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Computational Propaganda in The 2024 Presidential Election: Contestation of The Republic of Indonesia in The Diversion of Public Opinion on Social Media

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Abstract: Computation propaganda, which is aimed at diverting public opinion, is widely used in the world of politics in the current era of digital democracy. One effect of computational propaganda is the polarization of public opinion on social media. This needs to be a concern, especially in Indonesia, which has a pluralistic society. This research aims to find out how computational propaganda strategies are used in the 2024 presidential election in the Republic of Indonesia. This research uses a qualitative descriptive method. The research data are the result of a Social Network Analysis (SNA) of conversations about the 2024 presidential election, which became a trending topic on Twitter/X social media platforms. The analysis was conducted by Drone Emprit Academic, and the resulting data were interpreted by researchers. The results of the research show that the 02 Prabowo/Gibran candidate pair employed a computational propaganda strategy to build and guide public opinion in their favor. This can be seen on the SNA map, where the sub-clusters form separately from the main cluster, creating a network mesh with many-to-many connections. This is a characteristic of a bot account. The network's narrative shows positive sentiment towards couple 02. The use of bots by one of the couples could polarize public opinion on social media regarding the 2024 presidential election. The use of computational propaganda has become unavoidable in today's rapidly developing technological era. Therefore, there is a need to understand its use from an ethical perspective and to increase the community's political and digital literacy regarding this matter.

Keywords: Propaganda Computation, 2024 Presidential Election, Public Opinion, Social Media, Twitter/X.

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Abstrak: *Propaganda komputasi yang ditujukan untuk mengalihkan opini publik marak digunakan di dunia politik pada era demokrasi digital saat ini. Salah satu efek penggunaan propaganda komputasi yaitu terjadinya polarisasi opini publik di media sosial. Hal ini perlu menjadi perhatian terutama di Indonesia yang memiliki latar masyarakat plural. Penelitian ini ingin mengetahui bagaimana penggunaan strategi computation propaganda pada pemilihan presiden Republik Indonesia tahun 2024. Penelitian ini menggunakan metode deskriptif kualitatif. Data penelitian merupakan hasil Social Network Analysis (SNA) pada percakapan tentang pemilihan presiden 2024 yang menjadi trending topic di media sosial Twitter/X. Analisis tersebut dilakukan oleh Drone Emprit Academic. Data hasil analisis kemudian diinterpretasikan oleh peneliti. Hasil penelitian menunjukkan bahwa pasangan calon 02 Prabowo/Gibran menggunakan strategi computation propaganda dalam membangun dan menggiring opini publik tentang pasangan tersebut. Hal ini dapat dilihat pada peta SNA, di mana subklaster yang terbentuk terpisah dari klaster utama, membuat jaringan mesh network dan melakukan postingan many-to-many. Hal ini merupakan ciri dari akun bot. Narasi yang dibangun oleh jaringan tersebut bernada sentimen positif terhadap pasangan 02. Penggunaan bot oleh salah satu pasangan berpotensi terhadap terbentuknya polarisasi opini publik terkait pemilihan presiden 2024 di media sosial. Penggunaan propaganda komputasi telah menjadi hal yang tidak bisa dihindari di era teknologi yang semakin berkembang pesat saat ini. Oleh karena itu, perlu adanya pemahaman dari sudut pandang etika dalam menggunakannya dan perlu adanya peningkatan literasi politik maupun literasi.*
Kata Kunci: *Propaganda Computation, Pemilihan Presiden 2024, Opini Publik, Media Sosial, Twitter/X.*

Introduction

The development of communication and information technology is very rapid. Encouraging revolution in various aspects of life, including in the fields of communication and politics.[1] According to Brook Manville, the very rapid development of the internet, which gave birth to new media, has brought a shift to a new form of democracy, namely digital democracy, which previously promised utopian hopes.[2] Manville stated that many people

[1]Elizaveta Kuznetsova and Mykola Makhortykh, "Blame It on the Algorithm? Russian Government-Sponsored Media and Algorithmic Curation of Political Information on Facebook," *International Journal of Communication* 17 (2023); Amr G. E. Sabet, "The Islamic Quest for Democracy, Pluralism, and Human Rights," *American Journal of Islam and Society* 19, no. 3 (2002).

[2]Suwandi Sumartias et al., "From Memes to Activism: A Bibliometric Analysis of Digital Democracy Research in Indonesia (2014-2024)," *Ethiopian Renaissance Journal of Social Sciences and Humanities* 12, no. 1 (2025); Roberta Fischli and James Muldoon, "Empowering

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believed the internet would create a utopia of digital democracy: harmonious, controlled decision-making reflecting freedom and equality in the global community of netizens, but this hope did not match the reality faced today. The rapid rise of social media has led to numerous problems, including hoaxes, hate speech, identity theft, and the spread of misinformation. It can even create polarization in society, leading to divisions or internal conflict within a nation.

One impact of Indonesia's growth in digital democracy is the emergence of political buzzers, bot or botnet accounts, and trolls. Buzzers are tasked with raising hot issues to raise the branding of the political figures they support. They also play a big role in shaping public opinion; with their 'strength', this buzzer line can be the spearhead for political actors to achieve victory.[3] Research conducted by Faulina et al. 2021 argued that buzzers have an important role in shaping public opinion. Apart from that, buzzers can also divide public attention by generating new opinions or undermining the opposition.[4] According to Reuters,[5] Apart from volunteers and buzzers, campaign teams often use bots and trolls to influence voters. This method is generally used by candidates who compete in democratic parties across countries. Bots, or netbots, are software that can quickly create and duplicate accounts. This bot also repeatedly and automatically activates activities. In just one hour, the bot can create thousands of social media accounts and simultaneously upload pre-programmed information. According to Samantha Bradshow and Philip N. Howard bots are often used to manipulate information. This is done by creating fake accounts whose sole purpose is to share information or give likes to content deliberately created by these accounts.[6]

Digital Democracy," *Perspectives on Politics* 22, no. 3 (2024); Budi Gunawan and Barito Mulyo Ratmono, *Demokrasi Di Era Post Truth* (Jakarta: Gramedia, 2021).

[3]Pradipa P. Rasidi, "Ludic Cybermilitias: Shadow Play and Computational Propaganda in the Indonesian Predatory State," *Communication, Culture and Critique* 16, no. 4 (2023); Arifin Ilham and Junaidi, "The Phenomenon of Political Movements on Social Media After the 2024 Presidential Election (A New Direction of Indonesian Democracy)," *AL-AFKAR:Journal for Islamic Studies* 8, no. 2 (2025).

[4]Rendra Widyatama and Maizatul Haizan Mahbob, "The Potential Hazards of Fake Accounts and Buzzer Behaviour on Deliberative Democracy," *Jurnal Komunikasi: Malaysian Journal of Communication* 40, no. 1 (2024); Sergei G. Ushkin, "Social Media, Fake News and Deliberative Democracy," *Russian Sociological Review* 23, no. 2 (2024).

[5]Fanny Potkin, and Agustinus Beo Da Costa. 2019. "In Indonesia, Facebook and Twitter Are 'buzzer' Battlegrounds as Elections Loom." *Https://Www.Reuters.Com/Article/World/in-Indonesia-Facebook-and-Twitter-Are-Buzzer-Battlegrounds-as-Elections-Loom-IdUSKBN1QU0AQ/*.

[6]Gunawan and Ratmono, *Demokrasi Di Era Post Truth*; Jonathan Benson, "Is Fake News a Threat to Deliberative Democracy?," *Social Theory and Practice* 51, no. 4 (2025); Dedi Mulyadi et al., "The Dynamics of Regional Head Elections in the Digital Era in Indonesia: The Perspective of First-Time Voters," *Journal of Legal Studies* 35, no. 49 (2025).

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Robot accounts reflect the current era of digital democracy. The use of these robot accounts in political communication can be known as a form of computational propaganda. Computational propaganda is a form of shift in current patterns of political or democratic communication. Propaganda was initially carried out through conventional media, but with the development of social media and the growing use of algorithms, computational propaganda is increasingly used in political contestations.

The use of computational propaganda also has various impacts on the political climate, especially on the democratic climate for nations that adhere to this political system. Indonesia, as a country with a democratic system, is certainly not immune to this form of computational propaganda. The application of computational propaganda has the potential to cause political polarization. Research on computational propaganda indicates increasing political polarization in India. Polarization in India occurs in Twitter discussions about controversial political issues.[7] As we know, there are many bot accounts on Twitter. This polarization occurs because the Internet allows people to select and contest news that suits their tastes and inclinations. This can result in the formation of echo chambers. This is also supported by the nature of individual preferences and social networks.

According to research, political polarization in political contestation is not a myth. There is a broad scholarly consensus on the growing importance of ideological divisions among American elites. However, there is little agreement on the significance of these divisions at the mass level. Several studies have found evidence that increasing elite polarization has led to increased ideological awareness and polarization among the public. We found that the strong polarization of the electorate toward George W. Bush and his policies energized the electorate. This also contributed to a dramatic increase in voting and other forms of political participation.[8]

The problem of computational propaganda, which causes polarization, is very interesting to study, considering the very diverse characteristics of Indonesian society, especially in terms of ethnicity and religion (Indonesian society is diverse in ethnicity and religion). Differences in ideology, class, and

[7]Taberez Ahmed Neyazi, "Digital Propaganda, Political Bots and Polarized Politics in India," *Asian Journal of Communication* 30, no. 1 (2020); Juarez Freitas and Anderson Vichinkeski Teixeira, "Digital Democracy and Continued Evaluation of Public Policies," *Revista Brasileira de Estudos Politicos* 119 (2019); Jafar Ahmad, Hengki Firmanda, and Mahmud Hibatul Wafi, "Models And Political Attitudes Of Fundamentalist Groups In Indonesian Presidential Elections," *Jurnal Ilmiah Peuradeun* 11, no. 2 (2023).

[8]Alan I. Abramowitz and Kyle L. Saunders, "Is Polarization a Myth?," *Journal of Politics* 70, no. 2 (2008); Katja Valaskivi and David G. Robertson, "Introduction: Epistemic Contestations in the Hybrid Media Environment," *Popular Communication* 20, no. 3 (2022); Yenn Lee, "Towards a More Inclusive Digital Democracy in Asia: Introduction to the Digital Democracy Special Issue of Asiascape: Digital Asia," *Asiascape: Digital Asia* 8, no. 3 (2021).

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religion are a source of polarization in several Muslim countries, such as Indonesia, which has a majority Muslim population and has diverse cultures, races, and ethnicities. The potential for societal polarization is greater during political contestation.[9]

Several studies on computational propaganda have been conducted, including research on its use in political contestation, which Taberez Ahmed Neyasih has also examined.[10] This research examines the use of digital propaganda on Twitter/X social media platforms to manipulate public opinion in a political context in India. This research also discusses the polarization of public discourse currently occurring in India, driven by social media, where the use of bots can create echo chambers, resulting in limited public opinion. The difference in this research is in the data collection method. The research carried out by the author used data from SNA analysis from Drone Emprit Academic on trending topics on Twitter/X media throughout the 2024 presidential election campaign, while the research carried out by Neyasih used social bearing, a social media analysis tool (Twitter), by analyzing hashtags circulating around a surgical strike carried out in Uri, to detect bots used by politicians. The research conducted by the writer focused on bot practices in a practical political contestation, namely the 2024 presidential election in the Republic of Indonesia, while Neyasih's research focused on the context of political relations between India and Pakistan.

Samuel C. Woolley[11] also conducts research on Political Communication, Computational Propaganda, and Autonomous Agents. This research discusses in general the tendency to use digital devices, namely the internet, which is changing the dynamics of current communication. This research explains that this cannot be separated from the role of algorithms. This gives rise to a new era in politics: computational propaganda via bots, which are said to be able to manipulate public opinion. It is said that critical studies are needed to analyze the phenomenon of bot use. This research aims to explain how to detect bots and which methods are suitable for researching or detecting them. This research also touches on legal and ethical issues related to the use of bots and computational propaganda. This research is indeed general and basic, as it merely explains the phenomenon of computational propaganda and bots in political communication. This is evident

[9]Luthfi Assyaukanie, "Polarisasi Dan Merosotnya Demokrasi," *Https://Mediaindonesia.Com/Opini/511452/*, 2022; Roderik Rekker, "The Nature and Origins of Political Polarization over Science," *Public Understanding of Science* 30, no. 4 (2021).

[10]Neyazi, "Digital Propaganda, Political Bots and Polarized Politics in India."; Bertrand de Jouvenel, "On the Nature of Political Science," *American Political Science Review* 55, no. 4 (1961).

[11]Samuel C. Woolley and Douglas R Guilbeault, "Computational Propaganda in the United States of America : Manufacturing Consensus Online," *Computational Propaganda Research Project* 1, no. 5 (2017).

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from the year this article was published, namely 2016, when computational propaganda was a new phenomenon still in need of further research.

Other research on computational propaganda was carried out by Kermani[12] entitled #MahsaAmini: Iranian Twitter Activism in times of Computational Propaganda. This research discusses the hashtag movement on social media about #MahsaAmini, which, in several cases, spreads disinformation and misinformation using bots detected through computational propaganda strategies to suppress opinion. This research analyzes the strategy of diverting public opinion to reduce the conflict carried out by the regime in Iran, by spreading disinformation that justifies the regime's actions. However, this proved ineffective or had no significant effect. Hossein stated in this research that movements on social media, especially Twitter, are more effective at supporting movements than at suppressing them.

From the three studies above, we can see the application of computational propaganda across different countries. The research above shows that computational propaganda is used in conflict, politics, and protest movements in Iran, as well as in articles explaining its use as a political communication strategy in the digital era. The difference between this paper and the research described above is that the author will discuss computational propaganda in the context of political contestation in Indonesia, specifically the 2024 Presidential Election. The difference between previous research and this research can also be seen from the research methods used.

Computational propaganda uses algorithms, automation, and human curation to disseminate content on social media. Algorithms work with large computing systems, mobile phone networks, or social media platforms.[13] An algorithm is a series of steps arranged logically to achieve a goal. This can be understood as a series of steps logically arranged to achieve a goal, or as a sequence of activities logically arranged to achieve that goal. According to Fensi, algorithms that support computational propaganda work by determining how news and content are distributed and consumed by the public. Information exposed through Facebook news feeds, Google search results, and trending topics on Twitter has been sorted and prioritized by algorithms programmed to group, filter, and present content to increase user interaction with that content and the time users spend. on social media,

[12]Hossein Kermani, "PROFILE: #MahsaAmini: Iranian Twitter Activism in Times of Computational Propaganda," *Social Movement Studies* 24, no. 2 (2025).

[13]Philip Howard, Fen Lin, and Viktor Tuzov, "Computational Propaganda: Concepts, Methods, and Challenges," *Communication and the Public* 8, no. 2 (2023); Dr. Faisal Aziz et al., "Political Propaganda On The Internet: A Systematic Review," *Migration Letters* 21, no. S8 (2024).

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according to the design.[14]

Computational Propaganda uses similar psychological mechanisms. Algorithms generate emotions and bias in social media users. It aims to trick rational thinking and to promote specific ideas outlined by campaigners. This seems similar to past conventional propaganda practices; computational propaganda gradually shapes public opinion through ad hoc methods.[15]

One tool that has become famous for achieving political goals is the spread of propaganda online. That tool is a political bot. Previous research shows that candidates and political campaigns in the United States and several other countries have used automated software to manipulate public opinion on social media.[16] An army of bots enables manufacturing consensus and democratizes online propaganda. Social media bots artificially generate consensus to amplify conversations about political candidates and issues.[17]

Generally, social media, political bots, and the Internet of Things allow for computational propaganda. Howard defines computational propaganda as the use of social media platforms, autonomous agents, and big data to manipulate public opinion. Autonomous agents, armed with big data about our behavior collected from the internet of things, work through social media to engage us on political issues and advance ideological projects.[18]

Bots are algorithm-driven computer programs designed to perform specific tasks online. Bots have invaded political conversations around the world and manipulated public opinion on social media.[19] The large access to information that a person has, especially on social media, as well as the role of algorithms, are usually used only to strengthen their existing opinions and support. This will encourage selective exposure to certain ideologies. Content that pleases and reinforces a person's previously held opinions can create an echo chamber that can facilitate social extremism and political polarization.[20]

Through online field experiments, Bail in Abramowitz, 2008 suggests that exposure to opposing opinions can increase political polarization. This is possible because the goal of engaging with people who hold opposing viewpoints during

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[14]"Peran Algoritma Media Sosial Dalam Penyebaran Propaganda Politik Digital Menjelang Pemilu," *Jurnal Kajian Stratejik Ketahanan Nasional* 7, no. 1 (2024).

[15]Howard, Lin, and Tuzov, "Computational Propaganda: Concepts, Methods, and Challenges."

[16]Lincoln Dahlberg, "Re-Constructing Digital Democracy: An Outline of Four 'Positions,'" *New Media and Society* 13, no. 6 (2011).

[17]K. Sabeel Rahman, "(Re)Constructing Democracy in Crisis," *UCLA Law Review*, 2018.

[18]Rahayu et al., "Human Rights Defenders in Indonesia's Digital Age: Navigating Limited Spaces in the Quest for Digital Democracy," *Sriwijaya Law Review* 8, no. 2 (2024).

[19]Melissa Ellen Dowling, "Foreign Interference and Digital Democracy: Is Digital Era Governance Putting Australia at Risk?," *Australian Journal of Political Science* 57, no. 2 (2022).

[20] Pablo Barberá et al., "Tweeting From Left to Right," *Psychological Science* 26, no. 10 (2015).

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a crisis is to attack, vilify, and prove one's point, rather than to be influenced by opposing opinions, thereby further solidifying polarized opinions. Such cross-exchanges on digital platforms generate more negativity and further polarize our political opinions.

This type of research is descriptive qualitative. Research data from the results of social network analysis (SNA) carried out by Drone Emprit Academic. Analysis was carried out on conversations on Twitter/X social media regarding the 2024 Indonesian presidential election, which became a trending topic in the period October 2023-February 2024 (campaign period). The results of the social network analysis carried out by Drone Emprit Academic are shown in the SNA map. SNA maps are used to determine actor networks or narratives that develop on social media, including bot networks that form in these conversations.

In a social network map, each account that spreads an issue is called a node. The more nodes spread messages, retweets, or replies, the larger the node will appear on the map. The lines that connect node interactions with other nodes in the form of retweets or replies are called edges. Comments containing negative sentiment are marked with a red edge. Comments that have positive sentiment are marked with a green edge. The results of the SNA conducted by Drone Emprit Academic were then interpreted by the researchers to answer the research questions.

To examine the use of computational propaganda in the 2024 Indonesian presidential election contestation process, researchers analyzed the SNA map of conversations on Twitter/X social media related to the moments of the presidential and vice presidential candidate debates held by the general election commission of the Republic of Indonesia. The moment of the debate between presidential and vice presidential candidates is always a trending topic on Twitter and other social media, both before, during, and after the debate. The issues discussed are very comprehensive, ranging from the programs of each presidential candidate pair to the formation of positive public opinion towards certain candidate pairs, and can also take the form of directing negative public opinion towards the opposing pair. This is because all the attention of netizens and the Indonesian people is focused on every moment of the presidential and vice presidential candidate debate.

Mapping Online Political Discourse in the 2024 Indonesian Presidential Election

The presidential election contest is a moment to assess the face of democracy in Indonesia, held every five years. In 2024, three pairs of presidential candidates and vice presidential candidates will participate in the presidential election. Candidate pair 01 is Anies Baswedan and Muhaimin Iskandar. Anies is the former Governor of Jakarta, the capital of the Republic of Indonesia, while Muhaimin Iskandar is the leader of one of Indonesia's major political parties,

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Nahdatul Ulama. The second candidate pair is Prabowo Subianto and Gibran Rakabuming Raka. At that time, Prabowo served as the defense minister, and Gibran served as the mayor of Solo in Central Java Province. Gibran is the son of Joko Widodo, President of the Republic of Indonesia (2019-2024). The third pair is Ganjar Pranowo and Mahfud MD. Ganjar Pranowo previously served as Governor of Central Java Province, while Mahfud MD was a former minister in Joko Widodo's government cabinet. Ganjar in the 2024 presidential election is carried by the Indonesian Democratic Party of Struggle (PDIP), which won the 2019 election.

Based on the data collected, several conversations that trended during the campaign discussed the 2024 Indonesian presidential and vice presidential elections. On the SNA map of conversations about the presidential and vice presidential candidate debates, at least 5 clusters are evident in the conversation network. at the presidential and vice presidential candidate debate. These clusters include Pro Anies/Pro Muhaimin, Pro Prabowo/Pro Gibran, Pro Ganjar/Mahfud, the media cluster, and the neutral cluster. A media cluster consists of online media accounts, while a neutral cluster usually consists of accounts that do not side with any of the candidate pairs and also consists of online media accounts.

In figure 1 below, you can see the SNA map before the first vice presidential candidate debate. The pre-debate for the first vice presidential candidate raised themes about the economy, finance, investment, taxes, trade, APBN-APBD management, infrastructure, and urban areas. On the SNA map, four clusters form a main cluster. The map also shows five pro-Gibran sub-clusters spread across all sides of the network, with pro-Gibran clusters within the main or large cluster. This small cluster interacts exclusively with itself and is not connected to the main cluster. In the picture below, you can see that most of those discussing Gibran are influencers and buzzers from the Anies/Muhaimin and Ganjar/Mahfud pairs.

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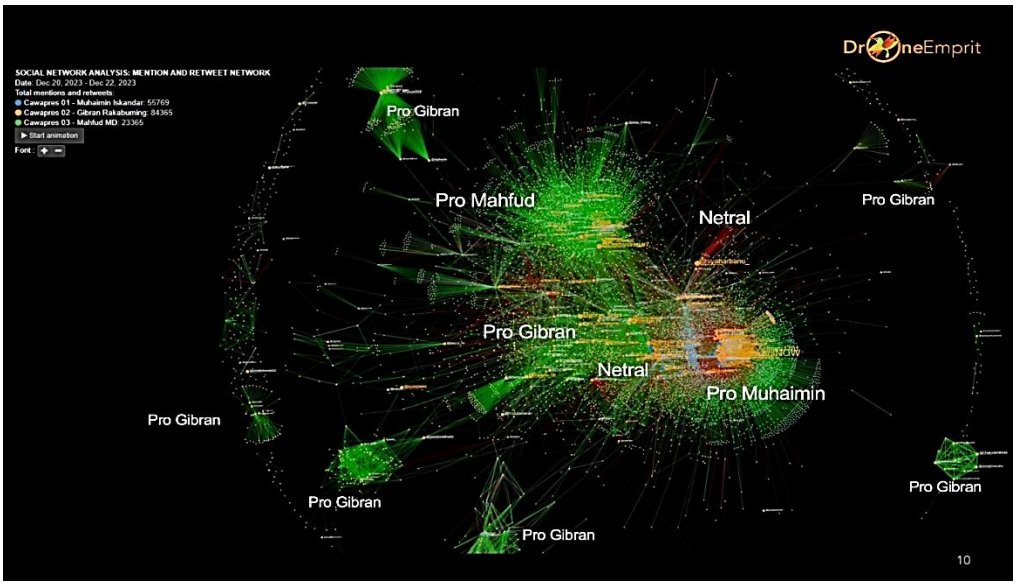
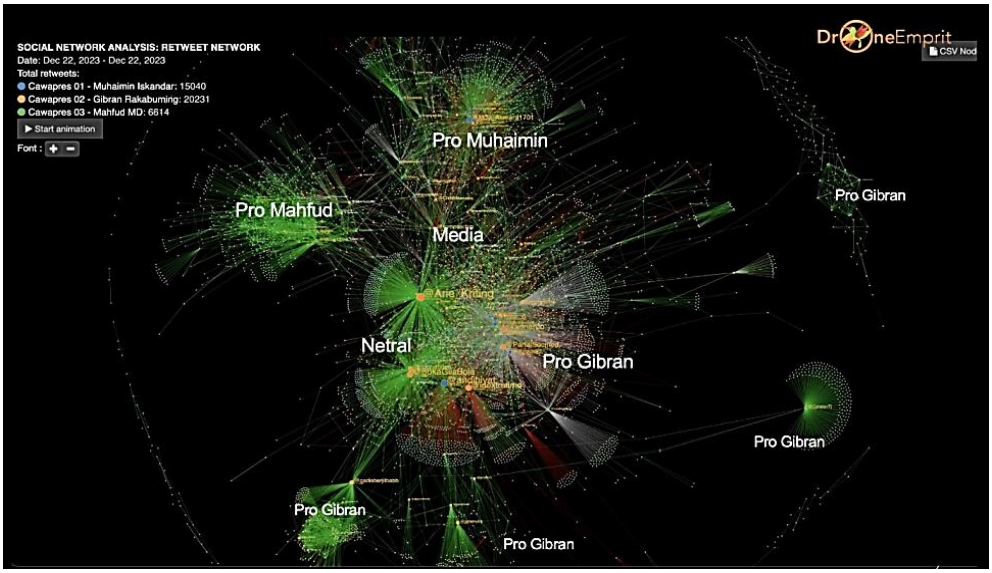
Figure 1: SNA Network Map Pre-Debate 1 vice presidential candidate



Source: Drone Emprit 2024

When the first debate of the vice presidential candidates took place can be seen on the SNA map below

Figure 2: SNA Map of First Vice Presidential Debate



Source: Drone Emprit, 2024

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In the SNA map of this first debate, the largest cluster is the pro-Gibran cluster. This cluster appears dense and highly central. The pro-Gibran cluster is also more spread out across the network. This was due to the high level of conversation discussing Gibran during the debate, including Gibran's question, which was addressed to Muhaimin, vice presidential candidate pair 01. The question was in the form of an abbreviation without explanation, so Muhaimin did not understand the question Gibran asked. This gave rise to a lot of negative sentiment about Gibran, especially the opinion that Gibran deliberately did not explain the abbreviation to bring down Muhaimin. On the map, a Pro Gibran cluster is also visible, integrated with the main cluster, while the other three clusters are spread out along the edges of the main network. Likewise, in the pre-debate conversation map, there are two separate pro-Gibran sub-clusters, with the main network forming an exclusive network among fellow accounts in the sub-clusters.

If you look closely from the pre-second debate until the debate takes place, you can see on the SNA map that the pro-Gibran cluster always has sub-clusters with separate connections to the main cluster. This could be indicated as a bot account. There are pro-Gibran sub-clusters that are spread out and have no connections between groups, and each cluster has quite a lot of intra-group relationships and has built an exclusive network of accounts in the sub-cluster that talk exclusively about Gibran with positive sentiments. This can be identified as an echo chamber phenomenon, formed by buzzers or bot networks. This sub-cluster has a many-to-many message distribution pattern, thus forming a mesh network. The characteristics of this form of network are that a message is posted to many accounts and then forwarded to many accounts. This led to the formation of an echo chamber of supporters who disseminated narratives about Gibran that they had created themselves, then amplified them to accounts with the same political preferences.

The tendency of this network form certainly shows the polarization of public opinion on social media between candidate pair 02, especially regarding Gibran and the candidate pairs who are opposing pair 02, as well as regarding the work programs offered by each candidate pair related to economics, finance, investment, taxes, trade, APBN, infrastructure, and urban management. Polarization can also be seen in the sentiments expressed in netizen conversations about this debate. This is possible because of the large number of negative comments about Gibran that emerged during this pre-debate.

In the image below, you can see the SNA map of pre-debate conversations, during the debate, and after the first presidential candidate debate, which will be held on January 5, 2023.

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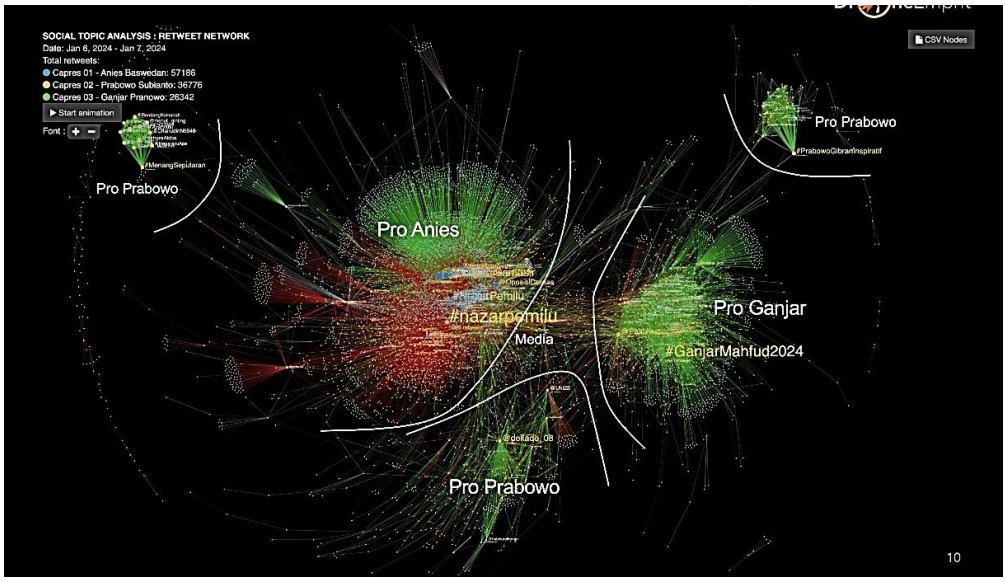
Figure 3: SNA Map of Presidential Candidates' First Pre-Debate Conversations



Source: Drone Emprit 2024

On the SNA map before the first presidential debate, the Pro Prabowo cluster is also seen interacting with the Pro Anies cluster, the media cluster, and the organic Pro Ganjar cluster. The cluster tends to be centralized on the account node @dekade_08, which talks about Prabowo with positive sentiment. On the network map, it can also be seen that there are separate and independent pro-Prabowo sub-clusters. This sub-cluster does not interact with the large cluster or main cluster. The sub-cluster only interacts with accounts within it. The cluster discusses topics separate from those in the main cluster. It appears that the pro-Prabowo sub-cluster has a high level of interaction, as evidenced by the thickness of the connecting lines between nodes. This pro-Prabowo sub-cluster can be seen as an unnatural form of network, or as bots or political buzzers who build their own narrative that differs from the conversation material in a large, organic cluster, aiming to divert negative public opinion towards candidate pair 02. On the SNA map, it appears that the hashtags amplified by this sub-cluster are the hashtags #WinningSeputaran and #PrabowoGibranInspiratif. Prabowo's pro network map is shown in the image below. The very exclusive many-to-many network form in the pro-Prabowo cluster can also be seen on the conversation map during the third debate, and after the debate, it can be seen on the SNA map below.

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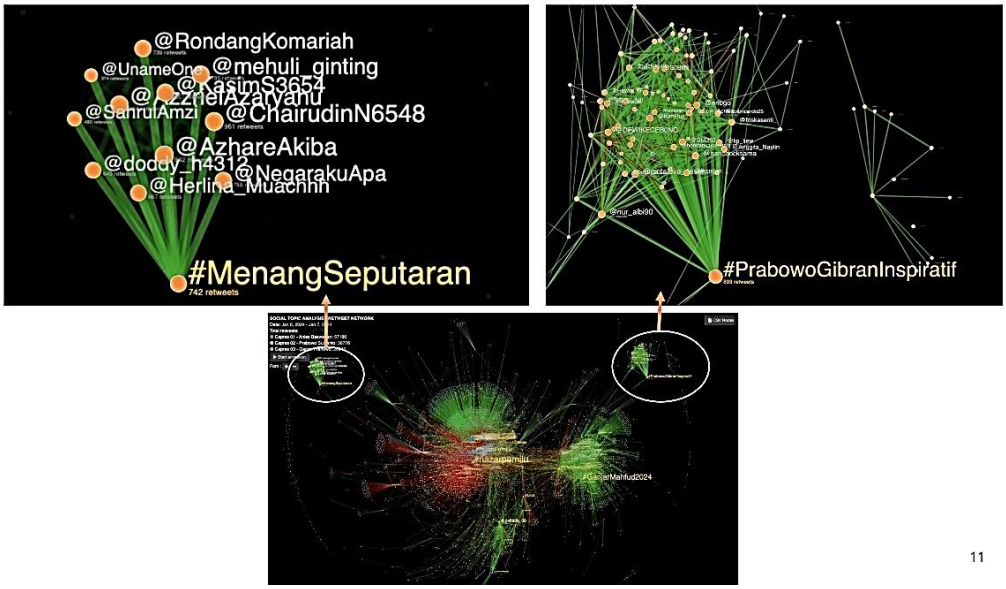
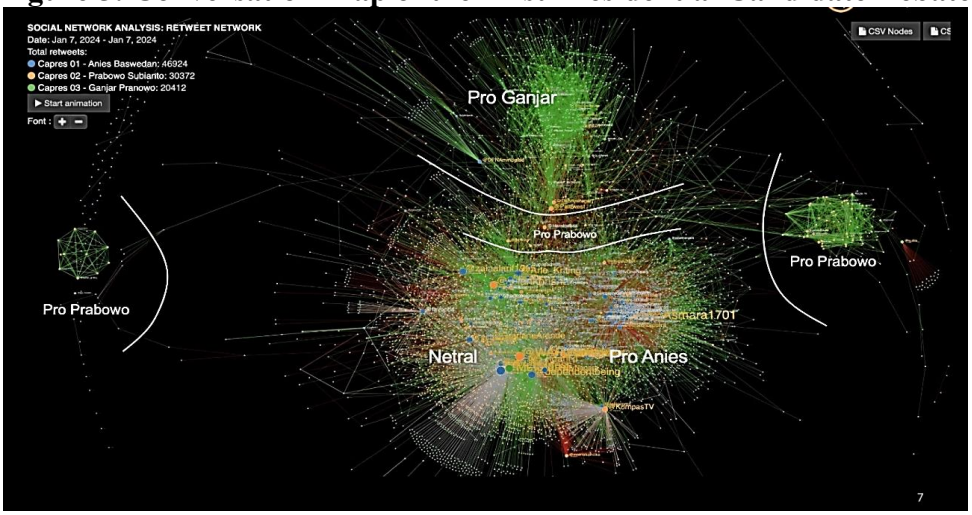
Figure 4: Pro Prabowo Sub-Cluster SNA Network Map



Source: Drone Emprit 2024

Networks that form sub-clusters not connected to the main cluster and build exclusive conversations are also visible on the conversation map during and after the debate. This is evident in the two SNA maps below.

Figure 5: Conversation Map of the First Presidential Candidate Debate



Source: Drone Emprit 2024

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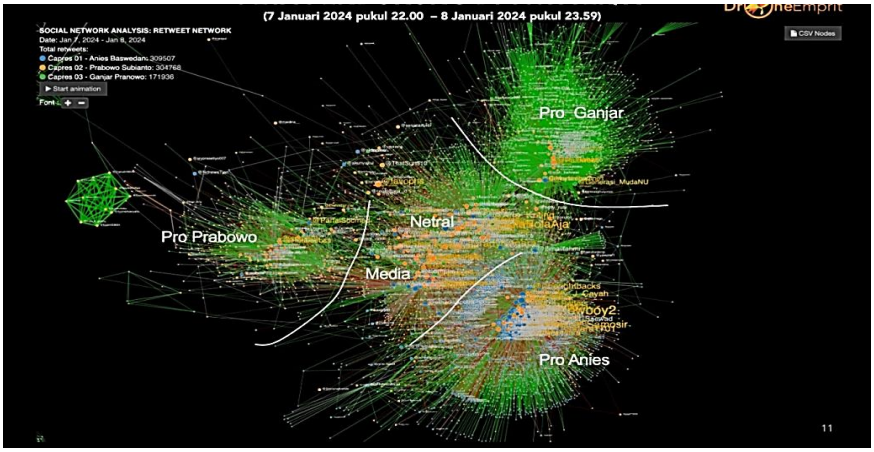
Figure 6: SNA Map of Conversations After the First Presidential Candidate Debate

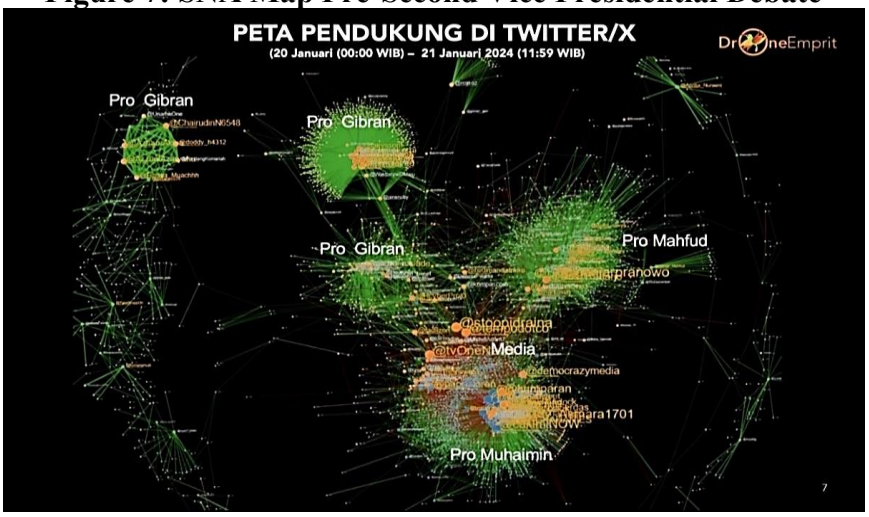


Source: Drone Emprit 2024

Based on the explanation above, candidate pairs 02 and 03 form an echo chamber network that amplifies positive opinions about the supported candidates. This can polarize public opinion among the three pairs of candidates. Several media accounts reported negative sentiments about pair 02, which became the topic of conversation in the candidate pair 01 cluster.

The image below shows the SNA map of the pre-debate, during-debate, and post-debate conversations in which the vice presidential candidates participated. Just as in the SNA map network at the previous debate moment, 4 clusters formed.

Figure 7: SNA Map Pre-Second Vice Presidential Debate



Source: Drone Emprit 2024

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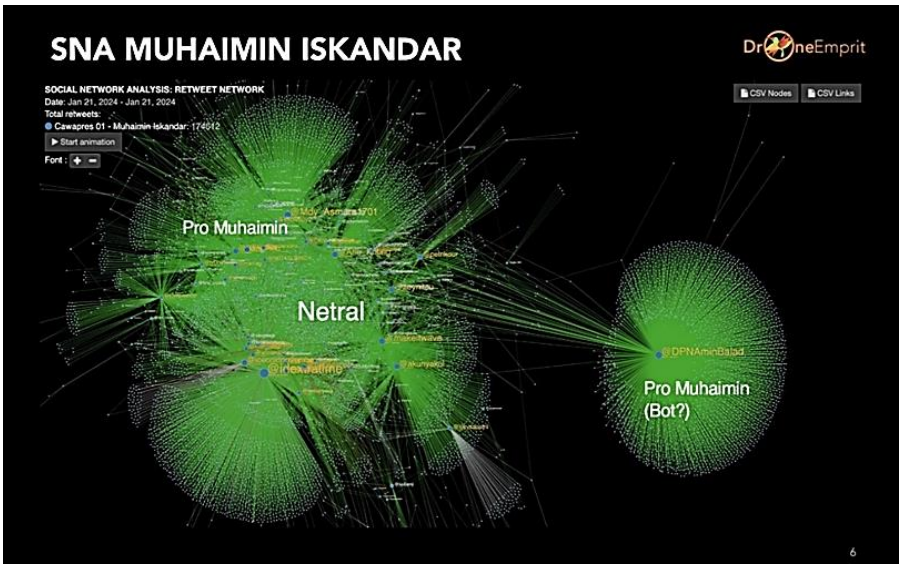
In the picture above, you can see 3 Pro Gibran clusters forming their own cluster, separate from the neutral cluster and the media cluster. This shows that this cluster has its own conversation topic and that there is no close interaction among the three. The Gibran cluster on the far left of the map shows 10 accounts, where each time one of the accounts posts, another retweets it, forming a highly coordinated mesh network that does not interact with the other 2 clusters. The patterns formed by these clusters can be classified as bot conversation patterns. This network pattern was still visible on the SNA map during the fourth debate and afterward.

Figure 8: Map of SNA Muhaimin Iskandar at the second Vice Presidential Candidate Debate



Source: Drone Emprit 2024

In Figure 8, you can also see the Pro Muhaimin cluster, which is separated from the main network with weak interaction ties. The cluster centers on one node, namely the @DPNAminBalad account, which receives high engagement. This network is thought to be a network of bot accounts that aim to amplify certain messages. In the main cluster, the network is not centralized at a particular node. It's just that there is a pro-Muhaimin network separate from the main cluster network, centered on a node suspected to be a bot, as previously explained.

The conversation about Gibran in the fourth debate is shown in Figure 9. The SNA map shows a single main network comprising neutral and pro-Muhaimin groups, media, and pro-Gibran groups. In the main cluster, there are account nodes @arie kriting, @afutami, @erasmus, and others. Those who have a high degree of centrality are neutral.

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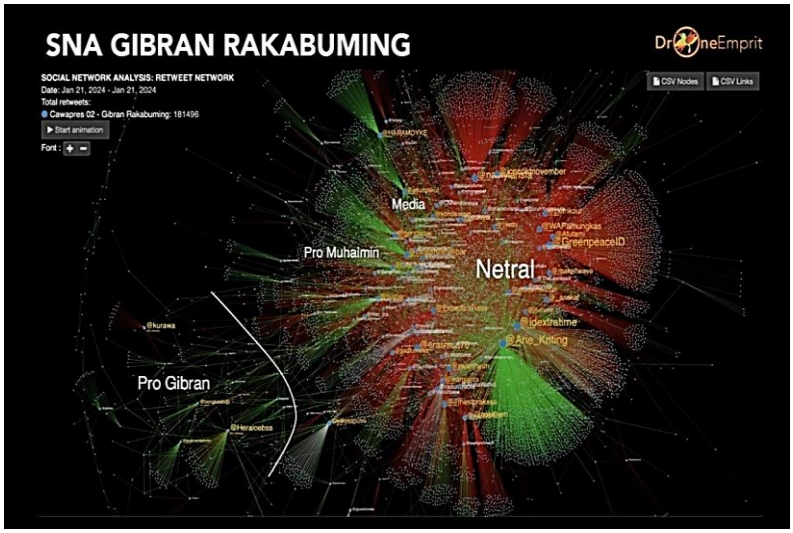
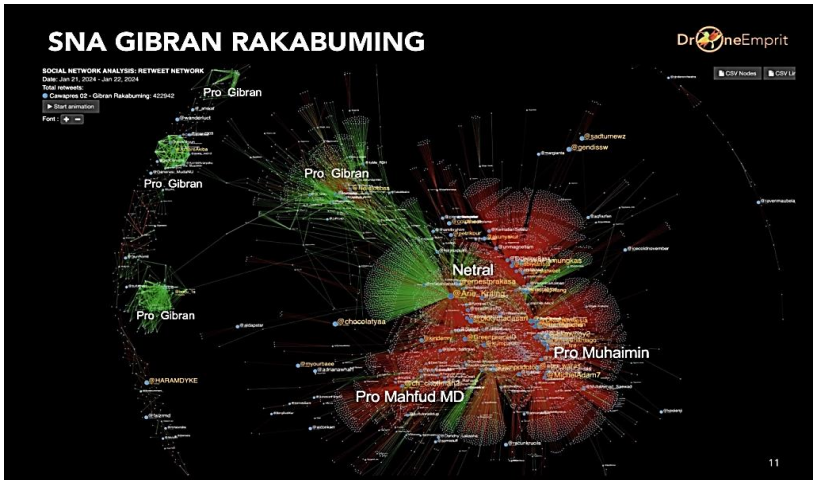
Figure 9: Gibran's SNA Map at the Second Vice Presidential Candidate Debate



Source: Drone Emprit 2024

In the SNA map above, you can see the pro-Gibran sub-cluster with a very small network. This network talks about Gibran with positive sentiment. This cluster is driven by a number of supporters and buzzers of pair 02, such as @kurawa, @bengkeldado, but there are not as many influencers talking about Gibran as there are among those in the community. Pro Muhaimin, neutral and media.

Figure 10: Gibran Rakabuming's SNA map after the Second Vice Presidential Candidate Debate



Source: Drone Emprit 2024

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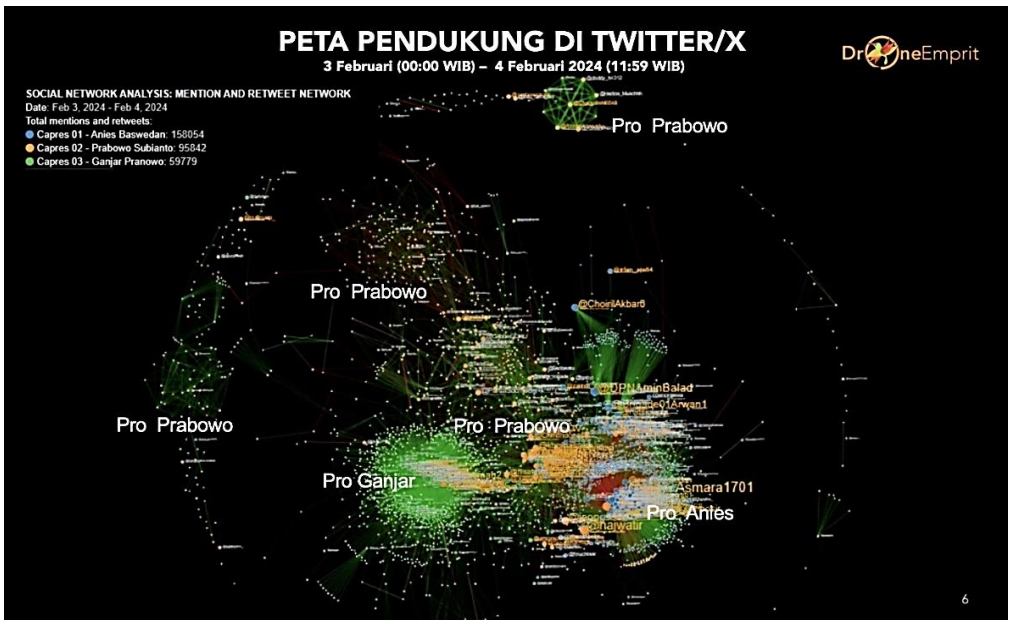
In figure 10, you can see the SNA map after the debate between the two vice presidential candidates discussing Gibran. On the map, it appears that there is a single large network consisting of three clusters: the neutral cluster, the Pro Muhaimin cluster, and the Pro Mahfud cluster. These three clusters express negative sentiment toward Gibran, as shown in the media line on the SNA map. These three clusters contributed to the large volume of conversation about Gibran on Twitter/X social media.

The same thing happened on the conversational SNA map in the post-debate period, where several Pro Gibran sub-clusters had no connection to the main cluster. This sub-cluster builds its own conversation that talks positively about Gibran. Building an issue that is then amplified by accounts in the sub-cluster. On the post-debate map, most conversations about Gibran expressed negative sentiment, while Muhaimin Iskandan and Mahfud MD were discussed with positive sentiment.

Based on the SNA map above, an echo chamber network has formed within the cluster for each candidate pair, especially pair 02. This has led to polarization in public opinion in this debate between pairs 01 and 02 and pairs 03 and 02. So it can be said that the pair 02 is always polarized, with supporters of pairs 01 and 03.

Figure 11: SNA Map Pre-Second Presidential Candidate Debate



Source: Drone Emprit 2024

In the SNA map above, the network appears evenly distributed, but there are small pro-Prabowo clusters that are centrally located. In the pro-Anies cluster,

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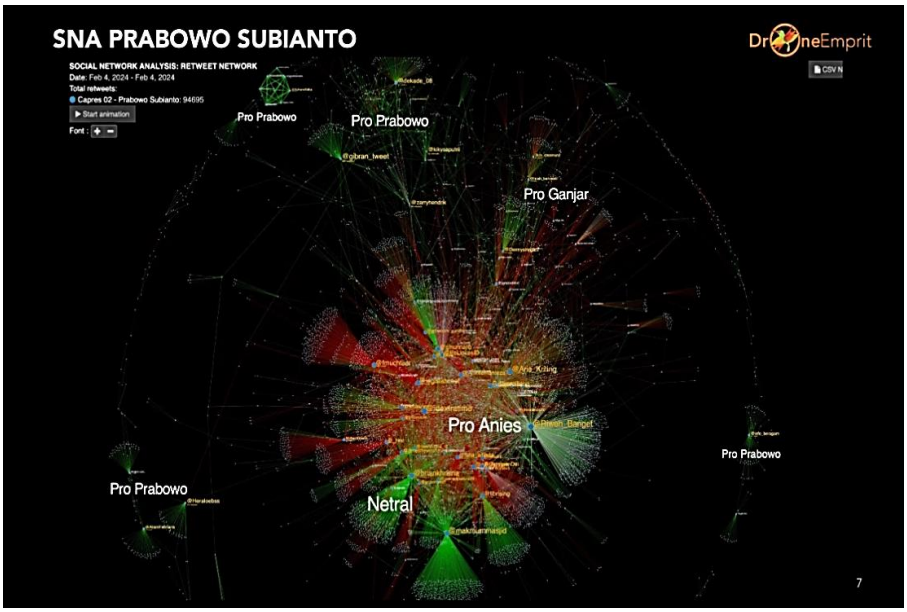
several negative sentiments about Prabowo are expressed, while in the pro-Prabowo cluster, sentiment is positive. Especially in the small pro Prabowo cluster, which is separate from the main cluster.

The pro Prabowo cluster consists of four clusters; one is connected to the main cluster or large cluster, even though it is far from the pro Anies and pro Ganjar clusters. The other three pro-Prabowo clusters appear unconnected and far from the main cluster. This small cluster is decentralized across several accounts and creates conversation patterns across them. This could be indicated as a bot account.

Figure 12: SNA Map of the Second Presidential Candidate Debate



Sumber: Drone Emprit 2024

In the SNA regarding the conversation about Prabowo in the second presidential candidate debate, the network is quite even; no node dominates or has greater power in spreading the issue. This could be because the issues raised were more general, and in the fifth debate, the three candidate pairs remained quite calm, avoiding attacks on each other. It was seen that netizen sentiment towards Prabowo in this debate was mostly negative. Apart from that, in the SNA map shown in the image above, several nodes from the large network appear disconnected from the main network; these may be bots or inorganic robots. Bot accounts usually do not interact with other accounts because they have very few followers, but many follow them. This bot account amplifies messages to its followers.

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In the SNA map of the fifth debate, it can be seen that each presidential candidate built their own conversation, forming a group with relatively few inter-group connections, while there were many intra-group connections. In the SNA map above, it can be seen that there is polarization of opinion between Pair 02 and the other two pairs. This can be seen in the network's shape, which tends to create an echo chamber, as well as in the sentiments of each candidate pair. This can be seen on the map where the pro-Anies group builds a negative opinion about Prabowo, while on the other hand, Prabowo supporters build a narrative with positive sentiment towards Prabowo.

Based on SNA's analysis of several trending topics during the 2024 presidential election campaign, it appears that pair 02 frequently uses bot accounts to create positive images and opinions on social media. This can be seen in the SNA map of conversations about the four debate moments held during the campaign period, where each debate moment comprises at least three SNA analyses: pre-debate, during the debate, and post-debate. Based on observations, candidate pair 02 often uses accounts flagged as bots to reduce the spread of negative issues on Twitter/X social media. As is known, throughout the pre-campaign period and until the end of the 2024 presidential election campaign, the Prabowo/Gibran couple received widespread negative sentiment, leading to negative opinions about them. The large number of conversations about couple 02 increased the volume of mentions on several trending topics on Twitter/X social media.

Based on observations of the movement of buzzers supporting candidate pair 02, the number of political buzzers supporting candidate pair 02 is less than the number of political buzzers supporting pair 01 and pair 03. If this relates to the discussion regarding indications of the use of robot accounts by pair 02 above, it can be assumed that this is intended to build positive opinions and reduce issues. Negative, pair 02 prefers a robot account to an organic political buzzer account.

Based on the results of the SNA map analysis of conversations about the 2024 presidential election debate, it can be seen that at several moments in the debate, both pre-debate, during the debate, and after the debate, sub-clusters of the Pro Gibran/Pro Prabowo cluster were formed, which were separate and not connected at all to the main network or large network. The formation of this sub-cluster is evident throughout the debate. The sub-cluster forms a mesh network and posts many-to-many, namely posts made by all accounts, which are then forwarded to all accounts on one network. The post expressed positive sentiment towards Gibran. Bots usually build positive narratives about candidate pairs and amplify them to create the impression of dampening negative opinions. This relates to Howard's statement about computational propaganda that uses bot accounts to manipulate public opinion.

The pro-Gibran cluster, which was separated from the large network that formed, differed from the conversation in general, which was a trending topic at

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the time. This conversation can take the form of a counter-narrative to reverse public opinion, shaped by widely circulating views on the issue across society and social media. For example, during the debate, Gibran was less polite towards his opponent. Gibran's attitude sparked negative comments and sentiments. On the other hand, Gibran's camp is countering the opinions formed on social media by posting content that portrays Gibran as an ideal figure. This is what forms a separate cluster outside of the general opinion that has been formed. Efforts are made to build opinions using robot accounts so that the image of candidate pairs does not become increasingly negative on social media and in society.

Candidate pair 01 also detected the use of bots to maintain Muhaimin Iskandar's image before the fourth debate, after an unfavorable opinion formed regarding Muhaimin. This was because Muhaimin was unable to answer Gibran's question regarding SGIE at the previous vice presidential candidate debate. The use of this bot account appears to be aimed at keeping opinions about Muhaimin Iskandar stable ahead of the next presidential candidate debate. Bot accounts were also used during the debate between the two presidential candidates, who discussed Prabowo with positive sentiment. It is thought that this was an effort by the 02 pair team to build a positive image and shape public opinion of Prabowo before the debate.

Based on observations, candidate pair 02 tends to use bot networks on social media to maintain stability in public opinion regarding candidate 02, who is being attacked by a wave of negative sentiment from netizens. Pair 02's political buzzer acts as a "fire extinguisher". It can be seen that pair 02 actually doesn't use many organic buzzers; it consists only of several main buzzers as issue throwers and counter issues. Posts or tweets made by the buzzer are amplified by their followers on Twitter/X media.

On the overall network map, it can be seen that the nodes or accounts supporting pair 02 are indeed limited. This can be seen from the pro cluster (Prabowo/Gibran), which was formed; very few influencers spoke positively about this pair. Likewise, there are very few retweets. This could be because couple 02 has done things several times that have caused negative sentiment among netizens. Based on the SNA analysis, it can be seen that the conversation about couple 02 increases because it is discussed by the cluster supporting other couples, the media, and neutral circles, most of whom express negative sentiments. Therefore, several public sentiment diagrams show that pair 02 has a high conversation volume but also a high level of negative sentiment. One of Paslon 02's strategies for fostering positive sentiments about himself is using bots or propaganda-computing strategies.

This is different from the form of conversation in pair 01. It appears that a high-density cluster in the Pro cluster, pair 01, has formed and is interacting with other accounts. This indicates that the account being interacted with is an organic account. It can also be said that the supporters or buzzers of pair 01 are

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highly militant, even though pair 01 consistently states that it is not hiring political buzzers in the 2024 presidential election. But many voluntarily become buzzers for pair 01.

Analysis of Couple 03 is that they often have conversations within their own cluster. Minimal also talks about other partners. So this cluster seems a bit separate from other clusters, such as the media cluster, but it is still connected to the main cluster, which indicates that the account carrying out the conversation is an organic account. Candidate Pair 03 has never been detected using a bot account. This can be caused by the solid organic buzzer of this candidate pair. Buzzer, who is militant against the PDIP struggle.

By looking at the network patterns and sentiments that form, you can see how political buzzers and bots work, including countering and stabilizing public opinion so that it is not too negative, even amid opponents' posts that strongly corner the candidate pairs they support. However, each pair must maintain the stability of the public opinion that has formed so that their political image does not drop, because this can result in a decline in the candidate pair's popularity and perhaps even their electability. Even though Pair 02 often receives negative sentiment, they can manipulate public opinion to benefit their camp.

Looking at the network map of the three candidate pairs, it can be said that pair 02 is more likely to use bots to influence public opinion on Twitter/X social media. The use of bots or robot accounts is a form of computational propaganda. Bot accounts are usually used on social media networks to create the illusion of a message's popularity or legitimacy.[21] In this case, the bot account is used to create the impression that Prabowo is not as bad as accounts from other clusters in the conversation network claim.

This phenomenon of computational propaganda is not new in the political field. It was explained that Computational Propaganda is a real thing whose aim is to manipulate public opinion. Propaganda computing is a Pontohcoordinated activity to convey messages by utilizing bots or robot automation groups on social media[22] Computational propaganda can be carried out by creating robot accounts that often spread manipulated information to influence behavior. In this case, computational propaganda is used to shape or sway netizens' opinions on social media.[23] Computational Propaganda is also thought to be able to filter netizen information, thereby creating a network of echo chambers. This is supported by communication and information technology, namely algorithms, so that people receive information only based on their political preferences, thereby establishing an echo chamber. This will certainly lead to the polarization of public opinion.

[21]Andhika Kurniawan Pontoh, "Computational Propaganda in Hashtag Activism," *Jurnal Komunikasi* 13, no. 2 (2021).

[22]Pontoh.

[23]Pontoh.

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Conclusion

The shift in political communication towards digital or the use of artificial intelligence (AI) means that political propaganda has also changed, using computerized assistance in the form of bots or cyber troops to guide public opinion. Based on the results of this research, it can be seen that in the contestation for the Indonesian presidential election in 2024, this strategy was also used, especially by pair 02. Even though the use of this computational propaganda strategy is not new in the context of political communication in Indonesia, it is important to note. attention for politicians, governments, and also political communication experts. It cannot be denied that computational propaganda can raise ethical concerns across communication, politics, democracy, and government. The widespread use of bots, buzzers, cyber troops, and others can also result in polarization of public opinion, which, of course, needs to be closely monitored, especially in Indonesia, a country with a pluralistic societal background. To address the phenomenon of computational propaganda in the current era of digital democracy, the government and society need to take strategic action. Governments can consider the legal and ethical implications of computational propaganda. Apart from that, it is necessary to increase digital and political literacy among the public so they have strong filters to sort the social media content they receive. Recognizing the importance of computational propaganda, it is hoped that many academics will conduct research on this topic, not only in communication but also from other scientific perspectives.

References

Journals and Books

Abramowitz, Alan I., and Kyle L. Saunders. “Is Polarization a Myth?” *Journal of Politics* 70, no. 2 (2008).

Ahmad, Jafar, Hengki Firmanda, and Mahmud Hibatul Wafi. “Models And Political Attitudes Of Fundamentalist Groups In Indonesian Presidential Elections.” *Jurnal Ilmiah Peuradeun* 11, no. 2 (2023).

Arifin Ilham, and Junaidi. “The Phenomenon of Political Movements on Social Media After the 2024 Presidential Election (A New Direction of Indonesian Democracy).” *AL-AFKAR:Journal for Islamic Studies* 8, no. 2 (2025).

Assyaukanie, Luthfi. “Polarisasi Dan Merosotnya Demokrasi.” *Https://Mediaindonesia.Com/Opini/511452/*, 2022.

Aziz, Dr. Faisal, Muhammad Kaqbad Alam, Dr. Nasir Khan (PhD Mass Communication), Khaqan Mehmood, Jan Muhammad, and Saba Afzal. “Political Propaganda On The Internet: A Systematic Review.” *Migration Letters* 21, no. S8 (2024).

Barberá, Pablo, John T. Jost, Jonathan Nagler, Joshua A. Tucker, and Richard

DOI: 10.22373/sjhk.v10.i1.28080

Bonneau. "Tweeting From Left to Right." *Psychological Science* 26, no. 10 (2015).

Benson, Jonathan. "Is Fake News a Threat to Deliberative Democracy?" *Social Theory and Practice* 51, no. 4 (2025).

Dahlberg, Lincoln. "Re-Constructing Digital Democracy: An Outline of Four 'Positions.'" *New Media and Society* 13, no. 6 (2011).

Dowling, Melissa Ellen. "Foreign Interference and Digital Democracy: Is Digital Era Governance Putting Australia at Risk?" *Australian Journal of Political Science* 57, no. 2 (2022).

Fischli, Roberta, and James Muldoon. "Empowering Digital Democracy." *Perspectives on Politics* 22, no. 3 (2024).

Freitas, Juarez, and Anderson Vichinkeski Teixeira. "Digital Democracy and Continued Evaluation of Public Policies." *Revista Brasileira de Estudos Politicos* 119 (2019).

Gunawan, Budi, and Barito Mulyo Ratmono. *Demokrasi Di Era Post Truth*. Jakarta: Gramedia, 2021.

Howard, Philip, Fen Lin, and Viktor Tuzov. "Computational Propaganda: Concepts, Methods, and Challenges." *Communication and the Public* 8, no. 2 (2023).

Jouvenel, Bertrand de. "On the Nature of Political Science." *American Political Science Review* 55, no. 4 (1961).

Kermani, Hossein. "PROFILE: #MahsaAmini: Iranian Twitter Activism in Times of Computational Propaganda." *Social Movement Studies* 24, no. 2 (2025).

Kuznetsova, Elizaveta, and Mykola Makhortykh. "Blame It on the Algorithm? Russian Government-Sponsored Media and Algorithmic Curation of Political Information on Facebook." *International Journal of Communication* 17 (2023).

Lee, Yenn. "Towards a More Inclusive Digital Democracy in Asia: Introduction to the Digital Democracy Special Issue of Asiascape: Digital Asia." *Asiascape: Digital Asia* 8, no. 3 (2021).

Mulyadi, Dedi, Kayla Andini Putri, Salsabila Hadi Aulia, Rivaldi Aka Akbar, Muhamad Fahri Mawardi, and Camiliya Fakhriyah Garnita. "The Dynamics of Regional Head Elections in the Digital Era in Indonesia: The Perspective of First-Time Voters." *Journal of Legal Studies* 35, no. 49 (2025). https://doi.org/10.2478/jles-2025-0004.

Neyazi, Taberez Ahmed. "Digital Propaganda, Political Bots and Polarized Politics in India." *Asian Journal of Communication* 30, no. 1 (2020).

"Peran Algoritma Media Sosial Dalam Penyebaran Propaganda Politik Digital Menjelang Pemilu." *Jurnal Kajian Stratejik Ketahanan Nasional* 7, no. 1 (2024).

Pontoh, Andhika Kurniawan. "Computational Propaganda in Hashtag Activism." *Jurnal Komunikasi* 13, no. 2 (2021).

DOI: 10.22373/sjhk.v10.i1.28080

Rahayu, Kholis Roisah, Khansadhia Afifah Wardana, and Vania Lutfi Safira Erlangga. "Human Rights Defenders in Indonesia's Digital Age: Navigating Limited Spaces in the Quest for Digital Democracy." *Sriwijaya Law Review* 8, no. 2 (2024).

Rahman, K. Sabeel. "(Re)Constructing Democracy in Crisis." *UCLA Law Review*, 2018.

Rasidi, Pradipa P. "Ludic Cybermilitias: Shadow Play and Computational Propaganda in the Indonesian Predatory State." *Communication, Culture and Critique* 16, no. 4 (2023).

Rekker, Roderik. "The Nature and Origins of Political Polarization over Science." *Public Understanding of Science* 30, no. 4 (2021).

Sabet, Amr G. E. "The Islamic Quest for Democracy, Pluralism, and Human Rights." *American Journal of Islam and Society* 19, no. 3 (2002).

Sumartias, Suwandi, Evie Ariadne Shinta Dewi, Diah Fatma Sjoraida, Heru Ryanto Budiana, and Eny Ratnasari. "From Memes to Activism: A Bibliometric Analysis of Digital Democracy Research in Indonesia (2014-2024)." *Ethiopian Renaissance Journal of Social Sciences and Humanities* 12, no. 1 (2025).

Ushkin, Sergei G. "Social Media, Fake News and Deliberative Democracy." *Russian Sociological Review* 23, no. 2 (2024).

Valaskivi, Katja, and David G. Robertson. "Introduction: Epistemic Contestations in the Hybrid Media Environment." *Popular Communication* 20, no. 3 (2022).

Widyatama, Rendra, and Maizatul Haizan Mahbob. "The Potential Hazards of Fake Accounts and Buzzer Behaviour on Deliberative Democracy." *Jurnal Komunikasi: Malaysian Journal of Communication* 40, no. 1 (2024).

Woolley, Samuel C., and Douglas R Guilbeault. "Computational Propaganda in the United States of America : Manufacturing Consensus Online." *Computational Propaganda Research Project* 1, no. 5 (2017).