

Research on the Impact of Generative Artificial Intelligence on the Guidance of News Public Opinion

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Abstract. With the high-speed development of Generative Artificial Intelligence (AIGC), Generative Artificial Intelligence has changed the trend of news public opinion and the information dissemination environment. This paper explores the application of AIGC in journalism, and finds that it improves the efficiency of news production while causing public opinion security issues, public opinion ethics and public opinion law issues. Through literature research and typical case analysis, the study analyzes the status of AIGC in news reports and its influence on public opinion, and concludes that AIGC has advantages in information production and transmission speed, with outstanding personalized recommendation performance, and also has risks such as misinformation and manipulation of public opinion. Young people can be confused when faced with such information, and the content of dehumanized processing also makes the public opinion reception gradually change, resulting in the gradual disintegration of social consensus. Policymakers, industry leaders and educators need to take active countermeasures, relevant departments need to build effective regulatory systems, and the governance structure needs to be constantly improved. College students are the group that should be cared for, strengthening media literacy education, improving information judgment ability is a necessary way for college students to adapt to the new information environment. The study on the influence of AIGC on the guidance of news public opinion, new ideas, lay a theoretical foundation for the construction of ethical and legal system in the future, and have both academic significance and reference value.

Keywords: Generative Artificial Intelligence (AIGC), Guidance of News Public Opinion, Information Dissemination, Media Literacy

1. Introduction

With the rapid development of generative artificial intelligence, generative artificial intelligence has continuously reformed the mode of guiding news public opinion, reformed the entire chain of information production, and brought new opportunities for ideological communication. New challenges to public opinion security are facing in the process of many ethical and legal issues have been emphasized by existing studies [1,2].

1.1. Research background and significance

In recent years, generative artificial intelligence has developed rapidly. The large - scale language model technology represented by ChatGPT has achieved great popularity in a relatively short time, completely changing the social public opinion ecology and the way of news generation [3]. Machines can generate and understand natural language, and their application in the field of Journalism has greatly enhanced the efficiency of information production and dissemination. Although technological advancements have provided new development opportunities for the media industry, challenges to ethics and security have also arisen [4]. As AIGC becomes increasingly popular, it becomes increasingly difficult to discern the authenticity of content, increasing the risk of public opinion guidance and the stealthiness of misinformation, which has gradually come to the fore [5]. The dissemination of information has increasingly lost humanistic care, altering people's concepts and judgment standards concerning public opinion, particularly among young people. They are likely to become lost under the information of the public, and social values may go in the wrong direction [6]. AIGC has led college students to become addicted, and imperceptible to interfere with college students' study and way of seeing world, and even distort their psychology and value concept. AIGC will have an impact on the trend of news public opinion, and it is a need for systematic research for policy makers, industry giants and education workers, so that they can provide an empirical reference. In the turbulent public opinion field, information quality and credibility should be kept. To make effective regulatory mechanisms and build a multi-subject governance system to make public opinion healthily develop.

1.2. Research objectives and questions

This paper takes the use of AIGC in news production and public opinion guidance and the influence of AIGC on the attitude and value orientation of college students on public opinion as the research object. The purpose of this research is to discuss how AIGC is used to guide the production of news public opinion, how the production and dissemination mode of public opinion is gradually transformed by AIGC, and the ethical, legal and social issues it brings about. Under the background that AIGC has been rapidly developing and the media ecosystem has evolved, traditional public opinion mechanisms are facing new challenges [7]. Information authenticity, content credibility and user judgment need to be solved urgently. This paper aims to comprehensively study AIGC's effects on the quality of news, public opinion security and information dissemination efficiency, and its in - depth effects on the field of ideology [2], so as to explore the path for the construction of the public opinion guidance system under the background of the rise of AIGC. To this end, we will analyze its internal mechanisms and working principles, understand the various roles of AIGC in public opinion guidance from a systematic perspective, and systematically evaluate the role of AIGC in social public opinion. This paper will discuss the risks of public opinion security in the new era of technology, where information manipulation, fake news, etc. are all issues that should not be ignored[5]. This paper will use a combination of literature review and case analysis to conduct in - depth research on the influence of AIGC on the guidance of news public opinion, and provide theoretical support and practical suggestions for subsequent policymaking and practice [8].

2. Literature review

First of all, this literature review summarizes the definition of Generative AIGC and its characteristics, the role of Generative AIGC in news public opinion and ideological changes, the

current situation related research under the new technological environment and existing problems. These studies provide a theoretical foundation for understanding AIGC's impact on news production and dissemination.

2.1. Overview of generative artificial intelligence

Generative Artificial Intelligence (AIGC) is a new type of technology that is slowly transforming content creation in the fields of text, images, audio, etc [3], with deep learning and natural - language processing as its core mechanisms: by mining large - scale datasets, it is possible to automatically generate content similar to human expressions. In response to the needs of users, AIGC optimizes the process of information creation, creating personalized content, and showing its strong capabilities [9]. Generative AIs, represented by ChatGPT, have become increasingly mature and are increasingly utilized in media and journalism. They are now being used to automatically generate news reports, social media content, and conduct public opinion analysis. As people pay more attention to the potential of these technologies and expand their scope of application, it also brings ethical and legal problems [10,11]. The copyright owner is not clearly defined, the authenticity of the content is difficult to ensure, and the social impact is complex. How to protect AI - generated works by intellectual property rights? How about it, we need to think deeply. Will the misinformation be spread on an extensive scale? Whether the public opinion guidance will deviate? The related discussions on the academic level about the influence of AIGC on the news public opinion is not rich, and further research is urgently needed for this topic [12]. AIGC's characteristics and the changes it causes are the core to the analysis of the impact of AIGC on news public opinion guidance.

2.2. News public opinion and ideological changes

The development of news public opinion and ideology is complex. As digital technology has developed rapidly, the public opinion form and ideological communication method have changed. In the traditional media era, public - opinion guidance was dominated by news organizations, which controlled the public - information channels and public - opinion understanding framework through strict editorial processes [13]. With the rapid development of AIGC, content production has become more distributed, and the voices of independent creators have become louder [3]. AIGC's automatic content production has sped up the dissemination of information, altered the way public opinion is constructed, and affected ideological communication [14]. Intelligent algorithms constantly analyze the audience's preferences and generate personalized content like a professional gardener trimming the plants. People's habit of information acquisition is slowly changing, and a new public opinion ecology is being shaped in the network [9]. A large amount of content spreads out like vines in the midsummer, while the public is often bewildered under the jungle. Inappropriate and false information spreads in the jungle by means of intelligent tools, and casts shadows on the public opinion environment [5,15]. The subjects of public opinion are diversified and subjectivity is enhanced, the way of ideological infiltration is subtle, i.e., more hidden. This also brings the traditional public opinion guidance ability to be challenged, leading to the thinking of the role of journalistic practices and media literacy. AIGC is not only an artifact of technological development, but also a new position of ideological struggles affecting all social, political, economic, cultural life. These changes provide a new perspective for researching public opinion guidance [2,16].

3. Research methods

On the basis of collecting rich data, through combing and summarizing, the author selects an AIGC generated public opinion incident: A false public figure image of the AI generation of AIGC is being circulated, making inappropriate remarks. By tracing its dissemination process, and observing the changes of public opinion, this paper discusses the specific influence of AIGC in the guidance of news public opinion, and pays more attention to the rigor and scientific nature of the research process. Case Study Method:

In order to deeply explore the mechanism of the influence of AIGC on the guidance of news public opinion, this study selects the case study method. The case study method is conducive to the in - depth study of individual events and the analysis of their deep - level causes, action mechanisms, and social impacts, which is especially conducive to studying the changes of AIGC in real - life public opinion scenes.

3.1. Criteria for case selection

The selection of cases is based on four criteria: (1) Real and typical: This case should be verified and reported by foreign mainstream media and fact-checking organizations; (2) AIGC-caused: It is triggered by AIGC-generated content (such as deep-fake videos) that interferes with important political activities (such as national elections) and draws domestic and foreign attention and has a certain degree of impact [5,15]; (3) High impact: This incident should have caused official diplomatic responses, platform governance responses, and public cognitive confusion, these consequences are highly related, and fully show the path of AIGC shaping public opinion. (4) Traceability: The dissemination path of the incident should be transparent, the key nodes should be clear, and the detailed media reports and fact-checking reports should have the reports of all parties.

3.2. Overview of the selected case

This research is based on the deep-fake video of prime minister Sheikh Hasina which was posted on the eve of Bangladesh's general election 2024 that is a typical public opinion manipulation case.

7 January 2024 - At the time in Bangladesh as the election to the Jatiya Sangsad (National Parliament) was on the horizon, a video circulating on X/Twitter, Facebook and TikTok, featured a man resembling Bangladesh's Prime Minister and speaking in Bengali, telling people not to vote for his party the Awami League but for the opposition. The video was highly realistic, with perfectly synchronized lip movements, facial expressions, and audio.

Key incident nodes:

① This video spread at an alarming rate and hundreds of thousands of people saw it in the key time of the election, leaving the public baffled and drawing the attention of the world. Reuters, AFP, and other international major media reported the story.

② Bangladesh's Information Minister came forward and said the video was a fake (deep-fake). He believed that the video was created to disrupt the order of the election and confuse the public. Bangladesh's government has lodged complaints with social media platforms, requesting the deletion of the false content.

③ Technical verification was clear-cut: Reuters Fact Check et al. identified the video through technical means, proving that the audio was extracted from Hasina's previous speech, and AI tools were used to synthesize the audio with digitally generated lips, originally "Go to the polling stations on election day" is tampered with to "Do not go to vote".

④ Action of Meta and X: The two social media platforms took action after fact-checking and removed the deep-fake video, tagging it as misinformation. Instagram and Facebook are two social media platforms owned by the same company, Meta.

⑤ Diplomatic influence far - reaching: As the incident became larger, the Indian Ministry of External Affairs spokesperson was questioned by the media. The spokesperson calmly replied that the Bangladeshi people can distinguish the authenticity of false information, and she fully has full confidence in it.

3.3. Analytical framework and steps

This study systematically analyzes the case from three dimensions: (1) Content and technical feature analysis: Based on fact-checking reports and technical analysis articles, identify the types of deep-fake technologies involved (e.g., audio reuse, lip-sync synthesis), sort out how they reversed the political leader's original stance, and evaluate AIGC's specific methods in content manipulation. (2) Dissemination path and platform governance analysis: Reconstruct the video's dissemination timeline across different social platforms (X/Twitter, Facebook, TikTok, etc.) by sorting through international media reports and platform announcements, mark key dissemination nodes (original posters, influential retweeting accounts, peak periods), and analyze the fact-checking and content governance measures adopted by each platform. (3) Public opinion response and discourse framework analysis: Collect public statements from the Bangladeshi government, opposition parties, international media, and neighboring countries' diplomatic departments, analyze how they defined the incident (e.g., "misinformation," "election interference," "deep-fake"), and examine how these narratives were incorporated into existing discourse frameworks such as "AI election interference" and "digital misinformation" in international public opinion.

These developments are implicitly eroding the foundation of social trust and intensifying global discussions on "AI election interference." By analyzing this real-world case, people can clearly observe how AIGC influences real-world news public opinion—a process that directly impacts the direction of political processes. This research provides a solid empirical basis for subsequent studies.

4. Research results

Through in-depth analysis of the deep-fake video incident during Bangladesh's 2024 general election, several important phenomena were observed.

4.1. AIGC content production: a precise tool for political manipulation

In this case, the deep-fake video was meticulously produced around a specific political issue, with content objectively aimed at reducing the ruling party's electoral support. Technical analysis shows that the forgers used real public speech materials of Prime Minister Hasina, only tampering with the audio text and using AI to synchronize corresponding lip movements—completely reversing her political stance from urging voting to boycotting it. This forgery method, based on reality with key modifications, is extremely difficult to identify and significantly enhances deception. Existing studies have pointed out that generative content tools, due to their low cost and low threshold, are increasingly used in political communication, including aggressive or defamatory content [17]. This case is a typical manifestation of this trend in an electoral context.

4.2. Communication dynamics: viral spread through social divisions and algorithmic vulnerabilities

The video's dissemination precisely exploited long-standing political antagonism in Bangladesh. Upon its release, accounts of opposition supporters and suspected coordinated networks quickly retweeted it, generating the first wave of attention. Social media algorithms typically prioritize content that triggers significant interactions (e.g., comments, angry reactions). The video itself contained explosive and controversial elements, making it naturally selected and recommended by algorithms—ultimately reaching a large number of swing voters and undecided groups. During the intense election period, the public's urgent demand for information and widespread anxiety catalyzed dissemination. Social conflicts intertwined with incendiary content, which were further amplified by algorithms, forming a synergistic effect.

4.3. Multidimensional and asymmetric impacts of public opinion

The direct cognitive interference caused by the video temporarily confused voters, forcing the Election Commission and the ruling party to allocate valuable political and communication resources to clarify the facts. From the perspective of agenda-setting theory, the incident, to a certain extent, shifted public and media attention from policy issues to "debates over information authenticity," disrupting the original electoral agenda and reshaping international narratives. International media coverage transformed the focus of Bangladesh's election in international public opinion from the democratic process to a narrative of being attacked by digital misinformation. While this may have aroused sympathy, it weakened the depth of domestic political discussions. Fact-checking efforts had limitations: despite the government and platforms' timely actions to remove false information, the primacy effect had already taken hold. Firm supporters of the opposition were likely to interpret the fact-checking as a suppression tactic, and certain information-poor voters found it difficult to change their initial impressions.

4.4. Complexity and lag of governance responses

The incident revealed the dilemma of multi-stakeholder collaborative governance. The government responded quickly but had limited means, relying only on traditional media for fact-checking and pressuring platforms. Platforms typically responded—either by removing or labeling the content—only after the video had spread on a large scale, resulting in a time lag. The visibility of these labels was significantly lower than the impact of the video itself. Fact-checking organizations played a crucial role, but their influence was mainly confined to elite and media circles, with limited reach to grassroots audiences. This response system was essentially reactive, lacking early warning capabilities for AIGC content in its initial stage and the foresight to intercept it.

5. Discussion

Based on an in-depth analysis of this typical Bangladeshi case, this study discusses AIGC's impact on the guidance of news public opinion from multiple perspectives.

5.1. AIGC reshapes the boundaries between "political reality" and "evidence"

The case demonstrates that AIGC can not only create misinformation but also forge key words and deeds of political figures. When the public stance of a national political leader during a critical

election is highly accurately tampered with, such highly realistic deep-fake cases pose a substantive challenge to the "audio-visual evidence" mechanism that the public has long relied on. As such incidents increase, the cognitive cost and psychological burden of political participation may rise. Relevant studies have pointed out that such an uncertain information environment may breed political alienation and cynicism [18].

5.2. Popularization and asymmetry of "information warfare" in the algorithmic era

Traditional state-level information warfare requires enormous resources, but AIGC technology has provided new opportunities for non-state actors. Political groups, interest groups, and even individuals can launch "micro-information warfare." Generative technologies enable non-state actors to initiate low-cost "micro-information warfare," theoretically possessing the potential to influence national and even transnational public opinion fields. While the specific impact of this case on the election results cannot be accurately quantified, the widespread discussions it triggered in domestic and international media indicate that such operations have an undeniable effect in shaping issues and cognitive frameworks. Attackers only need limited technical resources and social media strategies, while defenders must mobilize massive administrative, technical, and public opinion resources to respond. The severe asymmetry between offensive and defensive costs and capabilities has made the digital public opinion environment more vulnerable.

5.3. Special vulnerability of "Global South" countries

The Bangladeshi case illustrates that "Global South" countries face particular difficulties in addressing AIGC-related public opinion threats. These countries have experienced rapid development of digital infrastructure, but lag behind in media literacy education. They suffer from intense political polarization, insufficient local fact-checking capabilities and resources, and weak bargaining power in governing global social media platforms. These conditions make them highly susceptible to becoming hotbeds for AIGC-generated misinformation, and their domestic political stability is more vulnerable to internal and external digital interference.

5.4. Necessity of a paradigm shift from "content moderation" to "ecological governance"

The case shows that relying solely on platform moderation and post-hoc removal is insufficient to address the systemic risks posed by AIGC. Future governance needs to shift to an ecological governance model: first, prevent at the source by promoting the development and mandatory use of AIGC content watermarking and traceability technologies; second, intervene in the dissemination path by requiring platforms to consider the authority and historical credibility of information sources when evaluating content popularity, and restrict the flow of unconfirmed high-sensitivity political content; third, strengthen resilience building by focusing on improving public media literacy and conducting anti-AI forgery publicity and education before critical election cycles; finally, promote international cooperation by establishing transnational and cross-platform mechanisms for information sharing and joint actions against malicious AIGC content.

6. Conclusion

The deep-fake video incident in the 2024 general election of Bangladesh vividly shows that the evolution of generative artificial intelligence has changed from a threat to an actual threat. AIGC is constantly operating in the world news public opinion and shaping the political process. This paper

finds that AIGC can forge the "golden key" of political evidence, which has a great impact on the judgment of voters, creating sensitive issues and consuming social governance resources. At the international level, AIGC is also reordering the narrative of events. In the process of dealing with social media algorithms and existing social conflicts, it gradually established a new model of public - opinion manipulation with high exposure.

The case particularly demonstrates the magnifying effect of AIGC in politically sensitive times and fragile institutions. It implies that the manipulation of public opinion has reached a new level—both “post-truth” and “post-evidence.” It is not only a trial of fact-checking speed, but also a foundation shake to common social cognition.

How to solve the problems caused by AIGC has become a social governance work in the digital era. From the technical norms, content traceability, platform responsibility, algorithm accountability, and legal system construction to build a governance system from multiple dimensions. The legal effect of deepfakes should be further clarified; publicity and education is necessary; the core is to enhance the public's digital critical literacy; international cooperation plays an important role; the follow-up research should continue to pay attention to the development of AIGC technologies like real-time deep-fakes and personalized generation. Compare the variation in the effect of AIGC on the public opinion in different political systems and cultures. Encourage the development of more resilient and versatile governance solutions; Only with forward - looking and systematic responses may we exploit the advantages of AIGC innovation and ensure the rational, truthful and healthy environment of public opinion on which a democratic society relies.

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