

Media Frame and Audience Cognitive Bias: Assessing News Effectiveness from a Social Psychological Perspective

Luodan Le*

School of Literature, History and Culture (School of Journalism and Communication), Qiqihar University, Qiqihar, China

*leluodan5577@163.com

ABSTRACT

As an important channel of information dissemination, news media plays a key role in shaping public cognition and guiding public opinion. Media frame theory points out that news reports do not reflect reality objectively and neutrally, but construct reality by selecting, emphasizing and excluding specific information. This construction process not only affects the audience's understanding of the event, but can also lead to cognitive bias. Cognitive bias refers to the distortion or misunderstanding of reality caused by many factors such as prior knowledge, emotional tendency and social norms when individuals process information. From the perspective of social psychology, this paper explores how the media framework affects the audience's cognitive bias, and analyzes the psychological mechanisms behind it, such as confirmation bias, stereotype, emotional bias and social identity bias. By assessing the effect of news, this paper aims to reveal the complex relationship between the media framework and the audience's cognitive bias, and propose strategies to reduce the cognitive bias and improve the public media literacy, so as to help the audience understand and evaluate news events more objectively and comprehensively, and promote the healthy development of the information society.

KEYWORDS

Media Framework; Audience Cognition; Cognitive Bias; Social Psychology; News Effect Evaluation.

1. INTRODUCTION

In the 21st century of information explosion, the influence of news media, as the main carrier of information dissemination, has become increasingly prominent. With the popularity of the Internet and the rise of social media, the speed, breadth and depth of news and information have reached an unprecedented level. However, while conveying information, news media also constructs and interprets reality through its unique framework, and this construction process will inevitably affect the audience's cognition. Media frame theory reveals that news report is not a simple statement of facts, but a product of careful selection and processing, which reflects the position, values and interest demands of media organizations. Therefore, it is of great significance to study the relationship between media framework and audience cognitive bias for understanding news effect and improving public media literacy.

Theoretically speaking, this paper can enrich and develop the media frame theory by deeply exploring the relationship between media frame and audience cognitive bias, and provide new perspectives and ideas for the research of journalism and communication and social psychology. In practice, the research results of this paper can provide a reference for news media organizations to improve the reporting methods and enhance the communication effect; At the same time, it can also provide

guidance for the public to improve media literacy and reduce cognitive bias, and help them understand and evaluate news events more objectively and comprehensively. In the context of the information society, research on relevant content can reduce the audience's cognitive bias, promote the public's rational thinking and judgment of news events, and help maintain social stability, promote the democratic process, and promote social harmony and development.

Domestic and foreign scholars have made some achievements in the research of media framework and audience cognitive deviation. Since the media frame theory was put forward, it has been widely concerned by the journalism and communication circles. Scholars have discussed the formation mechanism, influencing factors and communication effect of media framework from different angles. At the same time, the field of social psychology has also conducted in-depth research on cognitive bias, revealing a variety of cognitive bias phenomena and the psychological mechanism behind it. However, the research results of combining media framework with audience cognitive bias are relatively few, and mostly stay at the theoretical level, lacking the support of empirical research. Therefore, this study aims to fill this gap and reveal the specific impact of media framework on audience cognitive bias through empirical research.

2. AN OVERVIEW OF MEDIA FRAME THEORY

Media framing theory has its origins in sociology and psychology, and aims to explain how news reports affect audiences' perceptions of reality. Frame theory was introduced into sociology in 1974 by the American sociologist Irving Goffman and later by mass communication, becoming an important point of view in qualitative research. Goffman believes that what is real is the definition of the situation, which forms the framework of people's cognition, which enables people or organizations to locate, perceive, identify and name various concrete facts [1]. In *Making News* (1988), Tuchman argued that the news framework is artificially produced, and it is a standard system for journalists and editors to judge the value of news and produce news [2]. Du Junfei, a communication scholar from Nanjing University, proposed in his article "Frame Effect" published in *Journalism and Communication Research* that in the field of communication research, media frame is mainly concerned with a series of criteria that communicators (journalists) infiltrate when organizing texts. The research carried out in this direction mainly focuses on news texts, but in essence further analyzes the various complex rights relations behind the texts by analyzing the hidden structures [3].

In their article *Derivative and Fusion: Interdisciplinary Dialogue of Frame Theory Research*, Guo Xiaohan and Teng Jinda try to sort out the track of multi-disciplinary extension of frame theory from the perspective of ideological history, and explore the possibility of realizing dialogue and integration among different disciplines, public cognition structure, news framework, action framework and government response framework, so as to improve the imagination of frame theory research [4]. In *A Review of the Research on Media Frame*, Qin Shuang summarized the domestic and foreign studies from the aspects of the origin, development and empirical research of frame theory [5]. At the same time, he also put forward the problems existing in the current framework theory research and its research prospects [6]. In his article "The Interaction between Media and Audience Frame from the Perspective of Controversial News Reports", Shen Aijun discusses the presentation ways of media frame and audience frame in the reporting of controversial events and the differences between them from the perspective of traditional media theories such as agenda setting theory and coding-decoding theory. The necessity of effective interaction between the media framework and the audience framework is proposed, as well as the interactive strategy between the media and the audience [7]. Wu Wenxi and Wang Qing, in their article "Unbalanced Mirror: Media Framework of Controversial Technologies in Network Video -- taking Youku's popular transgenic videos as an example", put forward relevant suggestions on the communication of controversial technologies and sciences through network video based on media framework [8]. In the article "CRI < Hello, Aunt May > Micro-

video Report Analysis from the Perspective of Frame Theory", Guan Juanjuan takes the micro-video report of British Prime Minister Theresa May's visit to China as an example, starting from the media framework and audience framework involved in frame theory, and discusses the inspiration that the video brings to the content construction of "telling Chinese stories well" [9]. In the article "Analysis of Differences in Media Frameworks of Weibo, Toutiao and wechat -- Taking the Report and Discussion of the" Jiang Ge Case "as an example", Li Jie and Zhu Xiang analyzed the reports of multiple media platforms on the "Jiang Ge Case" and compared and analyzed the differences of media platforms' reports on the case from two dimensions of text analysis and keyword analysis. It is found that different media frameworks for this event are constructed [10]. In his article "The Media Framework of the image of contemporary Zheshang Businessmen from the Cover Figures of Zheshang Businessmen and Chinese Entrepreneurs", Li Wenbing analyzed the dominant framework of contemporary Zheshang businessmen presenting "contemporary Confucian businessmen" from the perspective of media construction [11].

The formation of media framework is influenced by many factors, including the position and values of media organizations, the professionalism and professional ethics of journalists, the pressure of market competition, and government policies. These factors work together to make news reports show specific tendencies and preferences, thus affecting the audience's cognition and attitude.

3. SOCIAL PSYCHOLOGICAL ANALYSIS OF AUDIENCE COGNITIVE BIAS

In the process of news communication, the audience does not passively receive the information, but will process and process the news information according to their own knowledge structure, emotional tendency, social experience and other factors. In this process, the audience tends to have various cognitive biases, which affect their comprehensive and objective understanding of news events.

3.1. The Concept and Classification of Cognitive Bias

Cognitive bias refers to the interpretation or judgment of information deviating from the objective facts due to the interference of oneself or external factors in the cognitive process. In the field of news communication, the audience's cognitive bias is mainly manifested in the following types:

Confirmation bias, Audiences tend to seek out, interpret, and remember information that is consistent with their existing views, while ignoring or rejecting information that is inconsistent with them. This bias makes it easier for the audience to accept reports that are in line with their own positions when receiving news, thus deepening the solidification of original ideas.

Stereotype, The audience forms a fixed, simplified view of a group or event, and uses this as the basis for judging all members or circumstances of the group or event. The stereotypical depiction of specific groups often appears in news reports, which is easy to trigger the audience's stereotype and lead to a one-sided understanding of news events.

Emotional bias, When the audience receives news, they are affected by emotional factors and have excessive love or dislike for news events, thus affecting the objective judgment of news facts. Emotional color in news reports can often stimulate the audience's emotional resonance, but it is also easy to lead to emotional bias.

Social identity bias, When audiences interpret news, they will be influenced by the social groups they belong to and tend to safeguard the interests and views of the groups. This bias makes it easier for the audience to accept the information that is consistent with the group when receiving news, while rejecting or questioning the information that is contrary to the group.

3.2. Psychological Mechanism of Audience Cognitive Deviation

The generation of audience cognitive bias is inseparable from a series of complex psychological mechanisms. Here are some of the main psychological mechanisms:

Heuristic thinking, Faced with a complex and changing information environment, audiences often adopt heuristic thinking to simplify the decision-making process. However, although heuristic thinking is fast and effective, it can easily lead to cognitive bias. For example, audiences may make judgments based on limited information or experience, ignoring other important factors.

Cognitive inertia, When receiving news, the audience tends to maintain the original cognitive structure and concept system, and is unwilling to make efforts to learn new knowledge or change the original concept. This kind of cognitive inertia makes the audience more susceptible to the influence of the media frame, resulting in cognitive bias.

Group pressure, In social groups, individuals are often affected by group norms, public opinion pressure and other factors, and tend to be consistent with the group. This kind of group pressure makes the audience more susceptible to the influence of group views when receiving news, resulting in social identity deviation.

Emotional involvement: Emotion is one of the important factors that affect audience cognition. When news events touch the emotional sensitive points of the audience, they tend to pay more attention to the relevant reports and produce a strong emotional response. However, excessive emotional involvement can easily cause the audience to ignore the objective facts and produce emotional bias.

4. THE INFLUENCE OF MEDIA FRAME ON AUDIENCE COGNITIVE BIAS

As the core component of news reporting, media framework not only determines the choice and presentation of news information, but also profoundly affects the audience's understanding, interpretation and memory of news events. In this process, the media framework will inevitably have a deviation in the audience's cognition, and then affect their attitudes, behaviors and decisions.

4.1. The Setting of Media Framework and the Guidance of Audience Cognition

The media framework guides the audience's cognition of news events by setting a specific reporting Angle and emphasizing some information while ignoring others. This setting not only shapes the image of the news event, but also builds the audience's understanding of the event. When the media frame is consistent with the audience's existing cognitive structure, it will strengthen the audience's existing ideas. However, when the media frame conflicts with the existing cognitive structure of the audience, it may cause the cognitive dissonance of the audience, and then produce cognitive bias.

4.2. Emotional Rendering of Media Frame and Audience's Emotional Bias

Emotional rendering in news reports is an important part of the media frame. Through the use of language, images, sounds and other means, media can trigger specific emotional responses in the audience, such as anger, sympathy, fear and so on. This kind of emotional rendering is easy to make the audience ignore the objective facts under the emotional impulse and produce emotional bias. Driven by emotional bias, audiences are more likely to accept news information that is consistent with their own emotional tendencies, while rejecting or questioning information that is contrary to them.

4.3. The Reinforcement of Stereotype in Media Frame and the Cognitive Solidification of Audience

Media often use stereotypes to describe specific groups or events in their reports, and the repeated presentation of such stereotypes will deepen the audience's solidified cognition of these groups or events. When the media framework reinforces the existing stereotypes, the audience is more likely to be affected by these stereotypes when receiving relevant news, resulting in cognitive bias. This cognitive fixation not only limits the audience's full understanding of news events, but may also exacerbate social prejudice and discrimination.

4.4. Social Identity Promotion of Media Framework and Group Pressure of Audience

By presenting the views and interest demands of a specific social group, the media promotes the audience's social identification of that group. When the audience identifies with a certain social group, it will tend to accept the views and attitudes of the group, resulting in cognitive bias on the information consistent with the group. In addition, group pressure is also one of the important factors affecting audience cognition. Within the group, individuals are often affected by group norms, public opinion pressure and other factors, and tend to be consistent with the group. This kind of group pressure makes the audience more susceptible to the influence of group opinions when receiving news, resulting in social identity deviation.

4.5. The Lack of Diversity of Media Frame and the Cognitive Limitation of Audience

In the process of news communication, the lack of diversity of media framework is also one of the important reasons leading to the cognitive deviation of the audience. When the media over-rely on a certain framework to report the news, it will lead to the news information of a single and one-sided. Such simple and one-sided information presentation tends to cause the audience to have a one-sided and narrow understanding of news events, thus ignoring other important factors and viewpoints. Therefore, the media should pay attention to the diversity and balance of the framework, and provide the audience with comprehensive, objective and multi-angle news information to reduce the audience's cognitive bias.

5. NEWS EFFECTIVENESS ASSESSMENT: STRATEGIES FROM A SOCIAL PSYCHOLOGICAL PERSPECTIVE

News effect evaluation is one of the important fields of journalism and communication research, which focuses on how news reports affect the audience's cognition, attitude, behavior and even social environment. From the perspective of social psychology, news effect assessment not only involves the audience's direct reaction to news content, but also goes deep into the audience's psychological mechanism, social interaction and group behavior.

5.1. In-Depth Analysis of Audience Psychological Mechanism

In the evaluation of news effect, first of all, the psychological mechanism of the audience needs to be deeply analyzed. This includes understanding the audience's cognitive process, emotional response, attitude formation and behavioral intention when receiving news information. Through questionnaire survey, in-depth interview, experimental research and other methods, we can collect the data of the audience's cognitive bias, emotional tendency, trust degree and action intention towards news events. These data provide an important psychological basis for evaluating the effect of news, and also provide a reference for the subsequent strategy formulation.

5.2. Analysis of the Interaction between Media Frame and Audience Psychology

As the core component of news report, media frame has a close interaction with audience psychology. When analyzing the effect of news, it is necessary to focus on how the media framework affects the audience's cognitive bias, emotional bias and social identity. Through content analysis, discourse analysis and other tools, we can reveal the setting principle, presentation mode and potential intention of media frame. At the same time, combined with the research results of audience psychological mechanism, we can deeply explore the interaction mechanism between media framework and audience psychology. This kind of analysis can help to reveal the deep-seated reasons of news effect and provide strong support for optimizing news report.

5.3. Evaluation of the Influence of Social Environment on News Effect

The effect of news is not only affected by media frame and audience psychology, but also restricted by social environment. The social environment includes many aspects such as politics, economy and culture, which together constitute the macro background of news communication. When assessing the effect of news, it is necessary to fully consider the influence of social environment on the audience's psychology and behavior. For example, the political environment may affect the audience's political stance and attitude towards news events; The economic environment may affect the audience's attention and acceptance of news information; The cultural environment may affect the audience's judgment and understanding of news value. Through the comprehensive analysis of the social environment's influence on the news effect, the actual effect of the news report can be evaluated more comprehensively.

5.4. Strategies and Suggestions for Improving the Effect of News Communication

Based on the results of news effect evaluation from the perspective of social psychology, a series of strategies and suggestions can be put forward to improve the effect of news communication. First of all, optimize the setting of media framework to ensure the objectivity, comprehensiveness and impartiality of news reports, and reduce the cognitive bias and emotional bias of the audience. Secondly, strengthen the media literacy education of the audience to improve their ability to identify news information and critical thinking ability. Third, the use of social media and other new media platforms to expand the coverage and influence of news dissemination, while focusing on the interaction with the audience and feedback mechanism construction. Fourth, pay attention to social hot spots and livelihood issues, actively respond to the concerns and needs of the audience, and enhance the pertinency and effectiveness of news reports. Finally, establish a sound news effect evaluation system and methodological framework to provide scientific basis and practical guidance for the continuous improvement and optimization of news communication effect.

6. CONCLUSION

This paper systematically combs the relevant theories of journalism and communication and social psychology, and deeply discusses the causes and manifestations of audience cognitive bias in the process of news communication and the complex relationship between them and the media framework. This paper collates existing research on cognitive bias in the field of news communication, and from the unique perspective of social psychology, reveals how the media framework has a profound impact on the audience's cognition through multiple mechanisms such as emotional rendering, stereotype reinforcement, and social identity promotion. This study not only enriches the theoretical connotation of journalism and communication, but also provides new perspectives and ideas for understanding audience psychology and optimizing news communication strategies.

The research results of this paper have important guiding significance for the practice of news communication. News practitioners should pay attention to the cognitive characteristics and psychological needs of the audience, optimize the presentation mode and communication strategy of news reports, and reduce the occurrence of cognitive bias. At the same time, this study also provides a reference for news regulatory agencies to formulate more scientific and reasonable regulatory policies and promote the healthy development of news communication. In addition, this study also provides new ideas for journalism and communication education, and emphasizes the importance of cultivating students' media literacy and critical thinking ability.

Although this paper has made some achievements in the cross-field of news communication and social psychology, there are still some limitations and deficiencies. For example, this study is mainly based on theoretical analysis and literature review, and lacks large-scale empirical research data support. At the same time, the evaluation strategies and methodological frameworks of news effects under different media forms, different audience groups and different social environments need to be further explored and perfected. Future research should strengthen interdisciplinary cooperation and exchanges, introduce more empirical research methods and technical means, and reveal the internal mechanism and law of news communication effect more comprehensively and deeply. At the same time, it pays attention to new trends and new problems in the field of news communication, such as the impact of new technologies such as artificial intelligence and big data on news communication, and provides more scientific and effective guidance and support for news communication practice.

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