

Social Media Communication Filters On Political Activists' Identities

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Abstract

This study examines how the digital network structure on platform X (formerly Twitter) shapes the identity and visibility of activists through algorithmic and relational political filtering mechanisms. Departing from the transformation of political communication in the digital era, this study highlights the role of algorithmic filters, confirmation bias, and echo chambers in shaping the discourse of activism. Using a quantitative approach with Social Network Analysis (SNA), data was collected through activism hashtags such as #MeToo, #BLM, #ClimateStrike, and #FreePalestine, resulting in 1,357 nodes and 955 edges. The results show an average network degree of 0.704, density of 0.001, very high modularity (0.973), and average path length of 1.009. This indicates a fragmented network structure that is locally cohesive and has minimal cross-connections between communities. Actors such as @barengwarga and @korbanmulyonoto became central nodes with a discourse amplification function. However, betweenness centrality was almost zero, indicating the absence of bridges between ideological groups, reinforcing segmentation. This study confirms the theories of Network Society (Castells), Social Capital Theory, and Platform Governance, and highlights that digital power now rests on network positions and algorithmic logic. This study concludes that the visibility and identity of activists on the X platform are jointly shaped by the interaction between network architecture, algorithmic regulation, and social capital dynamics

Keywords: *Algorithmic Filtering; Digital Activism; Network Society Theory; Social Capital Theory; Social Network Analysis (SNA)*

INTRODUCTION

The Digital Age, also known as the Information Age, is a historical and ongoing period characterized by the rapid expansion and integration of digital technology, which has fundamentally changed the way information is accessed, shared, and utilized. This era began in the mid-to-late 20th century, and its momentum increased with the creation of the World Wide Web and the spread of personal computers. This era marked the transition from analog and mechanical technologies to digital systems, enabling the dissemination of information at unprecedented speeds and volumes through the Internet and related technologies (Tyler, 2025). Technological advances have made human interaction easier through digital or virtual platforms. These technological advances have not only facilitated interaction, but also ushered in a new era of communication through the emergence of new media (Soekiman et al., 2025). On the down side, the rise of internet platforms has significantly changed the prostitution scene, increasing accessibility while also making traditional means of regulation more difficult (Sufa et al., 2025). For another example, the Indonesian government launched the Prakerja (Pre-Employment) Training Program as a strategic response to this challenge, aiming to enhance workforce competencies and support employability in the digital era (Susanto et al., 2024).

Digital communication is a form of interaction that is carried out indirectly, using digital tools such as computers or mobile phones accompanied by certain applications or social media sites such as Facebook, Instagram, and WhatsApp (Kurniawan, 2021). Digital communication is also called network communication, which is a way of communicating where the delivery and reception of messages are carried out with or through the internet network. In the contemporary era of digital communication, social media platforms have become the main arena for political engagement, identity negotiation, and collective action.

Among these platforms, Twitter, now renamed X, occupies a unique position as a space for digital activism that transcends geographical and cultural boundaries through real-time communication and network solidarity. These activities contribute to increasing the visibility of social movements and expanding the reach of their messages. The use of hashtags serves as a means of consolidation and collective reminder for users about current issues or movements, thereby accelerating the process of mass mobilization and strengthening the dissemination of issues in the digital space (Sidauruk et al., 2025).

The diversity of X users, which includes various age groups and social backgrounds, enriches public discourse by presenting a broad perspective in the political and social spheres. The form of digital activism on this platform is often linked to field actions, resulting in a hybrid pattern of engagement between the virtual and real worlds that can put pressure on the government and influence policy directions. X's social networking features, including direct interaction and mass communication between users, reinforce the decentralized and collaborative nature of activism (UGM, 2024).

Politics is the practice and theory of influencing governance, decision-making, and power structures in society. It encompasses the activities, actions, and policies used to gain and maintain power in the context of government or institutions. In the digital age, politics is increasingly mediated by digital technology, transforming political participation, communication, and public engagement (Koc-Michalska & Lilleker, 2017).

Digital politics describes the intersection between digital technology and political activity, where social media plays a major role as a space for political interaction and exchange of ideas. The development of the digital era has opened up opportunities for broader public participation by providing access to information, facilitating the mobilization of support, and enabling citizens to express their opinions online. Through social media, the form of political communication has undergone a significant transformation as it enables direct relationships between politicians, political parties, civil society, and the public. However, these dynamics have also led to the emergence of new phenomena such as digital activism and increased polarization in the political sphere (Koc-Michalska & Lilleker, 2017).

Political filters in the digital age refer to mechanisms, both technological and psychological, that shape and often limit the political information that individuals access online. These filters influence how people receive, process, and interact with political content in the digital environment. Key components include algorithmic filtering by social media platforms, selective exposure based on individual preferences, confirmation bias, and the formation of echo chambers (Chandrakar & Kumar Sahu, 2021).

Political filters encompass various mechanisms that influence how individuals receive and interpret information in digital media. Social media algorithms actively prioritize content that matches users' previous interaction patterns. This process reinforces existing views and indirectly limits access to different perspectives. In this context, users also show a tendency to seek information that aligns with their political beliefs. This pattern of selective exposure reduces openness to alternative views and deepens the level of social polarization (Villaplana & Fitzpatrick, 2024). The echo chamber phenomenon occurs when individuals build homogeneous communication networks with other users who share similar views. This condition reinforces shared opinions and creates a false sense of consensus that diminishes critical thinking skills. In addition, confirmation bias reinforces the tendency to accept information that supports personal beliefs while rejecting or ignoring contradictory evidence. As a result, the digital environment becomes a space that reinforces beliefs rather than a place to expand understanding (Villaplana & Fitzpatrick, 2024).

An activist is someone who actively promotes, encourages, or campaigns for social, political, environmental, or cultural change. In the digital age, activism has evolved into “digital activism,” where digital tools such as the internet, social media, email, and mobile phones are

used to mobilize people, raise awareness, organize movements, coordinate tactics, and trigger change more efficiently on a large scale (Zahira & Hermanadi, 2018). Activists seek to raise awareness, fight for issues, organize protests, or influence policy through various methods, both traditional and digital. Digital activism utilizes platforms such as social media (Facebook, Twitter, YouTube), online petitions, blogs, crowdfunding, and instant communication via mobile phones to quickly reach a global audience and facilitate collective action (Zahira & Hermanadi, 2018).

Activists organize themselves around shared hashtags, retweet influential voices, and strategically utilize visual narratives and text to reinforce the issues they are fighting for. These connected interactions not only represent activism; they build and curate activist identities in algorithm-mediated spaces (Field et al., 2022; Klein et al., 2022). The dynamics that can be termed “political filtering,” defined as structural and algorithmic mechanisms that influence visibility, shape how activist identities emerge, gain momentum, or are marginalized in connected platform environments.



Figure 1. #resetindonesia on X

Source: (IDN Times, 2025)

ResetIndonesia has developed as a digital movement calling for comprehensive reform of state institutions that are deemed to no longer be optimally performing their public service functions. This movement goes beyond symbolic protests because it contains concrete demands for institutions such as the House of Representatives, the People's Consultative Assembly, the Constitutional Court, the National Police, the Attorney General's Office, ministries, and other government agencies to transform themselves to be more transparent, accountable, and oriented towards the interests of the people (IDN Times, 2025).

Its development on social media has spread further as a number of musicians and public figures have uploaded content titled “Reset Indonesia” without lengthy explanations, as a form of solidarity with the aspirations of the people. The color green, called “Hero Green,” was used as a symbol of respect for an online motorcycle taxi driver who died in a demonstration incident, while the color pink or “Brave Pink” represented the courage of women who were directly involved in the action (IDN Times, 2025).

In addition, this movement also circulated a document containing “17 + 8 People's Demands” which summarized the short-term and long-term reform agenda, addressed to state institutions and government officials to encourage systemic change and public advocacy (News, 2025).

The #ResetIndonesia movement stems from public dissatisfaction with government policies and practices that are considered to not reflect social justice. One of the issues that triggered public reaction was the increase in allowances for members of the House of Representatives, which was deemed inconsistent with the difficult economic conditions faced by the people. The tragic incident that befell Affan Kurniawan, an online motorcycle taxi driver who

died after being run over by a tactical vehicle belonging to the authorities during a demonstration, became an important moment that strengthened solidarity and broadened support for this movement (Telisik.id, 2025).

The document “People's Demands” that is circulating lists a number of concrete demands, such as the withdrawal of the TNI from civil security functions, the release of detained protesters, the cessation of increases in DPR allowances, increased transparency in the state budget, and the revision of regulations related to the oversight of power. Responding to these dynamics, various research institutions and civil society organizations have proposed an “economic reset” approach with strategic steps, including cutting non-priority budgets, canceling allowance increases for officials and legislators, and strengthening mechanisms for recovering assets obtained through corruption so that public policy is more in line with the interests of the people (Celios, 2025).

Retweets, mentions, follower relationships, and shared hashtag usage act as social and technical filters that determine whose voice is heard or censored (Bucher, 2018; Gillespie, 2020). Visibility on X is therefore not solely a function of discursive power, but also of network centrality and algorithmic mediation. In movements such as #resetindonesia, both network centrality and algorithmic mediation work together to expand the visibility of the hashtag. Accounts with significant influence (high centrality) will help accelerate the spread of the hashtag, while X's algorithm will ensure that the most relevant and widely interacted-with tweets appear more frequently, further increasing dissemination among a wider audience.

Previous research has provided valuable insights into online activism through content and discourse analysis, focusing on narrative frames, emotional resonance, and identity politics (Dunklin & Jennings, 2022; Rice & Bucy, 2023). However, less attention has been paid to the structural and relational dimensions underlying these discourses, particularly how activist identities are formed through network relationships and algorithmic filtering.

This study aims to address this gap by using SNA (Social Network Analysis) to map and interpret the structural configuration of activist networks on X. Thus, this study seeks to elucidate how power and identity operate within the digital “flow space” described by (Castells, 2022) and further developed by subsequent researchers (Gómez & Vallès, 2020), placing the formation of activist identity within the broader framework of the Network Society.

According to (Highfield, 2019), activist expression on X is influenced by complex interactions between humans and algorithms. Although textual and visual content remains central to activist communication, visibility and influence are increasingly determined by network topology and algorithmic amplification. The structural organization of activist networks through retweets, mentions, replies, and shared hashtag usage functions as a political filter, shaping which actors and narratives gain prominence (Zulli, 2020). Previous research on digital activism has often emphasized discursive frameworks or emotional expression in hashtag movements such as #BlackLivesMatter or #MeToo (Choi et al., 2024; Foster et al., 2020). However, few empirical studies have explored the structural mechanisms behind the spread and visibility of these discourses. As a result, questions about how network structures curate activist identities through amplification, marginalization, or silencing remain under-explored.

Most research on activism on X focuses on content analysis (hashtags, frames, narratives). Few apply pure SNA to explore how activist identities are structurally curated through network relationships, retweets, and algorithmic amplification (Ayudha, 2022; Estrella-Ramón et al., 2024).

This study attempts to address this gap by systematically analyzing the network structure of activist communities on X to reveal how visibility and identity formation are influenced by algorithmic systems and relational patterns among users using SNA (Social Network Analysis). This study aims to map the structural patterns of activist networks on the X platform, as well as identify accounts that have significant influence, interconnected groups, and the role of connectors that shape the visibility of activist identities. In addition, this study analyzes the

influence of algorithmic and social filters, such as retweet mechanisms, mentions, and hashtag usage trends, on activist communication patterns. This study also interprets how the network structure plays a role in filtering and strengthening the construction of activist identities in the digital space.

Ultimately, this study interprets how network structures filter and strengthen activist identities by integrating insights from Network Society Theory, Social Capital Theory, Platform Management & Algorithmic Filtering, and the Innovation Diffusion framework. Through these objectives, this study seeks to provide a comprehensive understanding of how network logic influences political visibility and identity formation in digital activism.

This study contributes both theoretically and practically to the understanding of digital activism and political communication in networked societies. Theoretically, this study expands Castells' Network Society Theory by empirically demonstrating how activist identities operate in “flow spaces,” a sociotechnical domain where power is exercised through visibility and connectivity rather than hierarchical control (Gómez & Vallès, 2020). This study also applies Social Capital Theory to digital activism, distinguishing between bonding ties that strengthen solidarity within groups and bridging ties that connect diverse activist communities (Noor et al., 2020; Prasetyo et al., 2023). Furthermore, this study positions Platform Governance and Algorithmic Filtering as structural determinants of activist visibility, showing how algorithmic curation interacts with social networks to prioritize certain narratives while suppressing others (Bucher, 2018; Sybert, 2021). Drawing on Innovation Diffusion Theory, this research conceptualizes the spread of activist messages as a flow of innovation spreading through digital networks via retweets and hashtag cascades (Lin, 2024; Tilahun et al., 2025).

Practically, the findings of this study have implications for activists, policymakers, and researchers. For activists, these insights can be used to design strategies against algorithmic suppression and increase visibility across network clusters. Policymakers and platform designers can leverage these findings to promote ethical and inclusive governance frameworks that ensure fair representation for activist voices. Research by Duffy & Meisner (2022) emphasize this framework seeks to prevent the concentration of discursive power in the hands of dominant actors such as governments, corporations, or high-profile accounts that can distort narratives and marginalize activist voices. It requires the intentional design of algorithms and content moderation systems that do not suppress activist expression solely due to its controversial nature or deviation from mainstream norms. Research by Laura Savolainen (2022) emphasizes that the framework emphasizes the prevention of discriminatory practices such as shadow banning or algorithmic suppression, and it advocates for equitable access to visibility and engagement opportunities across digital platforms. Furthermore, the framework recognizes the heightened vulnerability of activists to targeted digital threats, including doxing, harassment, and orchestrated mass reporting by adversarial groups. In response, ethical and inclusive governance must incorporate protective mechanisms against such abuses and ensure that moderation processes remain impartial, context-sensitive, and supportive of legitimate advocacy.

For the academic community, this study provides a methodological framework for analyzing online activism through pure Social Network Analysis, emphasizing the relational structures underlying digital mobilization. Research by Ma & Zhang (2022) emphasize that the methodological framework grounded in pure Social Network Analysis (SNA) allows scholars to conceptualize online activism not merely as a communicative practice, but as a structural phenomenon shaped by intricate social relationships. By emphasizing relational structures, this approach yields strategic insights into the trajectory of digital movements, the configuration of coalitions and oppositional forces, and the structural resilience of networked organizations operating within digital environments. Overall, this study bridges theoretical and empirical approaches to uncover how network power operates as a political filter that shapes identity and visibility in the era of algorithmic activism.

The network society theory developed by Manuel Castells examines the structural and functional transformations of society resulting from advances in digital communication technology. In his trilogy “The Information Age: Economy, Society, and Culture,” Castells emphasizes that networks, as non-hierarchical and decentralized structures, have become fundamental elements of contemporary society (Castells, 2022). The concept of “flow space” describes changes in the perception of time and space, enabling instant global communication and giving rise to a global consciousness that integrates and triggers local reactions (Olivier, 2022).

RESEARCH METHODS

This study employs a quantitative research design using Social Network Analysis (SNA) to examine the structural characteristics of activist networks on the platform X (formerly Twitter). The design focuses on measuring relationships between accounts to identify patterns of interaction, influence, and community formation within digital activism movements. Research by Sari et al. (2021) emphasize this approach treats social media interactions as quantifiable relationships, allowing for a systematic analysis of connectivity, clustering, and information flow among activist users.

Data will be collected through the X API or third-party scraping tools to retrieve tweets containing activism-related hashtags such as #ClimateStrike, #MeToo, #BLM, and #FreePalestine. The dataset includes post metadata (username, timestamp, hashtags, retweets, replies, and mentions) to capture relational dynamics. Each type of interaction is converted into a network edge representing the relationship between accounts. Research by Logan et al. (2023) emphasize that nodes represent individual activist accounts, while edges capture the existence and intensity of relationships through retweets, mentions, replies, or co-occurring hashtags.

The collected data will be structured as a graph dataset consisting of nodes and edges. Nodes represent accounts, and edges represent directional or reciprocal interactions. Multi-relational layers, such as retweets, mentions, and replies, will be combined to produce an integrated interaction network. Co-use of hashtags and follower/following relationships will also be represented to enrich relational depth. The resulting dataset will be formatted in CSV or GEXF for compatibility with Gephi, UCINET, Pajek, and Python’s NetworkX library.

The analysis employs several SNA techniques to measure structure and influence. Centrality measures (degree, betweenness, eigenvector, and closeness) identify key actors and influential nodes. Community detection using the Louvain modularity algorithm reveals clusters and subgroup formations within activist discourse. Network-level metrics such as density, cohesion, reciprocity, and clustering coefficient assess overall connectivity and communication intensity. Visualization and mapping of these relationships will be performed using Gephi, UCINET, Pajek, or NetworkX to interpret topological and structural features of activist networks.

The target population consists of activist accounts and communities actively participating in digital campaigns on X, particularly those focusing on climate justice, gender equality, racial justice, and indigenous rights. Sampling will employ a hashtag-based snowballing method, starting with initial hashtags such as #ClimateStrike, #MeToo, #BLM, and #FreePalestine to identify related accounts. The sample will include 200 to 1,000 of the most active accounts in these discussions. Relationships are defined by the presence of retweets, mentions, replies, and overlapping hashtags, ensuring a representative sample of the core activist network structure.

RESULT AND DISCUSSION

Politics involves the systematic practice and theoretical analysis of how governance, decision-making processes, and power structures operate within society. It includes the strategies, actions, and institutional mechanisms through which individuals or groups acquire and maintain authority. In the context of the digital era, digital technology significantly reshapes political engagement, communication patterns, and modes of public participation (Koc-Michalska & Lilleker, 2017).

Digital politics refers to the convergence of political activity and digital technology, particularly through the use of social media as a platform for interaction and discourse. This transformation facilitates wider civic participation by enhancing access to information, supporting mobilization efforts, and enabling citizens to articulate opinions in online spaces. Social media has revolutionized political communication by allowing direct interactions among politicians, political parties, civil society, and the broader public. Nonetheless, these developments have also introduced complex phenomena such as digital activism and heightened political polarization (Koc-Michalska & Lilleker, 2017).

In the digital realm, political filters represent both technological and psychological mechanisms that influence the scope of political content individuals encounter online. These filters shape how users access, interpret, and engage with political information. Algorithmic curation by social media platforms, personal content preferences, cognitive biases such as confirmation bias, and the emergence of echo chambers all contribute to this filtration process (Chandrakar & Kumar Sahu, 2021).



Figure 1. Visualization of Digital Activist Network on X Platform Using Social Network Analysis (SNA)

Source: SNA, 2025

Table 1. The Social Network Analysis (SNA) of activist-related discussions on X

Label	Score
Average Degree	0.704
Network Diameter	2
Graph Density	0.001
Modularity	0.973
Avg. Path Length	1.009

Source: SNA, 2025

The Social Network Analysis (SNA) of activist-related discussions on X reveals a highly fragmented but locally cohesive communication structure. The network consists of 1,357 nodes and 955 directed edges, representing user accounts and their retweet, mention, or reply relationships. The analysis shows that the average degree of the network is 0.704, indicating that most users interact with fewer than one other account on average. This low degree value demonstrates a sparse and fragmented network, where interaction tends to occur within small, self-contained clusters rather than across communities. In the context of digital activism, this suggests that activist visibility and narrative diffusion remain concentrated within limited ideological circles.

The network diameter, measured at 2, indicates that the longest path between any two nodes in the network is only two steps. Although the overall interaction level is low, the short diameter implies that when connections occur, information can travel very quickly across the network through a few key accounts. This feature reflects the potential for viral diffusion in the network: when highly connected nodes engage, messages can reach multiple communities efficiently, despite the overall sparse connectivity.

The graph density is 0.001, meaning that only 0.1% of all possible ties between users actually exist. Such a low density confirms that the activist network on X is not cohesive. Instead, it consists of several tight clusters or echo chambers where discussions are internalized within like-minded groups. This structural condition aligns with bonding social capital (Putnam, 2000), where strong ties within groups reinforce shared ideologies but limit exposure to alternative perspectives. As a result, the network reproduces ideological homogeneity and restricts the formation of bridging ties that could enable cross-community dialogue.

The average path length of 1.009 further emphasizes the efficiency of local communication. Once a link is established, messages can be transmitted with minimal intermediaries, reflecting the capacity of small communities to mobilize rapidly. However, the absence of multiple bridging paths between clusters suggests that these mobilizations occur in parallel rather than in synergy, reinforcing the political segmentation of digital activism.

A particularly significant metric is the modularity value of 0.973, which is exceptionally high. This means that the network is strongly divided into well-defined communities, with minimal overlap between them. Each community likely represents distinct thematic or ideological orientations. Such a modular structure supports the Network Society Theory (Castells, 2022), where power and identity are produced through clustered digital formations. In this network, modularity acts as a political filter, shaping visibility and influence by determining which communities are amplified or marginalized through their internal cohesion and limited cross-connections.

In terms of node centrality, the analysis identifies @barengwarga as the most influential node with a degree of 37 and a high in-degree score, indicating that this account functions as a receiver hub for attention and interaction. This central position makes it a critical actor in curating discourse and consolidating activist visibility. Conversely, @korbanmulyonoto, with an out-degree of 24, acts as a broadcaster node that disseminates information outward to multiple recipients, facilitating message propagation within the cluster. Other notable nodes such as @prabowo, and @bootifullboos hold intermediate degrees (8–10), suggesting their roles as sub-community connectors or thematic leaders within localized clusters.

Interestingly, betweenness centrality values across the network are extremely low (approaching 0 for most nodes). This indicates that few, if any, actors serve as bridges between communities. When betweenness values are low, it means that information flow is predominantly confined within clusters, and no significant gatekeeper exists to connect different ideological groups. In contrast, a high betweenness centrality would have signified the presence of strategic intermediaries capable of transferring narratives between clusters effectively functioning as political filters or bridge influencers. The absence of such nodes reinforces the echo chamber effect and suggests a structural limitation for cross-ideological engagement on X.

Overall, these findings highlight the dual nature of digital activism networks: while they enable rapid communication and solidarity within clusters (bonding), they also produce systemic barriers that restrict narrative diffusion beyond those boundaries. The combination of low average degree, high modularity, and near-zero betweenness centrality demonstrates how activist identity and visibility are shaped not only by algorithmic filtering but also by the structural architecture of online interactions. Consequently, visibility in activist discourse is less a product of message content and more a function of network positioning supporting the proposition that digital activism on X operates as a networked political filter that amplifies some voices while structurally excluding others.

The results of the social network analysis (SNA) demonstrate that activist interactions on the X platform are highly fragmented yet display localized cohesion, providing empirical support for Castells' (2022) Network Society Theory. The network's low average degree (0.704) and limited graph density (0.001) indicate that users engage mainly within small, insular circles, forming ideological enclaves rather than interconnected communities. This reflects Castells' idea that digital environments are decentralized but structurally uneven, where influence and visibility depend more on network position than on formal authority. The "space of flows" is evident in the network's short diameter (2) and low average path length (1.009), which enable rapid information transmission within clusters but restrict global connectivity, confining discourse within localized ideological boundaries.

The exceptionally high modularity value (0.973) reinforces the view that digital activism is fragmented into distinct ideological or thematic communities with minimal overlap. This finding supports Castells' proposition that power and identity emerge through clustered digital formations functioning as self-reinforcing spaces of meaning. The concentration of engagement around key nodes particularly @barengwarga and @korbanmulyonoto illustrates the unequal distribution of attention and influence, echoing the insights of Platform Management Theory (Huang, 2022; Corporaal & Lehdonvirta, 2024). These actors operate as micro-influencers who shape discourse visibility, showing that algorithmic systems on social media do not dissolve hierarchies but reconstruct them based on engagement patterns and algorithmic preference.

Interpreted through the lens of Social Capital Theory, the network reveals a dominance of bonding over bridging capital (Putnam, 2000; sup, 2023). The formation of tight, homogeneous clusters implies strong internal trust and reciprocity, fostering solidarity among group members. However, the near-zero betweenness centrality values signal a critical absence of bridging actors capable of linking different communities. This deficiency restricts intergroup communication and diminishes opportunities for collective mobilization, illustrating how social capital can simultaneously strengthen internal cohesion and perpetuate external exclusion depending on its structural balance.

The uneven engagement distribution among a few central accounts further reflects the ethical and governance challenges discussed in Platform Management and Algorithmic Filtering Theory (Cobbe, 2020; Meese & Hurcombe, 2020; Niu & Zhang, 2023). Algorithms amplify the reach of central actors while marginalizing peripheral participants, shaping the network's information architecture and contributing to the "filter bubble" phenomenon (Ahmed et al., 2024). This process confines activist narratives within narrow clusters, turning digital activism

into a system of networked political filters where visibility and influence stem from algorithmic alignment rather than ideological strength or organizational scale.

These dynamics also align with Rogers' (1962) Diffusion of Innovations Theory, as the limited presence of bridging nodes constrains the dissemination of activist narratives beyond core communities. The absence of intermediaries inhibits the transition from early adopters to broader audiences, while nodes such as @korbanmulyonoto act as partial broadcasting innovators attempting to expand message diffusion. Nevertheless, high modularity and algorithmic gatekeeping hinder the broader propagation of information, underscoring Rogers' contention that social structure and communication channels critically influence adoption processes.

Overall, the empirical evidence portrays digital activism on X as a paradoxical system where technological affordances of speed and connectivity coexist with entrenched structural fragmentation and informational inequality. Activists can mobilize efficiently within clusters, yet they encounter systemic obstacles to cross-community collaboration and ideological exchange. This pattern confirms that digital activism is a socio-technical phenomenon shaped by the interplay between network architecture, algorithmic governance, and social capital formation.

From a broader theoretical standpoint, these findings highlight that visibility and influence in digital activism depend less on message content and more on network position, platform regulation, and algorithmic mechanisms. Addressing such disparities requires more transparent, participatory digital policies that strengthen bridging social capital and foster intergroup engagement. By synthesizing network analysis with social theory, this study elucidates how power, trust, and innovation diffusion collectively shape the dynamic ecology of contemporary digital activism.

CONCLUSION

This research demonstrates that the configuration of activist networks on X (formerly Twitter) plays a decisive role in shaping how activist identities are constructed, amplified, and made visible within digital environments. The results of the Social Network Analysis (SNA) reveal a fragmented yet locally cohesive network structure, characterized by a low average degree (0.704), minimal graph density (0.001), and a remarkably high modularity score (0.973). These structural features indicate that activist interactions predominantly occur within small, ideologically aligned clusters rather than across diverse communities. Consequently, visibility in digital activism emerges not as an evenly distributed phenomenon but as one mediated by relational architectures and algorithmic systems.

The findings highlight that network structures on X cultivate activist identities by reinforcing ideological homogeneity within clusters while simultaneously restricting cross-community engagement. In line with Castells' Network Society Theory, the "space of flows" is evident in the rapid yet localized circulation of information, where messages propagate swiftly within specific clusters but rarely extend beyond them. This dynamic demonstrates that visibility is primarily determined by network positioning and algorithmic amplification rather than the persuasive strength of discourse.

Certain accounts and relational ties most notably @barengwarga, which functions as a receiver hub, and @korbanmulyonoto, which operates as a broadcasting node serve as critical filters and amplifiers of activist narratives. Their structural centrality underscores that influence in digital activism derives from patterns of connectivity and interaction rather than from hierarchical organization. Nevertheless, the absence of bridging nodes, indicated by near-zero betweenness centrality values, reveals a scarcity of intermediaries capable of linking disparate ideological groups, thereby deepening polarization and constraining narrative exchange.

Moreover, patterns of retweets, mentions, and hashtag usage simultaneously facilitate and limit activist visibility. Retweets and mentions act as algorithmic cues that enhance content exposure within the platform's attention economy, while repetitive hashtag use fosters internal solidarity yet perpetuates the formation of echo chambers. This phenomenon reflects the predominance of bonding social capital over bridging social capital, which strengthens intra-group cohesion while reducing opportunities for external engagement.

Ultimately, a persistent tension exists between localized activist clusters and the global communicative potential of digital activism. Despite X's affordances for transnational connectivity, the evidence indicates that activist discourse remains structurally confined within local networks. This tension illustrates how algorithmic governance and network segmentation transform digital activism into a system of networked political filters that privilege certain narratives while silencing others. Overall, the study concludes that activist visibility and identity on X are co-constructed by the interplay of network architecture, algorithmic regulation, and social capital dynamics. Addressing these structural asymmetries requires fostering bridging ties and promoting transparent, participatory platform governance to democratize visibility and ensure inclusive political representation in digital spaces

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