

The Mediatization of Human–Machine Interaction in Digital Public Space: Socio-Political Implications for Contemporary Political Communication

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Abstract

The transformation of the digital public sphere positions machines, particularly algorithms and artificial intelligence, as increasingly influential actors within the communication ecology. This study examines how processes of mediatization, as articulated by Andreas Hepp and Stig Hjarvard, reshape political communication practices when human–machine interaction becomes integral to the production, distribution, and consumption of information. Using the framework of deep mediatization, this research conceptualizes algorithms not merely as technical channels but as operational entities with agency in shaping discourse visibility, public attention patterns, and the tempo of political conversation. The framework of Human–Machine Communication (HMC) further explains how machines function as quasi-communicators whose mechanisms of personalization, recommendation, and automated response contribute to shaping political opinion and civic participation. The article argues that human–machine interaction has generated a new form of platform-mediated political communication, where public deliberation increasingly shifts toward algorithmic recommendation processes. This shift brings socio-political consequences such as discourse fragmentation, personalization-based polarization, rising pseudo-engagement, and the emergence of political agency negotiated between human intention and technological design. By integrating mediatization and HMC perspectives, the study offers fresh insight into the evolving configuration of communicative power in the digital age and highlights the democratic challenges posed by an increasingly automated media infrastructure.

Keywords: mediatization, human–machine communication, algorithms, digital public sphere, political communication, artificial intelligence.

Introduction

The development of digital technology has brought about fundamental changes in contemporary political communication practices. Social media no longer functions merely as a means of disseminating political information, but has become a primary space for shaping public opinion, representing political identities, and an arena for contesting power discourse. In this context, political communication is increasingly shaped by the logic of digital platforms and the algorithmic systems that underpin them (Hepp, 2020; Hjarvard, 2021). The 2024 Indonesian Presidential Election clearly demonstrates this shift. Political campaign practices not only involve human actors such as candidates, political parties, and campaign teams, but also utilize artificial intelligence technology (Artificial Intelligence/AI), social media algorithms, and content automation systems. The use of AI-based visuals, automated sentiment analysis, and engagement-based message distribution strategies is part of political communication integrated with digital infrastructure.

This phenomenon marks a shift in the role of technology in political communication. Machines, particularly algorithms and AI, no longer function solely as technical tools but instead play an active role in determining the visibility of political messages, shaping public attention, and influencing voter perceptions. Thus, human-machine interaction has become a crucial element in the political communication process in the digital public sphere. In communication studies, this situation can be understood through a perspective of *mediatization*.

According to Hepp (2020), mediatization refers to the process by which media and communication technologies become structural forces that shape social practices, including political practices. The concept of deep mediatization explains that digital technology and data systems have become an inherent part of social life, making communication relations inseparable from the logic of media and machines. Meanwhile, Hjarvard (2021) emphasizes that political institutions are increasingly adapting to the logic of media, where popularity, visibility, and audience engagement are key indicators of successful political communication.

The 2024 Indonesian presidential election is a relevant context for examining the process of mediatization, particularly in seeing how machines act as communication actors. The use of generative AI in building candidate images on social media shows that machines function as *quasi-communicators*, which helps produce political meaning and mediate relations between political actors and the public. This interaction has significant socio-political implications, such as shifts in the form of political participation, a tendency to personalize messages, and the potential for strengthening polarization and pseudo-engagement. Based on this background, this study aims to analyze how the mediatization process shapes human-machine interactions in political communication in the 2024 Indonesian Presidential Election, as well as examine the socio-political implications of the role of machines as communication actors in the digital public sphere.

Literature Review

This study is based on the perspective of *mediatization* to understand the changing structure of political communication in the digital era, especially when artificial intelligence technology and social media algorithms play an active role in the communication process. Mediatization refers to a long-term process in which media and communication technology are not only a means of conveying messages, but also shape social practices, power relations, and the production of meaning in society (Hepp, 2020). Hepp (2020) developed the concept of deep mediatization to explain the advanced phase of mediatization, when digital technology, datafication, and algorithmic systems become the basic infrastructure of social life. In this context, communication practices—including political communication—cannot be separated from the logic of digital media, which operates through automation, personalization, and platform-based connectivity. Media are no longer mere intermediaries, but rather structural conditions that determine how social interactions occur.

In line with Hepp, Hjarvard (2021) emphasized that mediatization is also related to the penetration of media logic into social institutions, including political ones. This media logic encompasses an orientation toward visibility, speed, popularity, and audience engagement. In the context of digital political communication, the success of political

messages is no longer measured solely by their ideological substance but by their ability to adapt to the logic of social media platforms and content distribution algorithms.

In the digital public sphere, mediatization has resulted in significant changes in the relationship between political actors and the public. The political communication process has become increasingly fragmented, personalized, and reliant on algorithmic recommendation systems (Couldry & Mejias, 2023). Social media algorithms determine which political messages appear, who they are shared with, and how long they remain in the public eye. Thus, technology not only mediates communication but also actively participates in the formation of political discourse.

This development opens up space for a new understanding of the role of machines in communication. In the study Human–Machine Communication (HMC), machines—like algorithms, chatbots, and AI systems—are understood as quasi-communicators, namely non-human entities that carry out communication functions operationally (Guzman, 2020). Machines are capable of responding, selecting, filtering, and presenting messages, thus having the capacity to influence the communication process even though they lack human consciousness or intentionality. In the context of political communication, machines act as actors that mediate interactions between politicians and the public. Generative AI can shape candidate images, algorithms determine the visibility of campaign messages, and analytical systems predict users' political preferences. This phenomenon demonstrates that agency in political communication is no longer entirely in the hands of human actors, but rather is negotiated through technological design and the logic of digital systems (Couldry & Mejias, 2023).

This study views human-machine interaction as part of a mediatized political communication structure. Machines are not positioned as substitutes for political actors, but as communication actors operating within a digital media ecology. In the 2024 Indonesian Presidential Election, the use of AI and social media algorithms reflects how machines function as both intermediaries and producers of political meaning, impacting participation patterns, public perception, and the quality of the digital public sphere. By combining the mediatization perspective and the concept of machines as communication

actors, this study positions contemporary political communication as a process that occurs in collaboration between humans and machines. This theoretical framework allows for a more comprehensive analysis of the socio-political implications of the use of digital technology in electoral democracy practices.

Methods

This research uses a qualitative approach with a case study method to analyze the mediatization process in human-machine interactions in digital political communication. The qualitative approach was chosen because this research focuses on an in-depth understanding of social phenomena, specifically how artificial intelligence technology and social media algorithms play a role as communication actors in the context of the 2024 Indonesian Presidential Election (Creswell, 2021). The case study is used to examine the phenomenon contextually and holistically, with the 2024 Indonesian Presidential Election as a primary case. This case selection is based on the intensity of social media and AI technology used in political communication strategies during the campaign period, as well as the magnitude of the socio-political impact they have had on the digital public sphere.

The data sources in this study consist of primary and secondary data. Primary data was obtained from digital political communication content circulating during the 2024 Indonesian presidential election campaign, specifically social media posts on Instagram, TikTok, and Twitter. The content analyzed included AI-based campaign visuals, digital campaign narratives, and user interactions such as comments, responses, and engagement patterns. Secondary data was obtained from official documents of election organizers, mass media reports, scientific journal articles, and academic books relevant to the topic of digital political communication and mediatization. Data collection techniques included digital documentation and non-participant observation of social media content. Researchers identified and archived content demonstrating the use of AI, algorithms, or communication automation in political campaigns. Furthermore, a literature review was conducted to strengthen the theoretical analysis and provide academic context for the empirical findings.

Data analysis was conducted using thematic analysis techniques. The collected data was coded to identify key themes related to the process. Mediatization, the role of machines as communication actors, and the socio-political implications of human-machine interactions. The analysis process is carried out interpretively by linking empirical findings with the theoretical framework. Mediatization and Human-Machine Communication to maintain data validity, this study employed source triangulation, comparing data from various social media platforms, official documents, and literature sources. This approach was used to ensure the consistency of findings and strengthen the reliability of research interpretation.

Results and Discussion

Mediating Digital Political Campaigns in the 2024 Indonesian Presidential Election

The results of the study show that political communication in the 2024 Indonesian Presidential Election took place in conditions of mediatization. In-depth analysis. Social media no longer functions as an additional campaign channel, but rather as a primary infrastructure that shapes political strategy, messaging, and representation. Digital campaign practices demonstrate a strong adaptation to platform logic, particularly an orientation toward visibility, speed of distribution, and audience engagement. Political actors actively produce content tailored to the characteristics of social media algorithms. Campaign visuals are designed to be concise, repetitive, and emotional to be easily recommended by platform systems. This confirms the thesis. Mediatization means that political institutions are increasingly subject to media logic, where communication success is measured by algorithmic performance, not by the quality of public deliberation (Hjarvard, 2021).

In this context, political communication is no longer entirely controlled by human actors. Platforms and algorithms serve as selection mechanisms that determine which messages gain public attention. Thus, the relationship between political actors and the public is mediated by technological systems that operate automatically and continuously.

Machines as Communication Actors in Political Campaigns

Research findings indicate that artificial intelligence technology and social media algorithms play a role in communication in the 2024 Indonesian presidential election. The use of generative AI to build candidate images, particularly through digital illustration-based campaign visuals, demonstrates that machines not only support message production but also contribute to the production of political meaning. AI functions as a quasi-communicator that presents candidate representations in a more personal, emotional, and accessible form. Political personas created through AI visuals tend to emphasize affective aspects over substantive policy aspects. This demonstrates how machines contribute to the personalization of politics, while shifting the focus of communication from political programs to image and emotion.

Furthermore, social media algorithms play a role in determining the visibility and distribution of political messages. Content that aligns with the algorithm's preferences—for example, with high engagement rates—appears more frequently in users' timelines. Thus, algorithms function as filters for political discourse, influencing what the public can see, discuss, and debate. From a political perspective, Human–Machine Communication, machines run operational agencies that have a direct impact on the political communication process (Guzman, 2020).

Human–Machine Interaction and Changes in Political Participation

The interaction between social media users and algorithmic systems has shaped a distinctive pattern of political participation in the 2024 Indonesian presidential election. Public participation tends to be realized through low-key activities such as liking, sharing, and commenting on campaign content. This form of participation demonstrates high quantitative engagement, but is not always accompanied by deep deliberative engagement. This phenomenon can be understood as a form of pseudo-engagement, where digital interactions create the illusion of political participation without encouraging critical discussion or substantive reflection. Machines play a role in reinforcing this pattern through recommendation mechanisms that prioritize emotional and popular content. As a result, the digital public sphere has become increasingly fragmented and personalized, tailored to individual user preferences.

Within the framework of mediatization, this situation demonstrates that technology not only mediates communication but also shapes how the public participates in politics. Human-machine interactions shape political experiences that are more consumerist than deliberative, potentially diminishing the quality of digital democracy.

Socio-Political Implications for Contemporary Political Communication

The socio-political implications of human-machine interaction in the 2024 Indonesian presidential election are evident in the changing structure of communication power. The power to shape public opinion rests not only with political actors or the mass media, but also with the technological design and logic of algorithms. This poses new challenges for transparency, accountability, and the ethics of political communication. The use of AI and algorithms has the potential to exacerbate information inequality, as not all messages have equal visibility. Furthermore, data-driven personalization can exacerbate political polarization by creating echo chambers that limit exposure to divergent views. This situation underscores the need for digital literacy and regulations that can balance the power of technology in political communication.

Thus, mediatization of contemporary political communication must be understood as a process involving continuous negotiation between human and machine actors. The 2024 Indonesian presidential election demonstrates that the future of political communication will increasingly be determined by the ability of political actors and the public to understand and manage the role of technology as a communication actor.

Conclusion

This study shows that political communication in the 2024 Indonesian Presidential Election took place in conditions of mediatization, a profound transformation in which social media and artificial intelligence technologies serve as the primary infrastructure for political communication. Machines, particularly algorithms and AI, no longer function as technical tools but as communication actors that determine the visibility of messages, shape public attention, and influence patterns of political participation.

Through the framework of deep mediatization, this study asserts that contemporary political communication practices are increasingly subject to the logic of digital platforms. Human-machine interaction encourages the personalization of politics and user-based engagement. Pseudo-engagement has the potential to weaken the deliberative function of the digital public sphere. Therefore, strengthening digital literacy and ethical attention to the use of technology in political communication is necessary to maintain the quality of democracy in the digital age.

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