



Digital Rhetoric and Algorithmic Ethics: A Literature Review of Digital Communication

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Abstract

In the digital age, communication has become increasingly shaped by algorithmic systems that structure interaction, visibility, and persuasion across online platforms. This literature review explores the convergence of digital rhetoric and algorithmic ethics to understand how meaning-making and moral agency are co-constructed in contemporary digital environments. Digital rhetoric, concerned with how persuasion operates in multimodal and interactive contexts, now intersects with algorithmic processes that govern content distribution and user engagement. Simultaneously, the rise of algorithmic ethics addresses the sociotechnical implications of bias, opacity, and accountability embedded in machine-driven communication infrastructures. Through a qualitative synthesis of recent scholarship, this study identifies four core themes: algorithmic persuasion, content visibility and bias, platform governance, and ethical resistance. The findings show that algorithms are no longer neutral tools but rhetorical actors that influence how narratives are constructed and circulated. Moreover, the literature highlights growing concerns about fairness, transparency, and user autonomy, especially in the realms of political discourse, media consumption, and educational technologies. The study concludes that navigating digital communication today demands both rhetorical literacy and ethical sensitivity. A deeper understanding of how algorithmic systems persuade, exclude, or amplify certain voices is vital for promoting equitable and informed public discourse. This review contributes to a critical framework that connects digital rhetoric and algorithmic ethics, offering insights into the rhetorical and moral complexities of our algorithmically mediated world.

Keywords: Algorithmic ethics, communication bias, digital rhetoric, persuasion, platform governance

1. Introduction

In the 21st century, the convergence of technology and communication has redefined the way humans interact, persuade, and express themselves in digital spaces. As societies increasingly rely on algorithmically mediated platforms, the study of digital rhetoric, how persuasion operates in digital contexts becomes essential to understanding the social, cultural, and political implications of communication in the digital era (Dillet, 2022; Zompetti et al., 2022).

Digital rhetoric is more than just the application of classical rhetorical principles to new media. It encompasses the dynamic interplay between text, image, interface, and user behavior. Unlike traditional forms of rhetoric, digital rhetoric considers multimodal formats and interactivity, engaging audiences through hyperlinks, algorithms, AI-generated content, and platform-driven design choices that influence perception and decision-making (Wu et al., 2025).

Parallel to the rise of digital rhetoric is the emergence of algorithmic ethics a field that interrogates the moral dimensions of code, data, and machine learning processes. Algorithms now curate news feeds, moderate speech, and influence electoral decisions, raising fundamental ethical questions about transparency, accountability, and bias. The algorithm, once a neutral tool, has become a rhetorical actor in its own right (Barabas, 2022; Hashmi, 2025).

Together, digital rhetoric and algorithmic ethics offer a powerful lens through which to examine the evolving landscape of digital communication. While digital rhetoric explores how meaning and persuasion are constructed in online environments, algorithmic ethics evaluates the impact of these processes on equity, justice, and democratic discourse. Their intersection is crucial in unpacking the subtleties of influence, manipulation, and control in contemporary communication (Coeckelbergh, 2024).

Recent literature has moved beyond theoretical abstraction to interrogate the practical implications of algorithmic governance on rhetoric. For example, studies on platformization, algorithmic bias, and recommendation systems

highlight how digital platforms shape the visibility of content and voices. The rhetorical architecture of platforms like Twitter, YouTube, and TikTok is not just aesthetic, it is ideological and ethical (Duffy & Meisner, 2023).

Moreover, the influence of algorithmic logic on political rhetoric has become a pressing area of inquiry. From targeted advertising to micro-influencing and content moderation, algorithmically-driven systems shape public discourse in ways that challenge traditional norms of free expression and deliberative democracy. This raises concerns about who controls the narrative and how such narratives are received and contested.

In educational contexts, the role of digital rhetoric is also being reconsidered in light of AI-assisted writing tools and algorithmic plagiarism detection systems. These technologies reshape student writing practices, teacher assessments, and institutional standards, introducing a complex matrix of rhetorical agency, surveillance, and ethical considerations (Sharma, 2025). This literature review aims to synthesize the current scholarly conversation at the intersection of digital rhetoric and algorithmic ethics. By tracing major themes, theoretical frameworks, and empirical findings, this review seeks to map how researchers are responding to the challenges of digital persuasion in an age of algorithmic power. Ultimately, understanding digital communication today requires more than just technical fluency. It demands rhetorical and ethical literacy an ability to critique how digital infrastructures shape discourse and whose interests are served in the process. This review contributes to that endeavor by offering a comprehensive analysis of how digital rhetoric and algorithmic ethics converge in contemporary scholarship.

2. Literature Review

In recent years, the study of algorithmic bias and recommendation systems has grown rapidly. Liu (2024) categorizes bias into data bias, model bias, and “feedback loops,” which collectively give rise to phenomena such as filter bubbles and the reinforcement of social stereotypes on platforms such as Netflix, YouTube, and Amazon. A comprehensive study by Bartl et al. (2025) also highlights the reluctance of “bias in NLP” research to formulate a clear normative definition, prompting the need for a deeper analysis of its social and experiential impacts.

Other studies underscore the challenges of achieving algorithmic fairness as a sociotechnical phenomenon: Dolata et al. (2021) emphasize that fairness is not just about statistical metrics, but how technical and social systems interact to produce fair outcomes. In the recommender domain, a study by Leslie et al. (2024) outlines various fairness metrics and mitigation strategies, ranging from the removal of sensitive attributes to bias-aware algorithmic suites.

The literature also examines the polarizing and social manipulation effects of recommender systems in news media. Bozdag & Hoven (2015) highlight how the systems have the potential to isolate users from alternative perspectives and inhibit public deliberation (Milano et al., 2020). Plural approaches, such as the configuration of “recommendation personas,” are proposed to offer a balance between relevance and exposure to content diversity. In contrast, debates about algorithmic transparency and accountability have taken center stage. Liu (2024) and other systematic publications call for recommender systems to provide explainability and reporting channels for users.

Recent literature shows that issues related to algorithms in digital communication cannot be separated from broader social, political, and cultural dimensions. Algorithms are not just technical instruments, but also rhetorical instruments that shape narratives, regulate the visibility of information, and influence how users view the digital world. In this context, the presence of algorithms helps construct a communication reality that is full of values, power, and potential for manipulation.

Interdisciplinary perspectives that combine rhetoric, technology, and ethics further strengthen the understanding that digital communication does not occur in a vacuum. User experiences with recommendation systems, search, or content moderation are largely determined by algorithmic decisions that are often invisible but have a major impact on public perception, choice, and participation. The literature also emphasizes the importance of a critical approach to algorithmic practices and design. Fairness, transparency, and accountability are key principles in assessing the extent to which digital systems provide space for a diversity of voices, not just technical efficiency or convenience. In this regard, rhetorical sensitivity and ethical awareness are key to building a digital ecosystem that is not only technologically intelligent, but also socially wise.

3. Methods

This study adopts a qualitative-descriptive methodology with a critical orientation, aimed at synthesizing and interpreting contemporary scholarship at the intersection of digital rhetoric and algorithmic ethics. Given the conceptual nature of the research problem and its reliance on secondary sources, this literature-based inquiry is designed as a systematic critical review that integrates insights from rhetorical studies, algorithmic governance, digital media ethics, and sociotechnical systems. Data in this study are drawn from peer-reviewed journal articles, academic monographs, and conference proceedings published over the last 10 years, with a focus on works that directly address themes such as digital persuasion, algorithmic bias, platform governance, recommendation systems, and ethical design in digital communication. Sources were selected using keyword-based searches in academic databases such as Scopus, JSTOR, Web of Science, and Google Scholar, using terms including “digital rhetoric,” “algorithmic ethics,”

“platform bias,” “AI and communication,” and “ethical algorithms.” To analyze the data, this study employs Critical Discourse Analysis (CDA) as a primary analytical framework. CDA is particularly suitable for uncovering the ideological structures and power relations embedded in digital texts, platforms, and algorithmic designs. This approach allows the researcher to examine how rhetorical strategies are deployed in algorithmic environments, and how these strategies reflect or resist broader sociopolitical norms, ethical discourses, and institutional power.

The analytical process involves thematic coding and comparative synthesis of scholarly arguments, focusing on (1) rhetorical mechanisms in algorithmic communication, (2) ethical tensions in platform governance, and (3) the implications of digital infrastructures for justice, participation, and inclusion. Each source is examined for both explicit claims and implicit assumptions about communication ethics and algorithmic agencies.

Ultimately, this methodology provides a nuanced understanding of how digital rhetoric and algorithmic ethics mutually inform and shape the communicative practices of our time. By situating theoretical constructs within concrete digital phenomena such as recommendation systems, AI-generated content, or algorithmic content moderation the study seeks to contribute a critical framework for evaluating digital communication in the algorithmic age.

4. Results and Discussion

The analysis of the selected literature reveals three dominant and interrelated themes at the intersection of digital rhetoric and algorithmic ethics: the rhetorical construction of digital influence, the ethical opacity of algorithmic governance, and the sociopolitical implications of platform architecture.

4.1. The Rhetorical Construction of Digital Influence

Digital rhetoric today extends beyond verbal persuasion into algorithmically shaped experiences, where platforms selectively mediate visibility, attention, and interaction. Critical discourse analysis of scholarly works (Zompetti et al., 2022; Wu et al., 2025) reveals that algorithms not only curate content but also frame discourse, influencing what is seen, what is silenced, and how users emotionally engage with digital content.

A compelling example can be found in YouTube's recommendation engine, which has been criticized for pushing users toward increasingly sensationalist content a phenomenon referred to as the “rabbit hole effect.” This algorithmic behavior serves a rhetorical function, subtly steering user beliefs and behavior while maintaining an illusion of neutrality. As digital platforms embed persuasive mechanisms into their design, they become not just vessels of communication, but active rhetorical agents.

4.2. Ethical Opacity and the Myth of Neutrality

While the rhetoric of platform companies often emphasizes values like “user choice” and “technological objectivity,” the review reveals that most systems are imbued with hidden value judgments. Authors such as Leslie et al. (2024) and Barabas (2022) highlight how data-driven systems encode structural biases into algorithmic decision-making. However, CDA also uncovers how this ethical dimension is discursively minimized through terms like “personalization,” “efficiency,” or “optimization” in both academic and industry narratives.

Moreover, transparency remains limited. For example, Bartl et al. (2025) argue that the lack of normative definitions of fairness in NLP research leads to inconsistent applications of ethical principles. Even fairness-aware systems often reduce to technical parameters, ignoring broader sociocultural implications. This calls for a rhetorical reframing of algorithmic ethics—not only as a computational challenge but as a discursive and ethical struggle about what counts as “fair” and who decides.

4.3. Platform Architecture as Ideological Infrastructure

A key insight from this study is the ideological function of digital infrastructure. As platforms like TikTok, Twitter, and Amazon prioritize content based on engagement metrics, they encode certain assumptions about value, popularity, and relevance. This shapes public discourse and political rhetoric, often privileging virality over deliberation.

Digital platforms operate as rhetorical ecologies, where the interface, affordances, and algorithms co-create meaning. For example, the character limit on X (formerly Twitter) encourages brevity and conflict over nuance and reflection. Similarly, the algorithmic downgrading of dissenting views during political elections reveals a deep entanglement between algorithmic design and democratic norms.

In CDA terms, this reflects a hegemonic discourse platform that subtly normalizes values that align with commercial and political interests, often under the guise of neutrality or user-centric design. Ethical alternatives such

as “explainable AI” and plural recommendation systems have been proposed (Liu, 2024; Leslie et al., 2024), but their implementation remains rare due to institutional resistance and economic incentive structures.

4.4. Reclaiming Agency and Ethical Rhetoric

The final theme that emerges from the literature concerns the effort to reclaim rhetorical agency and ethical accountability within digital systems. Scholars argue that while algorithms structure communication flows, users and designers are not passive recipients. Instead, they actively negotiate and sometimes resist algorithmic norms through counter-rhetorical practices, transparency activism, and alternative platform design (Milano et al., 2020).

Digital rhetoric in this sense becomes a site of contestation a space where ethical deliberation about the design, deployment, and critique of algorithmic systems occurs. Calls for explainability, algorithmic literacy, and human-centered AI are part of a broader effort to reinstate human agency in computational environments. This shift is illustrated in Figure 1, which models the thematic relationship between digital rhetoric and algorithmic ethics. The model highlights how the four central themes persuasion logics, algorithmic visibility, design accountability, and ethical resistance interact to influence digital communication.

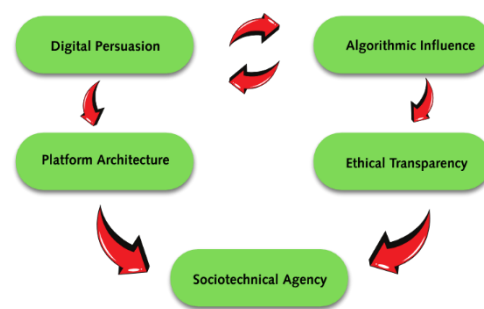


Figure 1: thematic model: intersections of digital rhetoric and algorithmic ethics

To consolidate these insights, Table 1 summarizes the four dominant themes identified in this review, including their descriptive features and implications for ethical digital practice. This helps ground theoretical abstractions in practical discourse analysis and critical technology studies.

Table 1: Summary of thematic findings and their ethical implications

Theme	Description	Ethical Implication
Algorithmic Persuasion	Platforms deploy algorithmic nudges to shape behavior	Raises concern over manipulation and consent
Visibility and Bias	Algorithms determine whose content gets seen	Highlights inequality in voice and representation
Design and Governance	Platform architecture encodes rhetorical values	Demands transparency and accountability in system design
Ethical Rhetorical Agency	Users and designers resist or subvert algorithmic control	Emphasizes need for ethical literacy and human-centered digital practices

5. Conclusion

The analysis reveals that the intersection of digital rhetoric and algorithmic ethics is marked by four key thematic concerns: algorithmic persuasion, visibility and bias, platform governance, and the reclamation of ethical agency. Together, these dimensions illustrate how algorithms not only mediate but actively shape contemporary communication landscapes structuring what is seen, said, and believed in digital spaces. The rhetorical power of platforms emerges through design choices that embed ideological and ethical values into user interactions. Meanwhile, the literature emphasizes a growing scholarly and civic effort to resist algorithmic opacity by advocating for transparency, fairness, and accountability in system design. The findings underscore that digital users are not only recipients of algorithmic influence; they are also rhetorical actors capable of critique, negotiation, and resistance. Ultimately, any attempt to understand or reform digital communication must involve both rhetorical literacy how persuasion functions in algorithmic environments and ethical literacy how justice, equity, and human agency can be

protected. This synthesis contributes to an emerging framework for critically navigating the ethics of digital persuasion in an age increasingly governed by algorithmic logics.

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