



BUGU
Dil ve Eğitim Dergisi

www.bugudergisi.com

E-ISSN: 2717-8137

Review Article

BUGU
Journal of Language and Education

Received: 28.03.2026

7/2, 225-232

TÜRKİYE

Accepted: 01.06.2026

Askhar, M. & Beissenova, Z. (2026). The impact of misinformation in the news on cognitive biases: a theoretical analysis. *BUGU Journal of Language and Education*, 7(2), 225-232. <http://dx.doi.org/10.46321/bugu.1226>

THE IMPACT OF MISINFORMATION IN THE NEWS ON COGNITIVE BIASES: A THEORETICAL ANALYSIS

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Abstract

In the contemporary media environment, the rapid dissemination of news exerts an increasing influence on the perceived credibility of information and on individuals' trust in it. The widespread circulation of misinformation not only distorts the cognitive processes underlying individual perception but also affects public consciousness and collective decision-making. This article provides a theoretical analysis of how misinformation in news content activates cognitive biases and examines the mechanisms through which such effects occur with high speed and intensity. The study integrates theoretical frameworks from cognitive psychology, media studies, and social communication. Particular attention is devoted to the role of key cognitive mechanisms – such as confirmation bias, the availability heuristic, anchoring, and framing effects – in shaping the reception and interpretation of misinformation. In addition, the structural impact of algorithmic curation systems and social media platforms in amplifying these processes is critically examined. The theoretical arguments advanced in this article demonstrate that misinformation cannot be reduced merely to inaccuracies in content; rather, it emerges at the intersection of inherent limitations in human cognition and broader social contexts. The findings substantiate the scientific importance of incorporating cognitive biases into the analysis of misinformation and provide a robust theoretical foundation for future empirical research.

Keywords: Misinformation, cognitive biases, information perception, social media, information psychology.



Ø. Introduction

The rapid development of information technologies has ensured a continuous flow of news in contemporary society. Online platforms, social networks, and digital media sources have become the primary channels for information dissemination, integrating deeply into the daily lives of individuals. However, as the accessibility of information has increased, the evaluation of its accuracy and reliability has become more complex. This situation has created favorable conditions for the widespread diffusion of misinformation, turning it into one of the pressing challenges of the modern information society.

The danger of misinformation lies not only in its factual inaccuracy but also in the ways it is perceived and the cognitive mechanisms through which it appears credible. Research in cognitive psychology demonstrates that individuals do not process information in a fully rational manner. Instead, under conditions of limited cognitive resources, people rely on heuristic strategies that enable rapid information processing. These strategies often lead to cognitive biases, that is, systematic errors in judgment. Within the news environment, misinformation effectively exploits these cognitive characteristics. It aligns with pre-existing beliefs, incorporates emotionally charged content, and is presented through simple linguistic structures. This facilitates its intuitive acceptance without undergoing critical evaluation. As a result, false information may appear as credible as, or even more credible than, verified information.

In this study, theories from media studies and social psychology play a crucial role. The concept of the *post-truth era* describes a condition in which emotions and subjective judgments take precedence over objective facts. In such a context, misinformation becomes an effective instrument for shaping public opinion, amplifying its influence through cognitive biases. In Kazakh-language scholarly literature, the relationship between misinformation and cognitive biases has not yet been systematically and comprehensively examined from a theoretical perspective. In most cases, the issue is addressed primarily from the standpoint of media ethics or information security, while its psychological dimensions remain insufficiently explored. To address this gap, the present article aims to provide a comprehensive theoretical analysis of the impact of misinformation in news content on cognitive biases.

The primary objective of this study is to explain the mechanisms underlying the reception of misinformation through the lens of cognitive biases and to substantiate its influence on public consciousness from a scientific perspective. In line with this objective, the study pursues the following tasks: to analyze the theoretical foundations of the phenomenon of misinformation; to systematize the main types of cognitive biases; to identify and demonstrate the interrelationship between misinformation and cognitive biases; to examine the role of the media space and social networks in the dissemination of misinformation; and to assess its impact on public consciousness and decision-making processes, as well as to outline directions for future research.

1. Literature Review and Theoretical Framework

Research on misinformation and cognitive biases can be broadly classified into three main areas: the phenomenon of misinformation, cognitive biases, and the media environment with its associated social factors.

The most commonly used terms related to false information include *misinformation*, *disinformation*, and *fake news*. *Misinformation* refers to false or inaccurate information that is



not intended to deceive; *disinformation* denotes information deliberately created to mislead; and *fake news* refers to fabricated content presented in the form of news (Lewandowsky, Ecker & Cook, 2017; Vosoughi, Roy & Aral, 2018). Empirical studies indicate that misinformation exerts its influence by appealing to the audience's emotional responses, pre-existing beliefs, and reliance on cognitive heuristics (Vosoughi et al., 2018). Beyond mere factual inaccuracy, misinformation plays a significant role in shaping public opinion.

1.1. Cognitive Biases

Cognitive biases are defined as systematic errors in human information processing. The most prominent types include:

- **Confirmation bias:** the tendency to favor information that aligns with one's existing beliefs (Festinger, 1957).

- **Availability heuristic:** the tendency to judge the importance of information based on its frequency or emotional salience (Tversky & Kahneman, 1973).

- **Anchoring:** the influence of initial information on subsequent judgments (Kahneman, 2011).

- **Framing effect:** the way information is presented significantly shapes its interpretation (Entman, 1993).

These biases weaken the audience's capacity for critical evaluation and facilitate the acceptance of misinformation as credible (Nyhan & Reifler, 2010). Moreover, within group dynamics, such biases contribute to the amplification and spread of misinformation (Sunstein, 2002).

1.2. Media Environment and Social Factors

The role of the media environment and social platforms is central to understanding the dissemination of misinformation. Algorithmic curation, *filter bubbles*, and *echo chambers* enable users to consume predominantly homogeneous information aligned with their existing views (Pariser, 2011). Elements of *social proof*—such as likes, shares, and comments—interact with cognitive biases to enhance the perceived credibility of misinformation (Cialdini, 2007). Furthermore, information overload exhausts cognitive resources and reduces critical thinking capacity (Eppler & Mengis, 2004).

The phenomenon of misinformation is therefore not merely the presence of incorrect information but rather the outcome of the interaction between cognitive biases and the structures of social media. Studies demonstrate that misinformation spreads rapidly through emotional appeal and significantly influences audience beliefs (Lewandowsky et al., 2017; Vosoughi et al., 2018). Cognitive biases—such as confirmation bias, availability heuristic, and framing—serve as key mechanisms in the acceptance of misinformation (Festinger, 1957; Entman, 1993). Algorithmic media systems, filter bubbles, and echo chambers create asymmetrical information ecosystems that shape public consciousness and guide decision-making processes (Pariser, 2011; Sunstein, 2002). In addition, information overload depletes cognitive resources and weakens critical thinking, thereby increasing susceptibility to misinformation (Eppler & Mengis, 2004).



Thus, the study of misinformation should not be limited to its characterization as an informational phenomenon; rather, it must be approached as an analysis of the complex interaction among cognitive, social, and media systems.

1.3. Literature Review: Tabular Analysis

Authors	Year	Main Topic	Key Findings	Purpose of Application
Lewandowsky, Ecker & Cook	2017	Misinformation and the Post-Truth Era	Misinformation is processed through emotional responses and relies on cognitive biases	Used as a theoretical foundation
Vosoughi, Roy & Aral	2018	False and True News	Misinformation spreads more rapidly and significantly influences emotions and beliefs	Social aspects of misinformation dissemination
Kahneman	2011	Dual-Process Theory of Thinking	System 1 (intuitive) and System 2 (analytical) modes of thinking	Explaining the mechanisms of misinformation perception
Festinger	1957	Cognitive Dissonance	Confirmation bias leads to systematic cognitive errors	Theoretical understanding of cognitive biases
Nyhan & Reifler	2010	Political Corrections	Corrections of misinformation are not always effective	Explaining the persistence of misinformation
Pariser	2011	Filter Bubble and Echo Chamber	Algorithmic media environments concentrate audiences within homogeneous information spheres	Social media context
Cialdini	2007	Social Proof	Likes and shares increase perceived credibility	Explaining the credibility of misinformation
Entman	1993	Framing	The presentation format of information determines its interpretation	Analysis of framing effects in news
Sunstein	2002	Group Polarization	Group-level dynamics lead	Impact on public



Authors	Year	Main Topic	Key Findings	Purpose of Application
			to the radicalization of viewpoints	consciousness
Eppler & Mengis	2004	Information Overload	Information overload reduces cognitive processing capacity	Effects of the media environment

2. The Interrelationship between the Phenomenon of Misinformation and Cognitive Biases

Misinformation is not merely inaccurate information; it is closely intertwined with cognitive biases. In the process of information perception, individuals rely on two modes of thinking—System 1 (intuitive) and System 2 (analytical) (Kahneman, 2011). Misinformation is predominantly processed through System 1, meaning that it is interpreted based on emotion and intuition rather than undergoing critical analysis. For instance, confirmation bias enables individuals to selectively accept information that aligns with their pre-existing beliefs (Festinger, 1957). Similarly, the emotional salience and frequency of information accelerate its processing through the availability heuristic (Tversky & Kahneman, 1973). Empirical studies demonstrate that the framing effect significantly influences how information is perceived, depending on the manner in which it is presented (Entman, 1993). In other words, a neutral description of an event and an emotionally framed narrative of the same event can lead to markedly different interpretations. This phenomenon is particularly evident in political and social news contexts. The interaction between misinformation and cognitive biases also manifests at the social level. Within echo chambers, individuals are exposed primarily to like-minded perspectives while being isolated from opposing viewpoints, thereby reinforcing group polarization (Sunstein, 2002). As a result, misinformation spreads more rapidly within society and is more readily accepted.

2.1. The Role of Algorithmic Media and Social Networks

The contemporary media environment is widely regarded as a key factor amplifying the dissemination of misinformation. Algorithmic filtering presents users with content that aligns with their interests or prior preferences (Pariser, 2011). This process generates *filter bubbles*, whereby audiences are exposed to a limited and homogeneous set of information. Elements of *social proof*—such as likes, shares, and comments—further enhance the perceived credibility of content (Cialdini, 2007). Emotionally charged material, particularly news that evokes fear or excitement, is more likely to be shared across networks (Vosoughi et al., 2018). Moreover, *information overload* depletes cognitive resources and diminishes individuals’ capacity for critical thinking (Eppler & Mengis, 2004). As a result, individuals tend to rely on intuitive processing, which increases their susceptibility to misinformation.

2.2. Impact on Public Consciousness and Decision-Making

Misinformation exerts a significant influence on both public consciousness and individual decision-making processes. In political contexts, for example, misinformation can alter voters’ attitudes and potentially lead to more radical decisions (Nyhan & Reifler, 2010). Cognitive



biases also operate at the group level: through echo chambers and group polarization, individuals become less receptive to opposing viewpoints (Sunstein, 2002). This dynamic intensifies social fragmentation and facilitates the broader dissemination of misinformation within society. At the individual level, under conditions of limited cognitive resources, individuals are less likely to engage in analytical reasoning and are more prone to accepting misinformation as credible (Kahneman, 2011). Thus, cognitive biases, social media structures, and information overload interact synergistically to reinforce the impact of misinformation.

Conclusion

In contemporary society, the information environment has emerged as one of the most pressing issues. The proliferation of diverse information streams significantly influences individuals' lives, perceptions of reality, emotional states, capacities, and overall motivation. While accurate information contributes positively to human development, misinformation (*fake news*) poses substantial risks to individual well-being. The widespread dissemination of misinformation, along with its frequent acceptance as credible information, exposes individuals to various forms of psychological distress. Therefore, the ability to distinguish between reliable and false information is of critical importance. Informational cognitive biases exert a negative influence on human psychology. Cognitive psychology, as a scientific discipline, examines the processes through which individuals think, perceive, remember, attend to, and process information through language. Informational cognitive biases, in turn, refer to systematic mental errors that arise during the processes of information perception, processing, and interpretation, leading to deviations from an accurate representation of reality. The widespread diffusion of misinformation not only distorts individual cognitive perception but also affects public consciousness and group decision-making processes.

In the course of this study, theories from cognitive psychology, media studies, and social communication were employed to analyze the structural impact of algorithmic filtering systems and social media in amplifying these processes. The theoretical conclusions presented in this article demonstrate that misinformation is shaped by both the inherent limitations of human cognition and the broader social context. The findings substantiate the scientific importance of explaining the phenomenon of misinformation through the lens of cognitive biases and provide a theoretical foundation for future empirical research.

This study confirms that misinformation spreads rapidly through emotional influence and significantly affects audience beliefs. In addition, it highlights the extent to which misinformation can be harmful to both society and individuals. Overall, the article contributes to a more precise scientific understanding of the impact of misinformation on human psychology and underscores its relevance for further academic inquiry.

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