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ABSTRACT

This project articulates a new methodology, Discursive Nodal Analysis (DNA) to explore and track the growth, spread, and interaction of conspiracy-oriented communities in digital spaces. By utilizing a combination of social network analysis (SNA), critical discourse analysis (CDA), and memetic rhetorical analysis (MRA), DNA empowers researchers to explore the unique rhetorical characteristics of online conspiracy theories that enable their evolution within digital environments while simultaneously tracking and analyzing their velocity and spread. Through an examination of discursive patterns, rhetorical strategies, and the mapping of communicative networks in digital communities, this methodology seeks to shed light on the dynamics of conspiracy communities in ways that might inform interventions to address their impact.

CCS CONCEPTS

• **Human-centered computing** → Human computer interaction (HCI); HCI theory, concepts and models; Collaborative and social computing; Collaborative and social computing design and evaluation methods; Social network analysis; Collaborative and social computing; Collaborative and social computing theory, concepts and paradigms; Social content sharing; Collaborative and social computing; Collaborative and social computing theory, concepts and paradigms; Social media.

KEYWORDS

Conspiracy, internet communities, social network analysis, memetic rhetorical analysis, discourse analysis

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1 INTRODUCTION

The spread of conspiracy theories and associated misinformation has been identified as a significant problem, particularly in matters of public interest and safety [1–6]. In this project, we define *conspiracy theory* in accordance with the terms stipulated by Reyes and Smith [9]: "What makes it a conspiracy theory is that it finds proof of conspiracy via conspiracism; it uses a small amount of evidence to configure epistemic lacunae through which the conspiracy is imagined. The theoretical qualities come not because the conspiracy has yet to be proven but because it is premised on the leap from identifying/ constructing a mysterious absence to assuming that absence is actively produced by governments, scientists, media, or a different powerful other" (p. 404). Conspiracy-oriented communities are characterized by the promotion of various conspiracy theories, often accompanied by direct challenges to or rejection of mainstream information sources. While there has been significant attention paid to understanding and debunking conspiracy theories as communicative acts [7–10], the ways that these communities grow, spread, and interact with one another in digital spaces are not yet fully understood. In keeping with the existing traditions of conspiracy study, we believe that understanding these rhetorical strategies and the content of modern conspiracies with which they are associated is an essential component to understanding and intervening in their spread. We argue that because conspiracy communities form around a combination of both shared ideologies and communication fostered by specific technological affordances, effective interpretation of and intervention in these communities must be based in analysis that addresses both these facets. As such, this project advocates for the combined use of social network analysis (SNA), critical discourse analysis (CDA), and memetic rhetorical analysis (MRA) [11, 12] to name, map, and track the unique rhetorical characteristics of online conspiracy theories that allow them to evolve within digital environments. The intervention of this project is to articulate discursive nodal analysis (DNA), which is a permutation of MRA, DA, and SNA, the combination of which affords integrated analysis of all these essential facets in ways that the individual methodologies do not.

2 MAPPING CONSPIRACIES WITH SOCIAL NETWORK ANALYSIS

Conspiracy theories and the communities that engage with them gain social impact through proliferation and engagement. Productive analysis of these communities should therefore account for their spread through digital contexts by examining the networks

through which they are shared. In conspiracy networks, nodes are individuals or digital locations from which content is shared to other points in the network [18]. These nodes can be specific social media posts, whole accounts, websites, or articles that contain content explaining a conspiracy theory or providing evidence of a conspiracy In order to map these nodes in context, the proposed methodology uses the software NodeXL [19] to facilitate social network analysis (SNA) of online conspiracy communities. The methodology will employ measures such as degree centrality, betweenness centrality, and eigenvector centrality to identify the most influential users in the conversation. These measures will enable studies that utilize this methodology to identify the users and content items (the nodes) that are most active in the conversation, those who occupy central positions in the network, and those who are most influential in shaping the conversation.

3 NAMING CONSPIRACIES WITH CRITICAL DISCOURSE ANALYSIS

Conspiracy theories are a negotiation of power that use language to manipulate public perception and social behavior. A review of existing literature reveals that conspiracy communication is characterized by unique discursive patterns including paranoia and mistrust of authority [13–15] as well as what Jenny Rice calls "thick evidence"—persuasion through the accumulation of vast quantities of evidentiary points, regardless of the content or quality of those points [16]. One component of our methodology, critical discourse analysis [17], focuses on breaking conspiracies into constitutive parts to name and challenge the socio-political consequences of conspiratorial discourse. A standard definition of conspiracy theories focuses on their rejection of logical or scientific explanations for events, instead crediting covert organizations and secret plots. In digital environments, these conspiratorial tropes can incorporate a variety of modalities in their representation of evidence, allowing that evidence to grow "thick" through frequent sharing of ideas in the form of images, videos, written, and audio communications. CDA helps us peel back the layers of "evidence" and trace the ideological work being done in conspiratorial discourse communities.

4 TRACKING THE EVOLUTION OF CONSPIRACIES WITH MEMETIC RHETORICAL ANALYSIS

By analyzing the DNA of the most influential nodes in comparison to those with weaker representation, we hope to offer insight into the affordances and constraints of digital systems that work in concert with the content and rhetorical practices of conspiracy communities.

Memetic rhetorical analysis (MRA) analyzes the spread of information by accounting for the adaptation of content, rhetorical strategies, and genre characteristics to the affordances and constraints of the technological environments they inhabit [11, 12].

5 ARTICULATING THE DNA OF CONSPIRACIES

The study's combined methodology integrates the affordances of SNA, DA, and MRA into a single system to facilitate improved understanding of the velocity of conspiracy theory communities, their contents and their interactions with one another. While DA offers insight into rhetorical and discursive strategies, MRA analyzes how these strategies evolve within the affordances and constraints of communicative technologies, and SNA allows us to view the loci of these analyses as individual nodes in a complex and mutually constructive network, thus representing the characteristics that make each conspiracy community unique–its "DNA."

6 CONCLUSION

In conclusion, it is crucial to understand the mechanisms and dynamics behind the proliferation of conspiracy theories to effectively address their impact on society. The findings of research projects that utilize the proposed methodology will contribute to a better comprehension of how these theories gain traction, attract followers, and spread across various online platforms. Understanding these rhetorical characteristics can aid in the development of targeted interventions and educational initiatives aimed at promoting critical thinking and media literacy. Ultimately, the insights gained from use of this methodology will aid in the development of evidence-based strategies to counteract the harmful effects of conspiracy theories and the spread of misinformation in the digital age.

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