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# Weaponization of Social Media: Challenges and Responses

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#### **Abstract:**

The use of social media as a tool for manipulation poses significant challenges worldwide, affecting public sentiment, intensifying divisions, and endangering democratic systems. This article investigates these issues and examines the responses from governments, tech companies, and civil society.

The swift evolution of social media has changed the way we communicate while also facilitating the rapid dissemination of false information and polarizing narratives, threatening societal unity. Researchers emphasize the impact of algorithms in creating echo chambers and filter bubbles that deepen polarization. Additionally, malicious actors take advantage of these platforms to propagate disinformation, sway elections, and incite violence.

In response, initiatives such as enhanced fact-checking, media literacy programs, and better content moderation by social networks are being implemented. Regulatory actions to promote transparency and accountability are also recommended, alongside international collaboration to combat cross-border online threats. A comprehensive strategy involving technology, regulation, international co-operation and community resilience is essential to protect democratic ideals in our interconnected society.

**Keywords:** Weaponization of Social Media, Filter Bubbles, Echo Chambers, Misinformation, Disinformation, Algorithmic Influence, Polarization, Digital Literacy, Content Moderation.

#### **Introduction:**

The phrase "weaponization of social media" refers to the use of social media platforms to influence public opinion, spread misinformation, impact political outcomes, and potentially incite violence. This issue has emerged as a significant concern for governments, businesses, and communities worldwide. Social media has evolved into a powerful medium for communication, connection, and building communities, yet it also engenders conflict. It facilitates the rapid spread of misinformation, creates divisions, and can lead to serious consequences such as violence and exploitation. The impact of social media on real-world communities is complex and rapidly evolving, transcending national boundaries and challenging conventional approaches to humanitarian aid, development, and peace building.

The misuse of social media has emerged as a significant challenge across various domains, including politics, public discourse, and national security. In the political sphere, the intentional dissemination of false information and propaganda through social media platforms has interfered with elections, swayed public opinion, and weakened democratic institutions. Moreover, the weaponization of social media exacerbates societal polarization, creating echo chambers that affirm existing beliefs and stifle constructive dialogue. Governments, technology companies, and civil society organizations are



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grappling with a challenging environment marked by the swift spread of deceptive content and the exploitation of online platforms for harmful purposes.



The visual above highlights how online platforms can be used to sway and polarize individuals.

#### 2. Literature Review:

In his notable book, #Republic: Divided Democracy in the Age of Social Media (2017), *Sunstein* explores how social media influences democracy, highlighting the dangers of "echo chambers" and "filter bubbles" that foster political polarization. He advocates for the necessity of exposing users to a range of perspectives to mitigate these issues.

Echo chambers and filter bubbles are situations created by the weaponization of social media in which people encounter only information that supports their pre-existing beliefs. Echo chambers arise from the gathering of similar individuals, whereas filter bubbles emerge from algorithms that customize content based on user preferences, restricting access to varied viewpoints and potentially exacerbating polarization.

Zeynep Tufekci, a sociologist focused on technology and politics, explores in her notable work, "Twitter and Tear Gas" (2017), the dual role of social media in facilitating protest and mobilization, while also serving as a tool for surveillance and repression by authoritarian regimes, emphasizing its power and inherent fragility.

Eli Pariser, an activist in digital media, coined the term "filter bubble" in his notable 2011 work, *The Filter Bubble: What the Internet Is Hiding from You*. He highlighted how algorithms on social media create information silos, limiting exposure to diverse viewpoints and potentially intensifying societal polarization.

*Philip N. Howard*, an expert in Internet Studies and Political Communication, is recognized for his significant work, "Pax Technica" (2015). His research at the Oxford Internet Institute's Computational Propaganda Project delves into the organized use of social media for disseminating misinformation, revealing how various actors can sway public perception through digital means.

Claire Wardle, a co-founder of First Draft, an organization dedicated to fighting misinformation, stresses the need to differentiate between misinformation, disinformation, and malinformation (2017). She advocates for improved media literacy, enabling people to critically evaluate the information they come across online and better navigate the complexities of today's information landscape.



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Samantha Bradshaw, a researcher at the Oxford Internet Institute specializing in political communication and computational propaganda, has examined the worldwide dynamics of digital propaganda (2018). Her work highlights how governments and political figures leverage social media to sway public opinion, raising significant ethical issues that threaten democratic processes.

Sinan Aral, an expert in data science, network theory, and marketing, authored "The Hype Machine" (2020), where he investigates how social media algorithms contribute to the rapid dissemination of misinformation. He highlights the concerning effects of this trend on public discourse and democratic processes, as false information outpaces the truth.

Daniel Kreiss specializes in Political Communication and Media Studies, with significant research on digital campaigning. He investigates how political figures utilize social media for voter engagement and message dissemination, examining the consequences of these strategies on democratic participation and the potential for increased political polarization (2016).

Educational programs and public awareness initiatives can equip individuals with the skills to critically assess the information they come across online. A study by *Guess et al.* (2020) revealed that media literacy training could help decrease vulnerability to false news.

Efforts are currently being made to create algorithms that emphasize trustworthy information and a variety of perspectives, rather than prioritizing sensational content. *Bandy and Diakopoulos* (2020) highlighted the significance of algorithmic accountability and the necessity for independent evaluations. Social media platforms have intensified their measures to regulate content and collaborate with fact-checking organizations in the fight against misinformation. Research conducted by *Grinberg et al.* (2019) shows that although these initiatives can help curtail the spread of false information, they encounter considerable obstacles, such as the immense volume of content and the subjective nature of truth verification.

Automated accounts (bots) and fake profiles are employed to sway discussions on social media, disseminate false information, and fabricate artificial trends. Ferrara et al. (2016) illustrated how bots influenced online conversations during the 2016 U.S. presidential election. The identification and management of bots and fake accounts present ongoing challenges due to their increasing sophistication. Social media platforms utilize algorithms to prioritize content, often elevating sensational and emotionally charged material to enhance user engagement. Research by Bakshy, Messing, and Adamic (2015) indicates that these algorithms can foster echo chambers and filter bubbles, which reinforce users' pre-existing beliefs and contribute to social polarization. The impact of algorithms in amplifying detrimental content has become a central issue in discussions about the ethical responsibilities of social media companies.

Misinformation refers to the inadvertent sharing of false information, whereas disinformation involves the intentional creation and spread of falsehoods. Studies demonstrate how easily false information can go viral, often outpacing the dissemination of accurate content. For example, research by *Vosoughi, Roy, and Aral* (2018) found that false news stories were retweeted 70% more than true ones. The repercussions of misinformation and disinformation can be significant, influencing public health (such as vaccine misinformation), political landscapes (like election interference), and social cohesion (including the incitement of violence).



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## 3. Challenges:

## a) Disinformation and Propaganda Campaign:

The intentional spread of false information aims to deceive and sway public opinion, often employed by governments or malicious actors through social media platforms. These channels facilitate the rapid dissemination of misinformation, propaganda, and fake news, significantly impacting public perception, electoral processes, and geopolitical events. This alarming trend threatens the integrity of democratic systems, as misleading narratives can quickly spread, making it challenging for societies to differentiate between genuine and deceptive content. The prevalence of disinformation campaigns, especially during elections, underscores the urgent need for improved fact-checking mechanisms and enhanced media literacy.

#### b) Election Interference:

Coordinated efforts to disrupt elections involve the dissemination of misleading information, targeting candidates, and undermining the electoral process. Social media platforms are often exploited for this purpose, facilitating the spread of false information about candidates and promoting divisive content to influence voter behaviour. Foreign entities strategically utilize social media to amplify disinformation and manipulate public sentiment, exacerbating political polarization and causing discord within target nations. This manipulation allows them to covertly shape public opinion and affect electoral results, undermining democratic processes. Addressing these challenges demands a comprehensive approach that includes strengthening cybersecurity, increasing transparency in political advertising, and fostering international cooperation to counter foreign interference in democratic institutions.

#### c) Polarization and Echo Chambers:

Social media algorithms significantly influence user experiences by customizing content to reflect individual preferences, which can unintentionally create filter bubbles and echo chambers. These algorithms prioritize material that resonates with users' existing beliefs, leading to insular online spaces where only reinforcing viewpoints are encountered. This phenomenon can intensify polarization and stifle diverse perspectives in public discussions, ultimately undermining constructive dialogue and informed decision-making in democratic societies. As a result, there is a pressing need to reassess algorithmic designs and to enhance digital media literacy.

## d) Online Harassment and Cyberbullying:

Cyberbullying involves the systematic harassment or intimidation of individuals through social media, where individuals or groups exploit these platforms to launch harmful campaigns. This online aggression can lead to serious psychological and emotional harm for victims. Social media not only facilitates online harassment and hate speech but also has real-world consequences due to the anonymity it provides, which often encourages harmful behaviour. The rapid spread of content can amplify these negative experiences, highlighting the urgent need for effective content moderation, reporting systems, and initiatives aimed at promoting respectful online interactions.

## e) Privacy Concerns:

The accumulation and potential misuse of user data on social media raise significant privacy issues, as these platforms gather extensive personal information often without clear disclosure or consent. This data, including user behaviour and sensitive details, can be exploited for targeted ads and unauthorized access, undermining privacy rights and fostering mistrust. To combat these challenges, robust data protection laws, enhanced transparency, and initiatives to give users more control over their information are essential.



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#### f) Radicalization and Extremism:

Extremist groups utilize social media platforms to recruit and radicalize individuals by spreading propaganda and extremist ideologies. These platforms provide a wide-reaching and accessible environment for such activities, allowing for quick sharing and amplification of radical content. This rapid dissemination of extremist narratives poses major challenges for counterterrorism efforts. Addressing this issue requires a comprehensive approach that involves active content moderation, cooperation between tech companies and law enforcement agencies, as well as efforts to encourage counter-narratives and enhance digital literacy in order to diminish the impact of social media on extremist beliefs.

## g) Manipulation of Stock Markets:

Misinformation regarding companies or financial markets disseminated via social media can be exploited to influence stock prices, resulting in financial benefits for the perpetrators of such disinformation. This practice involves intentionally spreading false narratives to sway market perceptions and decisions, enabling those orchestrating the deceit to profit from the resulting volatility. The rapid reach and impact of social media amplify the potential for such manipulation, creating an environment where trust in accurate information can be undermined, ultimately affecting investors and the overall stability of the financial market. Therefore, the consequences of spreading false information can be significant and far-reaching.

## h) Spread of Hate Speech:

Social media can be exploited to magnify hate speech, leading to increased tensions among various communities, ethnic groups, and religious affiliations. By weaponizing these platforms, harmful rhetoric can spread rapidly, fuelling discrimination and hostility. This manipulation of social media not only exacerbates divisions but also creates an environment where animosity thrives. As these negative narratives gain traction, the potential for conflict rises, making it crucial to address and combat the use of social media as a tool for spreading hate. The impact of such rhetoric can be profound, affecting relationships within and between communities on a significant scale.

## i) Online Impersonation:

Malicious individuals often establish fake profiles or impersonate others on social media platforms to disseminate misinformation, tarnish reputations, or sway public opinion. These actions typically involve constructing counterfeit identities aimed at deceitful intentions. By mimicking real individuals or organizations, they seek to mislead audiences and give misleading impressions. Such deceptive practices not only harm the targeted parties but also undermine trust in social media as a whole. This manipulation of identity can significantly impact public perception, and it is essential to remain vigilant and critical of the information encountered online to mitigate these risks effectively.

#### j) Coordinated Inauthentic Behaviour:

State-backed or malicious entities may collaborate to establish fraudulent accounts, alter algorithms, and promote specific narratives to sway public sentiment or incite division. These organized initiatives aim to influence online discussions by deploying deceptive accounts and synchronized activities. By amplifying targeted messages, they can strategically shape perceptions and foster discord among audiences. The manipulation of online discourse in this manner poses significant risks to public trust and social cohesion, highlighting the importance of vigilance and critical thinking in navigating the digital landscape. Ultimately, these efforts threaten the integrity of information and the quality of public debate.



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## k) Phishing Attacks:

Social media platforms are often exploited for phishing attacks through the distribution of harmful links or by impersonating reputable organizations. This deceptive practice can cause users to reveal sensitive information or become targets of scams. Malicious actors leverage the trust people have in these platforms to manipulate them into clicking on dangerous links or providing personal data. By creating fake profiles or posts that appear legitimate, they entice users into unwittingly compromising their security. Consequently, users must remain vigilant and cautious to protect themselves against these threats on social media.

## 1) Amplification of Conspiracies:

Social media accelerates the dissemination of conspiracy theories, which can be exploited to erode confidence in institutions, provoke social discord, or even trigger violence. The promotion and amplification of baseless conspiracy theories contribute to fostering distrust and confusion among the public. Additionally, the spread of deepfakes - manipulated audio and video content - can further mislead and deceive individuals. These practices not only distort reality but also threaten societal cohesion by creating an environment rife with misinformation. Ultimately, the impact of such content can be farreaching, affecting both individual perceptions and collective trust in democratic processes.

## 4. Miscellaneous Other Challenges:

Troll farms are organized groups that systematically disseminate disinformation, often driven by political or ideological motives. They engage in the distribution of extremist content to radicalize individuals, while employing social engineering tactics to manipulate people into providing unauthorized access or sensitive information. Additionally, misleading health-related information is circulated to incite panic or endorse unproven treatments. State-sponsored geostrategic disinformation campaigns aim to influence international perceptions and policies.

Meanwhile, public shaming campaigns leverage social media to discredit individuals or groups through coordinated efforts. During crises, false information is exploited for political or personal gain, and governments may use social media as a tool for censorship and dissent suppression. Moreover, there is a concerning trend of online recruitment for illicit activities, including human trafficking and cybercrime.

Spreading unverified rumours or gossip, commonly known as rumourmongering, aims to create confusion and unrest. Identity theft occurs when individuals exploit social media to illegally obtain and misuse personal information for fraudulent activities. Gaslighting campaigns are designed to manipulate perceptions, fostering self-doubt and confusion among targeted individuals. Cyber espionage involves gathering intelligence through social media to gain a competitive edge or influence events.

Fake reviews are misleading testimonials, whether positive or negative, intended to sway public opinion about a product or service. Political smear campaigns involve disseminating false and damaging information about opponents to harm their reputation. Lastly, the misuse of hashtags involves hijacking trending topics to promote false narratives or manipulate discussions.

Online vigilantism involves mobilizing social media users to take punitive measures against those deemed wrongdoers without adhering to established legal procedures. Additionally, ransom threats are made through social media, where individuals or organizations are coerced with the potential release of sensitive information unless specific demands are fulfilled. The weaponization of memes refers to the creation and spread of memes aimed at swaying public opinion or disseminating propaganda. Moreover, the exploitation of tragedies occurs when opportunists capitalize on catastrophic events to propagate mi-



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sinformation or promote particular agendas.

Manufactured virality entails intentionally crafting content to achieve viral status, often for misleading intents or to instigate disorder. The spread of malware involves the distribution of harmful software via social media platforms, putting users' devices and data at risk. Lastly, online stalking constitutes the systematic tracking and harassment of individuals on social media, thereby violating their privacy.

The infiltration of social movements involves manipulating or disrupting grassroots initiatives by diverting their narratives, while selective exposure leverages content algorithms to reinforce users' pre-existing beliefs, deepening polarization. False advocacy campaigns masquerade as genuine support for social causes, exploiting individuals' empathy to sway public opinion.

Additionally, manufactured controversies generate fake disputes or amplify trivial matters to distract or influence public discourse. Selective leaking entails the strategic release of partial or misleading information to shape narratives or tarnish reputations, and biased algorithmic recommendations manipulate algorithms to favour specific content or viewpoints, ultimately shaping users' online experiences.

### **5. Responses:**

Combating disinformation demands a comprehensive strategy that includes enhancing fact-checking processes, fostering media literacy, and holding digital platforms accountable for their content moderation practices. By making reliable information easily accessible and equipping users with the skills to differentiate between facts and falsehoods, the harmful effects of misinformation can be significantly reduced. Furthermore, platforms must take on the responsibility of enforcing effective measures to prevent the proliferation of false information.

A holistic strategy to address these issues should incorporate stronger cybersecurity protocols, greater transparency in political advertising, and international collaboration to counter interference. Protecting digital arenas from harmful entities, increasing transparency in political discourse, and promoting global partnerships are essential for bolstering defences against online threats and manipulations.

The increasing polarization observed in online spaces highlights the need to emphasize diverse content, improve the transparency of algorithms, and enhance digital media literacy. By dismantling echo chambers and encouraging analytical thinking, these initiatives can lead to a more equitable and informed online dialogue. The objective is to cultivate an environment where users encounter a range of viewpoints and are well-equipped to navigate intricate information landscapes.

Tackling privacy concerns involves implementing stringent data protection laws, allowing users greater control over their personal data, and employing privacy-centric design principles. By emphasizing user privacy and establishing strong data protection systems, the risk of personal information misuse can be reduced. This proactive approach not only safeguards individuals but also builds trust in digital platforms.

Addressing extremist content and online threats necessitates collaborative efforts among technology firms, governments, and civil society organizations. By recognizing and counteracting extremist materials and advocating for alternative narratives, these entities can join forces to foster a safer online environment. Additionally, governments can further this effort by creating and enforcing regulations that hold social media companies accountable for their content management, privacy safeguards, and efforts to prevent harmful activities.

The global nature of online threats, such as election interference and cyber operations, highlights the ne-



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cessity for cooperation among nations. Governments need to collaborate in sharing intelligence, coordinating actions, and formulating international standards that regulate online conduct. By establishing a cohesive front against online challenges, countries can collectively improve their ability to withstand dynamic threats.

Transparency emerges as a crucial aspect of these solutions. Social media entities should maintain transparency regarding their algorithms, robustly enforce content moderation standards, and proactively tackle misuse. Educational programs that enhance media literacy empower users to assess information critically, recognize misinformation, and understand how their online behaviour affects the environment. Additionally, providing users with tools to manage their online presence, adjust privacy settings, and report harmful content increases individual defences against online risks.

Promoting research on the effects of social media, algorithms, and online behaviours is vital for crafting innovative solutions and informed policies. By remaining engaged with the shifting digital landscape, researchers can offer critical insights that inform the development of effective strategies to address the challenges of disinformation, polarization, privacy issues, and online threats.

### 6. Legal Provisions:

India has implemented a range of legal measures to counter the weaponization of social media, primarily through the Information Technology Act, 2000 (IT Act), and related laws. Section 66A of the IT Act, which targeted offensive online content, was struck down by the Supreme Court in 2015 due to concerns over misuse. However, Section 69A remains a crucial tool, allowing the government to block content that threatens national security, public order, or the sovereignty and integrity of India. This section is often invoked to curb the spread of misinformation, hate speech, and other harmful content online.

The Bharatiya Nyaya Sanhita, 2023 (BNS) also plays a significant role, with provisions like Section 196, which penalizes promoting enmity between different groups, and Section 356, which addresses defamation. In addition, the Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021, impose stringent obligations on social media platforms to monitor and take down unlawful content promptly. These rules emphasize the need for due diligence, transparency, and accountability from intermediaries, including the appointment of grievance officers and the provision of monthly compliance reports.

The Unlawful Activities Prevention Act, 1967 (UAPA) and the Prevention of Money Laundering Act, 2002 (PMLA) have been invoked frequently, leading to significant debates and controversies. Critics argue that these laws are being used to stifle dissent and restrict freedom of expression, raising concerns about the implications for civil liberties and democratic discourse. Collectively, these legal frameworks aim to mitigate the misuse of social media while balancing freedom of expression.

#### 7. Conclusion:

Addressing the weaponization of social media requires a collaborative effort from governments, technology companies, civil society, and individual users. Governments should implement regulations that hold social media platforms accountable for their content moderation and privacy practices. In turn, tech companies need to develop robust strategies to detect and mitigate disinformation while maintaining transparency about their algorithms. Civil society plays a critical role in promoting digital literacy, empowering users to evaluate information critically, and advocating for a safer online environment. Such collaboration is essential in tackling the complex challenges that social media weapo-



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nization poses to democratic societies.

A comprehensive approach to combatting this issue involves integrating technological, regulatory, and societal strategies. Social media platforms should invest in advanced algorithms and AI to effectively tackle misinformation, hate speech, and harmful content. Clear regulations are necessary to ensure accountability in moderation practices, with international cooperation among governments further enhancing these efforts. Additionally, promoting media literacy programs can equip individuals with the skills to discern credible information, while fostering responsible online behaviour and digital citizenship is equally important. By aligning technological advancements, legislative measures, cross-border co-operation and public awareness, we can create a more constructive online landscape that encourages innovation and minimizes harm.

#### **References:**

- 1. Vosoughi, S., Roy, D., & Aral, S. (2018). An exploration of the dissemination of true and false news on the internet. Science, 359(6380), 1146-1151.
- 2. Ferrara, E., Varol, O., Davis, C., Menczer, F., & Flammini, A. (2016). An analysis of the emergence of social bots. Communications of the ACM, 59(7), 96-104.
- 3. Grinberg, N., Joseph, K., Friedland, L., Swire-Thompson, B., & Lazer, D. (2019). The prevalence of fake news on Twitter during the 2016 U.S. presidential election. Science, 363(6425), 374-378.
- 4. Guess, A., Nagler, J., & Tucker, J. (2020). Investigating media literacy and misinformation: Empirical findings and policy implications. Proceedings of the National Academy of Sciences, 117(45), 27614-27618.
- 5. Marwick, A., & Lewis, R. (2017). An examination of online media manipulation and disinformation practices. Data & Society Research Institute.
- 6. Pennycook, G., & Rand, D. G. (2019). Addressing misinformation on social media through crowdsourced evaluations of news source credibility. Proceedings of the National Academy of Sciences, 116(7), 2521-2526.
- 7. Howard, P. N., & Woolley, S. C. (2016). Political communication, computational propaganda, and the role of autonomous agents: An introduction. International Journal of Communication, 10, 4882-4890.
- 8. Bradshaw, S., & Howard, P. N. (2018). The worldwide organization of disinformation campaigns on social media. Journal of International Affairs, 71(1.5), 23-32.
- 9. Freelon, D., & Lokot, T. (2020). Analysing Russian disinformation in the U.S. and Western Europe: Content types, trends, and countermeasures. International Journal of Press/Politics, 25(3), 393-412.
- 10. Tambini, D. (2017). Strategies for public policy response to fake news. Media Policy Brief
- 11. Wilson, T. S., & Starbird, K. (2020). Insights from cross-platform disinformation campaigns: Key takeaways and future actions. Harvard Kennedy School Misinformation Review, 1(1).
- 12. Bessi, A., & Ferrara, E. (2016). The impact of social bots on the online discourse surrounding the 2016 U.S. Presidential election. First Monday, 21(11).
- 13. Ferrara, E., Varol, O., Davis, C., Menczer, F., & Flammini, A. (2016). A comprehensive overview of the growth of social bots. Communications of the ACM, 59(7), 96-104.
- 14. Grinberg, N., Joseph, K., Friedland, L., Swire-Thompson, B., & Lazer, D. (2019). The role of fake news on Twitter in the context of the 2016 U.S. presidential election. Science, 363(6425), 374-378.
- 15. Guess, A., Nagler, J., & Tucker, J. (2020). Media literacy and its role in combating misinformation:



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Key research insights and recommendations for policy. Proceedings of the National Academy of Sciences, 117(45), 27614-27618.

16. Vosoughi, S., Roy, D., & Aral, S. (2018). An analysis of the geographic spread of true and false news online. Science, 359(6380), 1146-1151.