

Analysis of the Mandela Effect Phenomenon and Its Propagation Mechanism in the We-media Era

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ABSTRACT

This paper explores the propagation mechanism of the Mandela Effect in the We-media era and its influence on social cognitive processing and public opinion. As a kind of mass memory distortion, with the promotion of social media, the Mandela Effect makes an immense amplification impact on information dissemination through algorithmic recommendation, which causes public memory bias for some events or symbols. Emotion-driven characteristics of We-media further accelerate the spread of the Mandela Effect, and hence the false memory influences the public cognition of facts, causing a crisis of confidence in the trustworthiness of the authoritarian information; it also enhances polarization of public opinion. The measures that this paper proposes to inhibit and guide the spread of false information through the control of this phenomenon are based on cognitive bias and distortion of public opinion: strengthening the review of contents, optimizing algorithmic recommendation, and enhancing media literacy education-in order to promote the construction of a healthy public opinion environment.

KEYWORDS

Mandela Effect; We-media; Collective Memory; Emotional Drive; Algorithmic Recommendation

1 Introduction

1.1 Research Background and Importance

The Mandela effect is a phenomenon-an event in which a collective memory that one group of people possesses does not align itself with fact. This term gained its popularity first through the illusion of memory about Nelson Mandela's life on the Internet platform. This gives the Mandela effects an influential boost on social media. The rapid popularization of self-media renders Mandela effect no longer an individual's unique misremembering; the mass spread of it goes through online platforms, which shows a shared model of collective memory ^[1]. Psychological research shows that the Mandela effect is related not only to personal memory deviation but also to the construction mechanism of collective unconsciousness and social memory, which is fast spread and strengthened on self-media platforms ^[2]. In recent years, high-frequency interaction, content push, and algorithm recommendation have brought the dissemination characteristics of self-media to make the passing of collective misremembering easier to spread in large-scale use, and strengthen the memory of the public for false information. Therefore, in this case, the study of the dissemination mechanism of Mandela effect in self-media environment will not only reveal the pathway of false information diffusion but also have an important theoretical significance and practical value in the cognitive science and information communication field ^[3].

As the product of social cognition and communication, the emergence of a Mandela effect

reflects the risk of collective memory manipulation and disseminating false information in the new information dissemination environment. Self-media, due to its immediacy, has not only increased the speed of information dissemination but also brought huge influences on users' emotions to better foster misremembered content spread ^[4]. In particular, it is manifested in the construction of collective memory. Individuals get their information from social media, and in the long run, they may develop constant biases in memory-even when this memory may not coincide with the real information ^[5].

1.2 Research Objectives

This paper explores the forming mechanism and effect of the Mandela effect in the self-media environment and especially analyzes how social media influences and algorithm recommendation systems favor the propagation of rumor information. The current paper aims to show how self-media accelerates and amplifies a collective misremembering effect by studying the propagation path and the psychological mechanism of the Mandela effect on self-media platforms. Therefore, it also discusses what effects this may have on public cognition and social opinions. What's more, corresponding response strategies will be discussed in this paper so as to offer a reference for controlling the spread of false information and optimizing information dissemination quality accordingly, providing data support and a theoretical basis for relevant media management and policy-making.

2 Theoretical basis of the Mandela effect

2.1 Definition and psychological mechanism of the Mandela effect

The Mandela effect is the mass illusion of remembering something. This would mean that a person or groups would have the same false memories of particular things. Common expressions of this are the obvious discrepancies between the facts in memory and realities, especially in the recall of events or images. This phenomenon is normally attributed to the psychological mechanisms of misattribution and social memory integration and may even relate to the theory of mass unconsciousness. Alhakamy (2023) related the effect of the "Mandela effect" with the "multiverse hypothesis," insisting that this kind of collective bias is born out of the interaction between different "realities.". The authors adopted the reinforcement learning model to simulate various universes' choice behavior-what the root cause of Mandela effect ^[6]. Bhattacharjee, explains that from a psychological point of view, the Mandela effect "déjà vu" comparability and in its mechanism involve memory reconstruction and self verification or related potential with the "parallel world", multiverse theory ^[7]. At the psychological level, this can be explained by misintegration of memory and cognitive bias. For example, Li et al. (2018) pointed out that the Mandela effect perhaps comes from the evolutionary mismatch hypothesis, or the mismatch between the psychological mechanism of human beings and today's environment results in some inaccurate memories and misunderstandings ^[8].

2.2 The relationship between self-media communication characteristics and the Mandela effect

We-media platforms, especially social media, with their immediacy and high interactivity, make the Mandela effect phenomenon easier to spread and accept. Compared with traditional media, self-media can quickly push content to a wider audience through algorithm recommendation and user

behavior analysis, thereby amplifying the influence of misremembering phenomena [9]. Seedat (2017) pointed out that the communication mode of self-media platforms usually enhances the audience's emotional response and cognitive bias, especially in the process of spreading false information. The spread of such emotional content is more likely to lead to the formation of collective misremembering phenomena [9]. Similarly, Williams (2015) found that the speed of information dissemination and the emotional appeal of content are greatly enhanced in the self-media environment. This dissemination characteristic is particularly prominent in the Mandela Effect phenomenon, because the audience is more inclined to accept false memories in emotional resonance [10]. Algorithmic recommendation in self-media also plays a crucial role in the spread of the Mandela Effect. Barnes and Milovanovic (2015) found that algorithms tend to recommend content that matches users' interests. This "echo chamber" effect not only deepens the audience's preconceived misconceptions, but also may form a self-reinforcing dissemination cycle, causing false memories to gradually evolve into collective memories [11]. This personalized recommendation mechanism exacerbates the biased dissemination of information.

3 The dissemination mechanism of the Mandela Effect in self-media

3.1 Social media and emotion-driven content dissemination

Social media is very important to the dissemination of the Mandela Effect. The characteristics of emotion-driven content speed up phenomena diffusion on social media. According to research, emotional content was shared significantly more quickly than neutral content on social media. Negative emotions, especially anger and anxiety, can strongly resonate with users, thereby increasing the scope of dissemination. Ferrara and Yang performed the analysis of the emotional contagion phenomenon on Twitter. Their results showed that users prefer to share emotional information. It has also been in line with findings from the "emotional contagion" model, after which users are more likely to post information with similar emotions after being exposed to negative or positive emotional content. Moreover, Brady et al. (2017) further showed that emotional content with moral emotions is more likely to spread in social networks. This finding underlined the core role of emotions within an information dissemination process because content containing strong emotions could flow quickly on a large scale in a short period of time.

Figure1 illustrates the propagation mechanism of the Mandela Effect within social media. Misinformation or false memories are emotionally propagated, amplified by algorithms, and reinforced through user interactions, ultimately forming a collective memory. The feedback loop

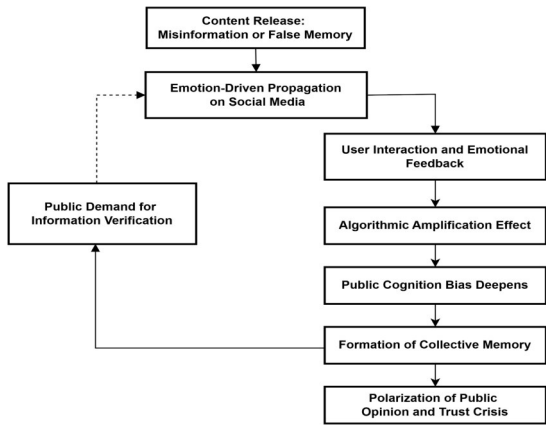


Figure1 Mandela Effect Propagation Mechanism in Social Media

from the public's demand for verification back to emotional propagation further entrenches the effect, leading to polarization and a potential trust crisis in public opinion.

The emotional communication effect of social media is particularly critical in promoting the Mandela effect, because users are easily driven by emotional content, which in turn strengthens the spread of false memories. Chawla and Mehrotra (2021) found that joy and anger had a relatively fast and widespread spread effect on Twitter, while negative emotions had a more lasting effect in multiple rounds of information dissemination. This emotional dissemination mechanism is further deepened by the "echo chamber effect" in social networks, that is, users constantly confirm and strengthen their previous memories in the cycle of emotional feedback, thereby promoting the spread of the Mandela effect on a larger scale.

3.2 Algorithmic recommendation and the amplification effect of information

The algorithmic recommendation mechanism of social media platforms has an amplifying effect in the spread of the Mandela effect. The personalized recommendation algorithms used by social media platforms usually push content based on users' historical behaviors and preferences, thereby directing users to content that suits their interests. This method is very likely to form an "echo chamber" effect of information^[15]. Wang et al. (2016) proposed an emotion-driven independent communication model and found that when social media recommendation algorithms push content containing emotional information, they significantly increase the probability and scope of content dissemination. This mechanism exacerbates the spread of the Mandela effect because users tend to repeatedly be exposed to information that is consistent with their existing cognition. Furthermore, algorithmic recommendation has enhanced the "information cocoon" phenomenon among groups to a certain extent, allowing individuals to continuously confirm their biased memories in content consumption and gradually form a collective cognition of misremembering.

In addition, Gangadharbatla and Valafar (2017) showed through large-scale Twitter data analysis that the dissemination model of social media follows a "power law", that is, a small number of opinion leaders have a high influence on the dissemination of information. These opinion leaders continue to gain exposure through the recommendation algorithms of social media platforms, thereby further expanding their influence and strengthening the confirmation of false memories within the group. Therefore, the algorithmic recommendation system not only plays a catalytic role in the spread of the Mandela effect, but also makes the phenomenon of misremembering more in-depth and extensive through the biased push of information.

4 Social impact and response strategies of the Mandela effect

4.1 Impact on public cognition and public opinion

The extensive dissemination of self-media has imposed huge influences on public cognition and the environment of public opinion, the Mandela effect has deviated the direction of collective memory about historical events or cultural symbols that are remembered by people. Such a misremembering phenomenon may affect the factual cognition of people, aggravate confusion in the information dissemination processes. Considering how easily people are likely to accept information given as the "facts" in their own memories, the Mandela effect has consumed intense discussions on social media, thus accelerating the speed of misremembering. This phenomenon misled part of the public to doubt some information about its authenticity and then to question the reliability of some official or authoritative sources. In public opinion, social media accelerate the "decentralized" dissemination pattern, making false memory more susceptible to influence in

shaping new consensus or prejudice and thus influencing the overall accuracy of social cognition and even causing the deviation or polarization of social public opinion.

4.2 Strategies for controlling and guiding the dissemination of the Mandela effect

In order to mitigate the negative impact of the Mandela effect on public cognition and public opinion, a series of strategies can be adopted from the perspective of controlling and guiding information dissemination. First, the platform should strengthen content review and information authenticity verification, and help users distinguish true and false information through label identification, backlinks and authoritative information recommendation. Secondly, algorithm optimization can be used to balance information recommendation and reduce the excessive push of similar or emotional content to reduce the misleading caused by the "echo chamber" effect. In addition, the government and media organizations can improve the public's cognitive ability through popular science and education, and guide them to establish correct information analysis and discrimination awareness. In addition to technical means, through extensive media literacy education and critical thinking training, enhancing the public's media recognition ability will help reduce the impact of the Mandela effect on society and promote the healthy development of the public opinion ecology.

5 Conclusion

The dissemination mechanism of the Mandela effect in the era of self-media and its impact on society reveal the complex interactive relationship between information dissemination and public cognition. On self-media platforms, the dissemination characteristics such as emotion-driven and algorithm recommendation amplify the spread of misremembering, making individual false memories quickly evolve into a widespread collective memory. The Mandela effect not only challenges the public's cognition of facts, but also shakes the trust in authoritative information to a certain extent, making social public opinion more susceptible to the manipulation of false memories. In addition, the "echo chamber" effect of self-media platforms causes information to circulate in a specific circle, further deepening the cognitive bias within the group, so that the phenomenon of misremembering does not only stay at the individual level, but gradually affects the cognitive structure of the society as a whole. This phenomenon poses a challenge to the public's factual judgment and also brings risks to the polarization of public opinion.

In response to the cognitive bias and misleading public opinion caused by the Mandela effect, the article proposes a variety of coping strategies, including strengthening platform content review, optimizing algorithm recommendations to reduce information bias, and enhancing the public's discernment through media literacy education. These strategies are both direct interventions in the Mandela effect and effective guidance for information dissemination and public cognition. Future research can further explore the complex relationship between individual memory and collective cognition, and seek more forward-looking countermeasures in the self-media ecology, so as to reduce the interference of false memory on the social cognitive system and maintain a healthy and authentic public opinion environment.

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