Artificial Intelligence and Algorithms in Digital Communication: Reflections on Consumption, Behaviors in Networks, and Techno diversity [1]

Dr. Marcia Siqueira Costa Marques [2]

Expanded Abstract

The XVI National Symposium of ABCIBER proposes a comprehensive exploration of the intersection between three pivotal issues in contemporary society: Information, Techno diversity, and Aesthetics. This study aimed to critically analyze the multifaceted influence of Artificial Intelligence (AI) and algorithms on consumption and behavior within the thematic axis of Digital Communication, Consumption, and Behaviors in Networks.

The concept of information extends beyond merely processed and calculated data, encompassing a complex interrelation with networked platforms, metaverses, social networks, algorithmic technologies, and bioinformatics. It is imperative to dissociate information solely from predictable and probabilistic data and recognize it as an inventive force deeply intertwined with differences and the creation of transformative meanings.

Yuk Hui's notion of techno diversity accentuates the significance of preserving alterity and acknowledging differences in the technological realm. It advocates political and technological diversity to confront pervasive challenges, such as structural racism, climate crisis, and social, economic, and technological inequalities. Techno diversity intertwines with

[1] Paper presented in the thematic hub Digital Communication, Consumption, and Behaviors in Networks at the 16th National Symposium of ABCiber - Brazilian Association of Researchers in Cyberculture. Federal University of Santa Maria, Brazil. December 4-7, 2023.

[2] Ph.D. in Communication and Semiotics at PUC-SP, Co-leader of the Design and Convergence Group at Centro Universitário Belas Artes - SP. Email: marciasiqueira253@gmail.com

the concept of cosmotechnics, which amalgamates cosmological and technological diversity, expanding the pluralistic understanding of technology, and fostering the emergence of alternative technologies that embrace non-Western perspectives.

"Non-Western perspectives" refer to viewpoints, beliefs, and cultural values that originate from regions outside of Western societies, such as Europe and North America. It encompasses diverse cultural, philosophical, and social perspectives, which may differ from those traditionally associated with Western thought.

In the context of technology and digital communication, valuing non-Western perspectives means acknowledging the diversity of the cultural, social, and historical contexts in which technologies are developed and used. It involves recognizing the unique challenges, values, and aspirations of non-Western societies and incorporating their perspectives into the design, implementation, and governance of technological systems.

By embracing non-Western perspectives, we can foster a more inclusive and culturally sensitive approach to technological development. This allows for the incorporation of diverse voices, knowledge systems, and ethical frameworks, ultimately contributing to a more equitable and globally responsive digital ecosystem.

To substantiate this core reflection, this study delves into the intricate relationship between digital communication and AI by drawing insights from prominent authors in the field. Shoshana Zuboff's seminal work, "The Age of Surveillance Capitalism," delves into the rise of surveillance capitalism and the instrumental role algorithms play in personalizing user experiences. Zuboff argued that major digital platforms leverage collected data to shape and influence user behavior, driven by the pursuit of profit maximization. In this context, AI plays a pivotal role in analyzing and interpreting vast amounts of data, enabling mass customization of content.

Another influential author, Jaron Lanier, in his book "Ten Arguments for Deleting Your Social Media Accounts Right Now," examines the far-reaching effects of AI and algorithms on the formation of information bubbles and social polarization. Lanier elucidated how

recommendation and filtering algorithms employed by digital platforms wield substantial power to shape the information users receive, resulting in segregation and a dearth of opinions. Consequently, existing beliefs and worldviews are reinforced, limiting the exposure to broader and critical perspectives.

The growing centrality of AI and algorithms in digital communication necessitates a comprehensive understanding of their impacts on information consumption, user interactions, and social behaviors. The mass customization of content based on algorithms creates virtual reality that can inadvertently reinforce prejudices, exacerbate inequalities, and deepen social divisions.

This reflection contributes significantly to academic discourse in the field of digital communication by shedding light on the ethical, social, and political implications stemming from the influence of AI and algorithms on consumption and behavior in online networks. Furthermore, it provides a nuanced exploration of the algorithmic aesthetics present in digital communication, encompassing personalized content recommendations, selective information filtering, and strategic engagement employed by digital platforms. Understanding how these algorithms shape the construction of digital narratives, dissemination of information, and the formation of virtual identities is of paramount importance.

By comprehending the theoretical foundations and practical implications of the influence of AI and algorithms on consumption and behavior in online networks, we can foster a more conscious, critical, and pluralistic approach to digital communication. This necessitates a critical evaluation and potential reconfiguration of the business models employed by digital platforms, ensuring algorithmic transparency and safeguarding users' rights in this rapidly evolving digital landscape.

This study aimed to provide a comprehensive analysis of the impact of AI and algorithms on digital communication. It seeks to deepen our understanding of how these technologies shape consumption patterns, influence social behaviors, and impact societal transformations. By critically examining ethical, social, and political implications, we can identify potential

challenges and opportunities for creating a more inclusive and diverse digital environment.

In recent years, AI and algorithms have been increasingly integrated into various aspects of digital communication. These technologies play a significant role in shaping our online experiences, from personalized content recommendations to targeted advertising and algorithmic news curation. They determine the information we consume, interactions we have with others, and behaviors we exhibit within digital networks.

However, it is crucial to critically reflect on the implications of this reliance on AI and other algorithms. While they offer benefits such as enhanced personalization and efficiency, they also raise concerns regarding privacy, bias, and concentration of power in the hands of a few dominant platforms. Understanding the societal consequences of these technologies is essential to ensure that their deployment aligns with ethical and democratic principles.

One area of concern is the impact of AI and algorithms on the consumption patterns. These technologies enable personalized recommendations and tailoring of content to individual preferences and interests. While this can enhance user experience, it also creates filter bubbles and echo chambers, limiting exposure to diverse perspectives. This raises questions about the formation of opinions, reinforcement of biases, and potential for social polarization.

Moreover, AI and algorithms shape social behavior within digital networks. They influence the content we share, connections we form, and interactions we have with others. The algorithms employed by social media platforms, for instance, prioritize engagement and optimize user attention, often leading to the proliferation of sensationalist content and spread of misinformation. Understanding these dynamics is crucial for promoting healthy and responsible online behavior.

In addition to consumption and behavior, AI and algorithms also have implications for techno diversity. Dominant algorithms are often developed using biases that reflect the perspectives and values of a particular group or culture. This can lead to marginalization and underrepresentation of diverse voices and perspectives, perpetuating existing power imbalances. Embracing technical diversity involves promoting the development and adoption

of alternative algorithms and technologies that incorporate a broader range of perspectives.

By critically examining the impact of AI and algorithms on consumption, behavior, and techno diversity, we can develop a more nuanced understanding of their implications. This understanding can inform the development of policies and practices that promote transparency, accountability, and inclusivity in digital communications. This can guide the design of algorithms that mitigate biases and promote diversity. Ultimately, it can contribute to the creation of a digital ecosystem that empowers users, fosters meaningful connections, and supports democratic value.

By understanding the theoretical foundations and practical implications of the influence of AI and algorithms on consumption and networked behaviors, we can contribute to the creation of more conscious, critical, and inclusive digital communication. This implies rethinking the business models of digital platforms, the transparency of algorithms, and the protection of users' rights.

Keywords

Digital Communication, Consumption, Behaviors in Networks, Artificial Intelligence, Algorithms.

Referencies

ALTER, A. Irresistible: the rise of addictive technology and the business of keeping us hooked. Penguin Press, 2017.

BAUDRILLARD, J. O sistema dos objetos. Perspectiva, 1995.

CASTELLS, M. A sociedade em rede: A era da informação: economia, sociedade e cultura (Vol. 1). Paz e Terra, 2003.

FOUCAULT, M. Microfísica do poder. Graal, 1999.

HAN, B-Cl. Sociedade da transparência. Vozes, 2017.

HUI, Y. The Question Concerning Technology in China: An Essay in Cosmotechnics. Urbanomic.2020

JENKINS, H. Convergence culture: Where old and new media collide. NYU Press, 2006.

LANIER, J. Dez argumentos para você deletar agora suas redes sociais. Intrínseca, 2018.

NANCY, J. L. A abertura do sentido. Estudos de Filosofia, 2(11), 19-31. 2014.

PARISER, E. O filtro Invisível- o que a internet está escondendo de você. Zahar, 2011.

TRIVINHO, E. A dromocracia cibercultural**:** lógica da vida humana na civilização mediática avançada. Paulus, 2007.

TUFEKCI, Z. (2027). We're building a dystopia just to make people click on ads. [Video] TED Conferences https://www.ted.com/talks/zeynep_tufekci_we_re_building_a_dystopia_just_to_make_people_click_on_ads

ZUBOFF, S. The age of surveillance capitalism: The fight for a human future at the new frontier of power. Profile Books, 2019.