of simple instructions, and it is less difficult to obtain relevant information. Therefore, as long as the instruction is correct, DeepSeek can generate news content with high reliability on the basis of the

existing database. It is more difficult to obtain information for communications and close-ups: first, the information required for field visits and interviews is determined according to the requirements of the writing, and then the information is collected in the field. DeepSeek cannot easily obtain this type of information, which is not recorded in the database. Without sufficient information support, the credibility of the newsletters and features generated by DeepSeek was significantly lower than that of the newsletters and reviews.

3.3.2 Comparison of the Credibility of DeepSeek and Traditional News Under Different News Genres

In terms of objective reliability, in terms of social news, the objective credibility of traditional news was generally greater than that of news generated by DeepSeek, but the difference between the two was relatively small. Under certain conditions, the objective credibility of the two methods was comparable. Information clarity has the greatest impact on the credibility of the news content generated by DeepSeek. DeepSeek does not actively ask the instruction giver when the instruction information is not clear enough, it searches the database on the basis of the existing information to improve the clarity of the information, but the data in the database may not be true. This practice cannot guarantee the objectivity and credibility of the news. At the same time, DeepSeek will avoid fuzzy information or fabricate information after logical reasoning and data retrieval on the basis of the database and article background. When the news is a genre based on accurate data, such as news, the DeepSeek information has a low degree of fabrication, and the objective credibility is high; when the news is a communication, which mainly contains details that are difficult to enter or be reasoned by large databases, the DeepSeek information's degree of fiction is high, and the objective credibility is low.

Perceived reliability. When the authorship subject is excluded, the perceived reliability of traditional news is greater than that of news generated by DeepSeek. With existing technologies, DeepSeek still has not completely overcome the limitations of machine writing. The information obtained by its mechanical use is not further processed, and there are problems with mechanized writing and templated writing. Two researchers, Yan Qi and Jitai Liu, also proposed similar views, e.g., AI writing lacks emotion and creativity and has little flexibility and adaptability (Qi & Liu, 2024). Therefore, the overall perceived reliability of the news generated by DeepSeek is lower than that of traditional news. However, owing to the strong influence of the recipient on the human reporters and the AIGC, when the factor of the signatory subject is added, the credibility difference between the two greatly changes.

4. Conclusions

DeepSeek is a cutting-edge AI technology in China today, but it still has some deficiencies in ensuring high reliability and is most affected by information clarity. However, when the information is clear enough, the credibility of the news content generated by DeepSeek is already comparable to that of traditional news content. The news content generated by DeepSeek is not absolutely credible. When using AI tools for news production and news reading, we need to consider critical thinking. On the premise of maintaining our independence, we should learn to use AI tools and fully exploit the advantages of AIGC in the news industry. This experiment is limited by the small number of samples and the presence of errors in manual evaluation.

In the news production process, what kind of instruction methods can improve the efficiency of human-AI interactions and reduce misunderstandings? How can the limitations of AIGC news writing be overcome? How can the authenticity of AIGC content be determined? These issues still need further exploration, and there is still a long way to go to achieve efficient cooperation between humans and AI in the news industry.

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