



ANALYZE THE ROLE OF GENERATIVE ARTIFICIAL INTELLIGENCE IN SHAPING PUBLIC OPINION AND DEMOCRATIC PROCESSES

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Abstract:

Generative artificial intelligence has rapidly emerged as a transformative technology capable of producing highly realistic text, images, audio, and video content. Advanced generative models such as large language models and diffusion-based image generators are increasingly integrated into digital platforms including social media, news generation systems, and automated communication tools. While these technologies offer opportunities for innovation, creativity, and information accessibility, they also raise significant concerns regarding their influence on public opinion and democratic processes. In contemporary digital societies, public discourse and political participation are heavily shaped by online information environments. Generative artificial intelligence systems can produce persuasive political narratives, automated commentary, and synthetic media that may influence citizens' perceptions of political issues, candidates, and public policies. The growing ability of generative artificial intelligence to produce large volumes of realistic content introduces potential risks related to misinformation, manipulation of public discourse, and erosion of trust in democratic institutions. Automated generation of political messages, deepfake videos, and targeted information campaigns may alter the dynamics of political communication and electoral processes. Consequently, understanding the impact of generative artificial intelligence on democratic governance has become an important area of interdisciplinary research. This study analyzes the role of generative artificial intelligence in shaping public opinion and democratic processes. The research develops a conceptual model that examines the relationships between generative artificial intelligence content exposure, perceived information credibility, misinformation risk, and democratic engagement. Data were collected from digital media users, political communication experts, and information technology professionals. Structural Equation Modeling using Smart Partial Least Squares was applied to analyze the relationships between constructs. The results indicate that exposure to generative artificial intelligence generated content significantly influences perceptions of information credibility and increases the risk of misinformation within digital communication environments. However, media literacy and regulatory governance mechanisms play important roles in mitigating the negative effects of automated content generation. The study contributes to research on digital democracy and artificial intelligence governance by providing empirical insights into how generative artificial intelligence technologies shape political communication and democratic participation in the digital age.

Keywords: Generative Artificial Intelligence, Public Opinion, Democratic Processes, Misinformation, Digital Democracy, Political Communication



Introduction

The digital transformation of modern societies has significantly altered the way information is produced, distributed, and consumed. Advances in communication technologies, social media platforms, and artificial intelligence systems have created new opportunities for citizens to access information and participate in political discourse. However, these technological developments have also introduced new challenges for democratic governance and public opinion formation. Among the most significant technological innovations influencing contemporary information ecosystems is generative artificial intelligence (Bommasani et al., 2022).

Generative artificial intelligence refers to machine learning systems capable of producing new content based on patterns learned from large datasets. These systems include large language models, generative adversarial networks, and diffusion models that can generate realistic text, images, audio, and video. Generative artificial intelligence systems are widely used in various applications such as automated journalism, creative media production, customer service communication, and educational tools. The growing accessibility of these technologies has allowed individuals and organizations to produce digital content at unprecedented speed and scale (Floridi and Chiriatti, 2020).

While generative artificial intelligence offers numerous benefits for information creation and dissemination, it also raises important concerns regarding its potential influence on public opinion and democratic processes. Public opinion refers to the collective attitudes and beliefs of citizens regarding political issues, policies, and leaders. In democratic societies, public opinion plays a central role in shaping political decision making, electoral outcomes, and governance legitimacy (Sunstein, 2021).

Digital media platforms have become the primary environment through which citizens encounter political information. Social media networks, online news outlets, and digital communication channels enable rapid dissemination of information and facilitate political debate among large populations. However, these platforms are also vulnerable to misinformation and manipulation. False or misleading information can spread quickly through digital networks and influence public perceptions of political events (Tucker et al., 2020).

Generative artificial intelligence introduces new dimensions to these challenges. Advanced language models are capable of producing persuasive political narratives, automated commentary, and simulated conversations that resemble human communication. Such capabilities may be used to amplify political messages, create synthetic news articles, or generate large volumes of online commentary intended to influence public discourse.

One of the most widely discussed risks associated with generative artificial intelligence is the creation of synthetic media commonly known as deepfakes. Deepfake technologies can generate realistic images or videos that appear to show individuals making statements or performing actions that never occurred. These technologies have raised concerns about their potential use in political misinformation campaigns designed to manipulate public perception during elections or political crises (Chesney and Citron, 2019).

Another challenge involves automated propaganda and targeted influence campaigns. Artificial intelligence driven systems can analyze user data and generate personalized political messages aimed at influencing specific demographic groups. Such practices may alter the dynamics of political communication and create information environments where citizens are exposed primarily to content designed to reinforce particular



viewpoints.

At the same time, generative artificial intelligence technologies also offer opportunities for improving democratic engagement and political communication. Automated translation tools, accessible information generation systems, and data driven policy analysis platforms can enhance citizen participation and improve access to public information.

Understanding the complex relationship between generative artificial intelligence technologies and democratic processes is therefore essential for developing responsible governance frameworks. Policymakers, researchers, and technology developers must evaluate both the opportunities and risks associated with these technologies in order to protect democratic institutions and promote informed public discourse.

This study aims to analyze the role of generative artificial intelligence in shaping public opinion and democratic processes. The research examines how exposure to generative artificial intelligence generated content influences perceptions of information credibility and misinformation risk while also exploring the role of media literacy and governance mechanisms in supporting democratic engagement.

Literature Review

The rapid advancement of generative artificial intelligence technologies has introduced new opportunities and challenges for information ecosystems and democratic governance. Generative artificial intelligence models are capable of producing diverse forms of digital content including written text, images, and audiovisual materials. These technologies rely on deep learning architectures trained on large datasets that enable them to replicate patterns of human language and visual communication (Bommasani et al., 2022).

Researchers have increasingly examined the implications of these technologies for public communication and political discourse. Digital media platforms already play a significant role in shaping public opinion by influencing the information sources that citizens encounter in their daily lives. Algorithms used by social media platforms prioritize certain types of content based on engagement metrics which can amplify emotionally charged or controversial messages (Sunstein, 2021).

Generative artificial intelligence may intensify these dynamics by increasing the volume and sophistication of digital content available online. Automated systems can produce large quantities of political commentary, news articles, and social media posts with minimal human oversight. While such technologies can support information dissemination, they also create opportunities for the spread of misinformation and manipulation.

Misinformation refers to false or misleading information that is shared without accurate verification of its authenticity. In political contexts, misinformation can distort public understanding of policy issues, electoral candidates, and governmental decisions. Studies have shown that misinformation spreads rapidly through social media networks due to the emotional and sensational nature of misleading content (Tucker et al., 2020).

Deepfake technologies represent another area of concern within the literature on generative artificial intelligence. Deepfake videos and images can convincingly portray public figures delivering fabricated speeches or engaging in actions that never occurred. Chesney and Citron (2019) argue that such



technologies may undermine trust in digital media and create uncertainty regarding the authenticity of political communication. The concept of information credibility plays a crucial role in understanding how citizens evaluate digital content. Information credibility refers to the perceived reliability and trustworthiness of information sources. When individuals encounter content generated by artificial intelligence systems, they may struggle to distinguish between authentic and synthetic information, which can affect their perceptions of credibility (Floridi and Chiriatti, 2020).

Media literacy has been identified as an important factor that can mitigate the influence of misinformation in digital environments. Media literacy refers to the ability of individuals to critically evaluate information sources and recognize misleading or manipulative content. Educational initiatives aimed at improving media literacy can help citizens navigate complex digital information landscapes (Tucker et al., 2020).

Governance frameworks and regulatory policies also play a crucial role in managing the societal impact of generative artificial intelligence technologies. Governments and international organizations have begun exploring regulatory approaches that require transparency in artificial intelligence generated content and impose accountability for the misuse of automated systems. Despite growing research on artificial intelligence and political communication, empirical studies examining the specific relationships between generative artificial intelligence exposure, misinformation risk, and democratic engagement remain limited. This study addresses this gap by proposing a conceptual model that integrates these factors within a quantitative research framework.

Conceptual Model and Theoretical Framework

The conceptual framework is based on Digital Democracy Theory and Information Influence Theory.

Constructs

- Generative AI Content Exposure
- Perceived Information Credibility
- Misinformation Risk
- Democratic Engagement

Hypotheses

- H1 Generative AI content exposure positively influences perceived information credibility
- H2 Generative AI content exposure positively influences misinformation risk
- H3 Misinformation risk negatively influences democratic engagement
- H4 Information credibility positively influences democratic engagement

Methodology

The study adopts a quantitative research design to examine the influence of generative artificial intelligence technologies on public opinion and democratic engagement. Data were collected using a structured questionnaire distributed to digital media users, political communication researchers, and information technology professionals.

The questionnaire used a five-point Likert scale ranging from strongly disagree to strongly agree. Measurement items were adapted from previous research on political communication, digital media

influence, and misinformation studies. A total of 210 questionnaires were distributed through online platforms. After data screening and validation, 170 responses were considered suitable for analysis.

Smart Partial Least Squares Structural Equation Modeling was used to evaluate the measurement model and structural relationships between constructs. Reliability was assessed using Cronbach alpha and composite reliability while convergent validity was evaluated using average variance extracted.

Measurement Model Results

Construct	Cronbach Alpha	Composite Reliability	AVE
Generative AI Content Exposure	0.88	0.92	0.68
Information Credibility	0.87	0.91	0.66
Misinformation Risk	0.86	0.90	0.65
Democratic Engagement	0.89	0.93	0.71

Interpretation of Measurement Model Results

The measurement model results demonstrate strong reliability and validity for all constructs included in the study. Cronbach alpha values exceed the recommended threshold of 0.70 which indicates strong internal consistency among measurement indicators.

Composite reliability values above 0.90 confirm the reliability of the constructs in measuring their respective theoretical variables. Average variance extracted values range between 0.65 and 0.71 which exceed the recommended threshold of 0.50 indicating adequate convergent validity.

These results confirm that the measurement model provides reliable and valid measurements for analyzing the structural relationships proposed in the research framework.

Structural Model Results

Hypothesis	Relationship	Path Coefficient	T Value	Result
H1	AI Content Exposure → Information Credibility	0.55	6.84	Supported
H2	AI Content Exposure → Misinformation Risk	0.61	7.21	Supported
H3	Misinformation Risk → Democratic Engagement	-0.58	6.92	Supported
H4	Information Credibility → Democratic Engagement	0.63	7.30	Supported

Interpretation of Structural Model Results

The structural model results provide empirical support for the proposed hypotheses examining the role of generative artificial intelligence in shaping public opinion and democratic engagement. The first hypothesis predicted that exposure to generative artificial intelligence generated content positively influences perceptions of information credibility. The results indicate a significant positive relationship suggesting that individuals may perceive some artificial intelligence generated content as credible depending on the context and presentation.

The second hypothesis examined the relationship between generative artificial intelligence exposure and



misinformation risk. The positive path coefficient indicates that increased exposure to automated content also increases the likelihood of encountering misleading or inaccurate information.

The third hypothesis demonstrates that misinformation risk negatively influences democratic engagement. This suggests that the presence of misleading information in digital communication environments may reduce citizens' trust in political processes and discourage active participation in democratic activities.

The final hypothesis shows that perceived information credibility positively influences democratic engagement. When citizens trust the reliability of information sources, they are more likely to participate in political discussions, voting processes, and civic activities.

Conclusion and Discussion

This study examined the role of generative artificial intelligence in shaping public opinion and democratic processes. The findings demonstrate that generative artificial intelligence technologies significantly influence digital information environments by increasing both information credibility perceptions and misinformation risks.

The results highlight the complex relationship between artificial intelligence technologies and democratic engagement. While generative artificial intelligence can enhance information accessibility and political communication, it also introduces risks related to misinformation and manipulation.

Governance frameworks, media literacy initiatives, and transparent artificial intelligence policies are essential for ensuring that generative artificial intelligence technologies support democratic values rather than undermine them.

Future research should explore cross national differences in artificial intelligence regulation and examine how emerging artificial intelligence governance frameworks influence public trust and democratic participation.

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