Microtargeting, Automation, and Forgery: Disinformation in the Age of Artificial Intelligence

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ABSTRACT

In recent years, analysis of the contemporary security environment has become saturated with discussions about the threat posed by disinformation, defined as a systematic and deliberate effort to undermine the political and social structure of one's adversaries through the dissemination of propaganda, misleading exaggerations, and falsehoods. From the advent of the printing press, to the contemporary technologies of the Internet and social media, the mediums through which the citizenry engage in political debate and receive political news are embedded with structural biases that influence the ways in which citizens understand the informational landscape. Consequently, the development of communications technologies has also transformed the distinct forms, range, and efficiency of disinformation campaigns. Recently, advances in the field of artificial intelligence (AI) have garnered the attention of international relations scholars. While tactical AI, capable of amassing, analyzing, and learning from extensive amounts of data, has been heralded for its ability to offer critical advantages to those actors capable of employing it effectively, this emerging technology also provides salient opportunities for disinformation efforts. This paper asks: how does the advent of AI transform the scale and efficiency of disinformation campaigns targeted against democratic states? The proliferation of AI introduces three critical transformations that exacerbate the scope, scale, and efficiency of contemporary disinformation campaigns: AI, which uses advanced algorithms and social media data to precisely target segments of the electorate, provides adversarial actors with a tool for the microtargeted exploitation of pre-existing political fissures and biases. Secondly, AI has allowed for the automation of political propaganda, as exemplified by the use of botnets leading up to elections. Lastly, AI's ability to integrate machine learning and neural network capabilities allows for the production of convincing AI-produced propaganda that seems authentic.

This paper concludes with an analysis of the unique challenges that liberal democracies face in confronting the threat posed by disinformation in the age of AI. Policy responses must ensure that they do not inadvertently bolster the very narratives that they seek to disprove. For example, efforts to regulate speech, 'debunk' falsehoods, or adopt technological responses risk strengthening those narratives that seek to undermine key liberal democratic values. Policy responses must recognize that AI-facilitated disinformation campaigns are precision-targeted, and designed to resonate with pre-existing inclinations, biases, and beliefs; policy must therefore address the underlying domestic contentions and fissures that can be exploited by adversarial actors. Policy responses must avoid characterizing those individuals who do believe in conspiracies and falsehoods as ignorant, populist 'dupes', as these denigrating narratives may confirm anti-elitist suspicions and entice these individuals towards the very narratives that counter-disinformation efforts aim to address. As AI continues to proliferate globally, liberal democratic states face distinct challenges in addressing disinformation that utilizes this emerging technology; these policy responses must respect key liberal democratic values and consider the pre-existing political and social conditions that allow disinformation to flourish and erode liberal democratic institutions and processes, without inadvertently bolstering the narratives that they seek to counter.

Keywords: artificial intelligence; disinformation; strategic targeting; political communication; contemporary warfare.

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1. Introduction

Contemporary political discourse has become saturated with discussions of a changing security landscape, whereby the traditional limits, or boundaries of 'warfare' have become ambiguous and extraneous. Consequently, analysts have begun questioning the relevance of traditional conceptualizations of aggression, which emphasized kinetic force and military strikes, and have largely begun referring to the modern security environment as one of 'hybrid warfare'. Importantly, 'hybrid' tactics aim to integrate conventional and non-conventional tactics in ways that support the pursuit of strategic or military goals, yet blur the line between peace and war.[1] Consequently, hybrid tactics often do not fall under the traditional, military definition of 'warfare', and thereby render the binary between 'war' and 'peace' conceptually ambiguous.[2] Despite the term's prevalence in contemporary political analysis, neither the international community, nor academia, have been able to identify a singular, comprehensive definition of 'hybrid warfare' that fully addresses and encapsulates the broad array of potential 'hybrid' threats.

Despite the current focus on its tactical advantages and potential for disruption, it is important to note that the use of 'hybrid' tactics are not new.[3] While the traditional concept of strategic targets have included critical infrastructure, defense systems, and enemy combatants, political targeting has also played a significant role in the history of military engagement, including the dissemination of propaganda, disinformation, and the use of deception that

[1] Patrick J. Cullen and Erik Reichborn-Kjennerud, "Understanding Hybrid Warfare," *MCDC Countering Hybrid Warfare Project* (2017) 1-36; Maria Mälksoo, "Countering hybrid warfare as ontological security management: the emerging practices of the EU and NATO," European *Security* 27, no. 3 (2018): 374-392. Doi: 10.1080/09662839.2018.1497984.
[2] Mälksoo, 2018; Williamson Murray and Peter R. Mansoor, *Hybrid Warfare: Fighting Complex Opponents from the Ancient World to the Present* (New York, NY: Cambridge University Press, 2012).
[3] Murray and Mansoor, 2012.

specifically aims to exploit pre-existing fissures and biases in the political and social structure of an adversaries' polity.[4] In particular, analyses of the contemporary security landscape have underscored the distinct threat posed by disinformation efforts, defined as the deliberate, strategic targeting of the informational environment in order to promote uncertainty, confusion, and chaos.[5] The long-term, substantive strategic goals of disinformation efforts include undermining the unity and integrity of an adversary's political structure, promoting uncertainty, and eroding trust in institutions such as the mainstream media.[6] That is, political or social contentions can be exploited in the pursuit of strategic goals through the fracturing and polarization of political cohesion, unity, and dialogue. Crucially, international actors have always employed these asymmetric, 'hybrid' tactics that aimed to undermine their adversaries through the manipulation of truth, the erosion of credibility, and the targeting of political discourse.[7]

While tactical hybridity is not novel, and there remains significant academic debate about whether the inherently ambiguous concept of 'hybrid warfare' is conceptually useful, its current prevalence in public debate can be linked, in part, to recent technological advances that have fundamentally transformed the scope, scale, and efficacy of disinformation. In examining the threat posed by disinformation campaigns, one must first consider the specific forum, or medium, through which the citizenry engages with politics, receives political information, and participates in political discourse. It is therefore insufficient to solely consider the role of 'the

[4] Norman Vasu et. al, "National Security in a Post-Truth Era," *S. Rajaratnam School of International Studies Policy Report* (2018): 1-36; Nicholas J. Cull, David H. Culbert, and David Welch, *Propaganda and Mass Persuasion: A Historical Encyclopedia, 1500 to the Present*. (ABC-CLIO: 2003); Samantha Power, "Samantha Power: Why Foreign Propaganda is More Dangerous Now." *The New York Times,* September 19, 2017. Accessed December 22, 2019. https://www.nytimes.com/2017/09/19/opinion/samantha-power-propaganda-fake-news.html

[5] Yochai Benkler, Robert Faris, and Hal Roberts, *Network Propaganda: Manipulation, Disinformation and Radicalization in American Politics* (Oxford Press: 2018).

[6] Vasu et. al, 2018; Benkler, Faris, and Roberts, 2018; Harmon Leon, "Bad Actors, AI & the Historical Context of Disinformation Campaigns." *The Observer,* November 1, 2019. Accessed January 2, 2020. https://observer.com/2019/11/bad-actors-artificial-intelligence-disinformation-campaigns/

[7] Eric Jardine, "Beware of Fake News: How Influence Operations Challenge Liberal Democratic Governments," *Centre for International Governance & Innovation* (2019).

media', defined as the sources of news and information available to the citizenry, which provide the electorate with fact-based, credible information; one must also consider the informational 'medium' through which the electorate engages in political discourse.[8] This paper maintains that communications technology, from the printing press to the recent proliferation of the Internet and social media, are not neutral media that simply disperse political information. Rather, the structure of the medium itself is embedded with biases that prioritize certain forms of communication, and thereby influence the ways in which citizens understand and experience politics.[9] As developments in technology have long influenced political discourse, the distinct forms, range, and efficiency of disinformation campaigns have also historically reflected the emerging technologies of their time.[10] From the advent of the Gutenberg printing press in 1439 to the rise of social media, political interference and targeting has historically taken advantage of relevant and emerging technologies in order to effectively fracture existing social and political foundations. It is therefore essential that one considers the ways in which technology has historically influenced, challenged, and transformed the informational landscape, and how technological developments have subsequently provided adversarial actors with new opportunities for political subversion and disinformation.

Most recently, tactical artificial intelligence (AI) is being incorporated into the modern military apparatus, as demonstrated by its integration into the surveillance practices, military targeting systems, and cyber infrastructures of many state militaries.[11] Furthermore, AI

[8] Jason Hannan, "Trolling ourselves to death? Social media and post-truth politics," *European Journal of Communication,* 33 no. 2 (2019): 214-226. Doi: 10.1177/0267323/8760323.
[9] Markus Wiesenberg and Ralph Tench, "Deep strategic mediatization: Organizational leaders' knowledge and usage of social bots in an era of disinformation," *International Journal of Information Management,* 6 no. 1 (2019): 1-12. Doi: 10.1016/j.ijinfomgt.2019.102042.
[10] Cull, Culbert, and Welch, 2003.
[11] Steven Feldstein, "The Global Expansion of AI Surveillance," *Carnegie Endowment for International Peace,* (2019): 1-31.

technology is also being integrated into civilian and commercial sectors, including transportation, energy, healthcare, and finance.[12] While tactical AI, capable of amassing, analyzing, and learning from vast amounts of data, may offer tactical advantages to those actors capable of effectively employing it, this emerging technology also provides salient opportunities for disinformation. This paper will consider the threats posed by AI to the political integrity of liberal democratic states, precisely because the liberal democratic emphasis on freedom of speech and free media creates opportunities for exploitation by adversarial actors. These liberal values also generate unique challenges in effectively addressing the threat of disinformation. Firstly, the distinct threat posed by AI lies in its ability to amass and rapidly analyze huge swaths of data, thereby providing adversaries with constant analysis and surveillance of public sentiment.[13] AI can therefore use its machine-learning capabilities to maintain a continuous, instantaneous analysis of human interaction online in order to gauge public perception and sentiment, and tailor disinformation accordingly. Secondly, the integration of AI into botnet communication has allowed for the automation of disinformation efforts that flood social media with coordinated messages, thereby misrepresenting public debate and undermining the voter's ability to make political decisions informed by public sentiment. Lastly, AI's ability to learn from data allows it not only to improve its methods, but to adapt to changing environments,

[12] Nadia Abouayoub, "Why Finance Needs Tech and AI," *ITNOW,* 60 no. 1 (2018): 10-11. Doi: 10.1093/itnow/bwy003; Carlos Ramos and Chen-Ching Liu, "AI in Power Systems and Energy Markets," *IEEE Computer Society,* 26 no. 2 (2011): 5-8. Doi:10.1109/MIS.2011.26; Rajmeet S. Juneja, "Regulation of AI: An Investigation on the Development of AI and its Effects on the Transportation Industry," *Journal of Computer Science & Systems Biology,* 11 no. 5 (2018): 290-295. Doi: 10.4172/jcsb.1000287; Fei Jiang et. al, "Artificial Intelligence in healthcare: past, present and future," *Stroke and Vascular Neurology,* 2 (2017): 230-243. Doi: 10.1136/svn-2017-000101; Thomas Davenport and Ravi Kalakota, "The potential for artificial intelligence in healthcare," *Future Healthcare Journal,* 6 no. 2 (2019): 94-98. Doi: 10.7861/futurehosp.6-2-94; Louis Columbus, "Why AI is the Future of Financial Services." *Forbes*, August 15, 2019. Accessed January 2, 2020. https://www.forbes.com/sites/louiscolumbus/2019/08/15/why-ai-is-the-future-of-financial-services/#571e49e03847

[13] Leon, 2019; William Davies, "The Age of Post-Truth Politics." *The New York Times,* August 24, 2019. Accessed January 16, 2020. https://www.nytimes.com/2016/08/24/opinion/campaign-stops/the-age-of-post-truth-politics.html; Daniel O'Leary, "Artificial Intelligence and Big Data," *IEEE Intelligent Systems,* 28 no.2 (2013): 96-99. Doi: 10.1109/MIS.2013.39.

facilitating the creation of believable propaganda that is almost indistinguishable from human script. Using machine-learning, AI can be trained on large data sets in order to learn how humans engage with each other online. AI is then capable of using this data to independently generate falsehoods.

Importantly, disinformation campaigns that utilize AI employ different tactics and methods based on the campaign's strategic goal. When the exploitation of an entrenched bias is strategically advantageous, AI's pattern recognition, machine learning, and data analysis abilities can be used to validate and reaffirm those pre-existing inclinations that resonate with the target audience. Alternatively, in instances where the erosion of completing claims to credibility and the promotion of uncertainty yields strategic benefits, AI's ability to automate political messages and employ machine learning can also be used to deliberately generate confusion. To summarize, the introduction of AI threatens to radically undermine trust in the informational environment, sow dissent, and hinder sound political discourse in ways that are increasingly rapid, precise, and destabilizing; the proliferation of AI thereby poses distinct challenges to the political integrity of liberal democratic states.

In order to demonstrate the significance of the advent of AI on disinformation, this paper will proceed as follows: Section two will define 'disinformation' and outline its three primary strategic aims. Section three will then provide a brief historical analysis of the role that technology has played on political communication, including the printing press, radio, and videography. The fourth section of this paper will analyze the contemporary communications technologies of the Internet and social media, outlining the ways in which they are structurally designed to promote a distinct form of political communication that is not conducive to sound political debate. This section will therefore examine the contemporary media and informational

landscape prior to the advent of AI and will consider the issue of a 'post-truth' political environment. Lastly, sections five and six will consider three distinct challenges posed by the introduction of AI-facilitated disinformation for liberal democratic states and will conclude with an analysis of future policy challenges for those democracies confronting disinformation in the age of AI.

2. Defining 'Disinformation'

As previously mentioned, strategic targeting is not limited to efforts to impair or destroy defense systems, weapons caches, and military personnel. Instead, strategic targeting includes political subversion efforts, including disinformation campaigns constituting a deliberate, systematic effort at fracturing or undermining the political and social foundations of one's adversaries through the targeting of information, and the dissemination of propaganda and falsehoods.[14] Disinformation can therefore be defined as the targeting of an opponent's political structure, facilitated by the strategic spreading of misrepresentations, rumours, and conspiracies, in ways that seek to alter the ideological or informational environment available to the citizenry.[15] Key to the concept of disinformation is intentionality; that is, disinformation should not be confused with misinformation, which refers to the accidental sharing of inaccuracies or falsehoods. Disinformation is not an isolated singular incident of inadvertent over-exaggeration or sensationalization, but instead is systematic and marked by a strategic intention to disrupt and erode trust.[16]

[14] Cull, Culbert, and Welch, 2003; Power, 2017.
[15] Vasu et. al, 2018; Benkler, Faris, and Roberts, 2018; Leon, 2019.
[16] W. Lance Bennett and Steven Livingston, "The disinformation order: Disruptive communication and the decline of democratic institutions," *The European Journal of Communication,* 33 no. 2 (2018): 124. Doi: 10.1177/0267323/87603/7; Benkler, Faris, and Roberts, 2018.

Importantly, the way in which disinformation is presented varies in form and content depending on its particular strategic goal. In some cases, disinformation campaigns contain elements of truth, thereby providing deniability for the deliberate spreading of falsehoods and 'proof' of credibility.[17] Starbird, Arif, and Wilson (2019) argue that disinformation campaigns are "based around a 'rational core' of plausible, verifiable information or common understanding that can be reshaped with disinformation".[18] For example, disinformation may involve sharing true information within a misleading context, or may include over-sensationalized and distorted interpretations of a real event.[19] However, disinformation may also involve the spreading of blatant inaccuracies, fabrications, and conspiracy theories that do not include any element of fact or evidence. For example, QAnon is an online community, first appearing on forums such as 4chan and 8chan in October 2017, where followers attempt to decipher messages sent by 'Q', an anonymous leader who claims to have insider knowledge about governmental corruption amongst the "globalist elites" of the "deep state".[20] Followers create links between messages sent by 'Q' and seemingly unrelated news stories or world events in an attempt to find 'clues' that explain 'Q's' cryptic messages and reveal the 'truth' of a global elitist conspiracy.[21] QAnon's conspiracies often tie-in extreme accusations pertaining to the global elite, "blood sacrifice", "Satanism", and "pedophilia" that lack any evidence or proof.[22] Disinformation campaigns may therefore include elements of truth, fact, and accuracy in order to appeal to a target audience's

[17] Siva Vaidhyanathan, *Anti-Social Media: How Facebook Has Disconnected Citizens and Undermined Democracy* (Oxford University Press: 2018).
[18] Kate Starbird, Ahmer Arif, and Tom Wilson, "Disinformation as Collaborative Work: Surfacing the Participatory Nature of Strategic Information Operations," *Proceedings of the ACM on Human-Computer Interaction,* 127 (2019): 4. Doi: 10.1145/3359229.
[19] Kate Starbird, "Disinformation's spread: bots, trolls, and all of us," *Nature,* 571 no. 449 (2019): Doi: 10.1038/d41586-019-02235-x.
[20] Ethan Zuckerman, "QAnon and the Emergence of the Unreal," *Journal of Design and Science,* 6 (2019): 4. Doi: 10.21428/7808da6b.6b8a82b9.
[21] Zuckerman, 2019, 6.
[22] Zuckerman, 2019, 4.

existing biases and increase credibility. Alternatively, disinformation may forfeit all elements of truth, evidence, or proof in order to generate confusion and doubt.

Disinformation efforts strike against political discourse in order to undermine political cohesion and unity, whereby the promotion of distrust, uncertainty, chaos, and dissent becomes an important military and strategic goal. Through disinformation, political discourse, as well as the state and traditional media's claims to legitimacy and credibility, become legitimate strategic targets, as political subversion aims to "attrite the will of the people...to divide at a personal or tribal level".[23] The act of disinformation, therefore, is part of a wider broadening of the concept of military 'target', that includes the information environment, political unity, ideology, and democratic institutions. Three of the primary strategic aims of disinformation efforts include: the exploitation of pre-existing fissures and biases amongst a target audience in order to stoke tensions, generate dissent and undermine political unity; undermining credibility in traditional media sources and the state in an attempt to promote confusion; and exploitation of the liberal democratic values of freedom of speech and free media.

2.1 *Exploitation of Pre-Existing Fears, Biases, and Inclinations*

Primarily, disinformation campaigns aim to exploit the pre-existing fissures and biases in the political and social structure of their target audience.[24] As previously mentioned, disinformation efforts often strategically integrate pre-existing fears, and concerns into its message so as to ensure that the disinformation resonates with the target audience in salient ways. Eric Jardine (2019) notes that disinformation efforts, particularly those that aim to highlight or utilize pre-existing biases in order to polarize political debate, require the

[23] Christopher Telley, "The Influence Machine: Automated Information Operations as a Strategic Defeat Mechanism," *National Security Affairs*: *The Land Warfare Papers,* 121 (2018): 1-11.
[24] Benkler, Faris, and Roberts, 2018.

exploitation of "a moral narrative" that "confirms sentiments that people already hold".[25] Bennett and Livingston (2018) outline the incentive to exploit sentiments of anger, resentment, or fear through disinformation campaigns, writing that effective disinformation feeds target audiences information that "supports identities" and "stems from emotional and material dislocations".[26] Disinformation, targeted against particular groups with illiberal prejudices, can therefore bolster these ideologies and increase illiberal mobilization. Indeed, contemporary disinformation efforts strategically exploit "emotional resonance" with "nationalism, anti-globalism, racism, welfare nationalism, anti-immigrant and refugee themes" in targeted audiences, in an effort to undermine the political identity of liberal democratic states.[27] Importantly, the exploitation of pre-existing, identity-affirming biases can ensure that disinformation campaigns mobilize emotive responses whereby the target audience is not only more likely to believe the falsehood, but is motivated to share it with others, and use this information to inform their political decision-making processes.[28] Effective disinformation can therefore be used strategically to promote polarization amongst the electorate, undermine unity and cohesion, stoke ethnic, linguistic, religious conflict, and polarize political debate in ways that discourage sound, fact-based political deliberation.

Disinformation campaigns in the Baltic states of Estonia, Latvia, and Lithuania elucidate the ways in which falsehoods may be spread deliberately to exploit ethnic and linguistic cleavages. Both Estonia and Latvia have significant Russian-speaking populations, with approximately 27% of the Latvian population, and 25% of the Estonian population identifying as ethnically Russian.[29] Further, these communities rely largely on Russian media for information

[25] Jardine, 2019.
[26] Bennet and Livingston, 2018, 135.
[27] Bennett and Livingston, 2018, 131; Timothy P. McGeehan, "Countering Russian Disinformation," *Parameters,* no. 48 (2018): 49-57.
[28] Benkler, Faris, and Roberts, 2018; Jardine, 2019.
[29] Raphael S. Cohen and Andrew Radin, "Russia's Hostile Measures in Europe: Understanding the Threat," *RAND Corporation* (2019): 26.

and entertainment, thereby providing adversarial actors with an opportunity to exploit pre-existing linguistic and cultural fissures amongst the local Russian population.[30] Following the decision to relocate a monument commemorating Soviet involvement in WWII from the centre of Tallinn to a military cemetery, the Estonian cyber infrastructure experienced destabilizing cyber intrusions and denial-of-service-attacks.[31] Importantly, this cyber aggression was coupled with false stories claiming that other Soviet graves and monuments were being systematically destroyed by Estonian officials, and that ethnic Russians participating in protests were facing widespread violence and human rights violations.[32] In recent years, disinformation efforts have circulated stories about widespread harm perpetrated against ethnic Russians living in Latvia and worsening social and economic conditions for Russian-Latvians.[33] Thus, the existence of large, Russian-speaking populations in the Baltic states has provided adversarial actors with an opportunity to exploit pre-existing linguistic and cultural fissures amongst the citizenry, sowing discord and distrust with Baltic media and state authorities, and promoting anti-NATO ideology.[34]

To conclude, effective disinformation campaigns are carefully curated to appeal to emotions, identities and firmly-held beliefs in order to stoke tensions and strike against the political, cultural, linguistic, or religious unity of their adversary's polity.

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[30] Ibid., 47.
[31] Stephen J. Flanagan, et. al. Deterring Russian Aggression in the Baltic States Through Resilience and Resistance," *RAND Corporation,* (2019): 1-36. Doi: 10.7249/rr2779.
[32] Damien McGuinness, "How a cyber attack transformed Estonia." *BBC News,* 27 April 2018. Accessed January 16, 2020.https://www.bbc.com/news/39655415.
[33] Marta Kepe, "NATO: Prepared for Countering Disinformation Operations in the Baltic States?" *Rand Corporation,* (2017); Benas Gerdziunas, "Baltics battle Russia in online disinformation war." *Deutsche Welle Europe,* October 8, 2017. Accessed January 16, 2020. https://www.dw.com/en/baltics-battle-russia-in-online-disinformation-war/a-40828834; Hal Foster, "#StrongerWithAllies: Meet the Latvian who leads NATO's fight against fake news," *Atlantic Council*, March 19, 2019. Accessed January 16, 2020. https://www.atlanticcouncil.org/blogs/new-atlanticist/strongerwithallies-latvian-leads-nato-s-fight-against-fake-news/.
[34] Cohen and Radin, 2019, 47.

2.2 *Erosion of Credibility*

Through the circulation of carefully-curated falsehoods that resonate with target audiences, disinformation campaigns target the credibility of both the mainstream media and state actors. Effective disinformation efforts generate confusion, sow distrust, and render the citizenry fundamentally unsure as to which sources can be trusted. The target audience may then be persuaded that competing media sources, such as mainstream news media and state representatives, are not credible sources of political information, thereby further shifting attention to alternative news sources that deliberately peddle emotive, bias-affirming narratives.[35] It is important to note, however, that traditional media sources also express significant bias in their news coverage and political commentary. While sources such as Fox News and the Washington Examiner reflect a conservative perspective, and CNN, Politico, and the Washington Post have been criticized for a centre to centre-left leaning bias, all are consistently referred to as "mainstream" or traditional media.[36] In fact, Groseclose and Milyo (2005) find a strong tilt towards liberal bias amongst a number of traditional American media sources, with the exception of Fox News and the Washington Times.[37] While traditional media sources may offer misleading or exaggerated interpretations of a particular news story or event, it is generally the "framing, not the facts" that is subject to biased interpretation.[38] That is, mainstream sources may pander to the

[35] Hybrid Centre of Excellence, "Countering disinformation: News media and legal resilience," *COI Records,* (2019): 10; Leon, 2019.
[36] Robert M. Faris et. al, "Partisanship, Propaganda, and Disinformation: Online Media and the 2016 U.S. Presidential Election," *Berkman Klein Center for Internet & Society Research Paper*, (2017): 44.
[37] Tim Groseclose and Jeffrey Milyo, "A measure of media bias," *The Quarterly Journal of Economics,* 120 no. 4 (2005): Doi:10.1162/003355305775097542.
[38] Callum Borchers, "'Fake news' has now lost all meaning," *The Washington Post*, February 9, 2017. Accessed February 21, 2020. https://www.washingtonpost.com/news/the-fix/wp/2017/02/09/fake-news-has-now-lost-all-meaning/; Jackie Mansky, "The Age-Old problem of "Fake News," *Smithsonian Magazine,* May 7, 2018. Accessed February 21, 2020. https://www.smithsonianmag.com/history/age-old-problem-fake-news-180968945/.

biases of their target audience in their interpretations and analysis, but typically do not attempt to re-write 'fact'.

In the contemporary media environment however, mainstream sources are increasingly turning towards an extreme hyper-partisan bias. For example, Benkler, Faris, and Roberts (2018) note that Fox News has published inaccuracies that espouse a hyper-partisan worldview and political bias, often with the aim of distracting their viewers from competing narratives.[39] For example, Fox News engaged in "intentional misdirection" by repeatedly spreading a false story asserting that Seth Rich, who had worked as a DNC staffer during the Obama administration, had been murdered for releasing DNC emails "in an effort to shield the president from mounting pressure surrounding his ties to Russia".[40] Mainstream media sources may also provide increasingly partisan coverage in an attempt to attract and secure steady readership. Baum (2002) argues that "soft news" sources, defined as media sources that "package human drama entertainment" in sensationalistic and dramatic ways, often provide coverage of foreign policy issues, rebranded as entertainment.[41] Framing political issues in terms of sacrifice, violence, justice, and 'us vs. them', thereby attracts those citizens for whom 'regular' politics are not interesting or accessible. Thus, as the number of "soft news" sources increases, mainstream sources may also have an incentive to frame political issues in misleading ways to retain or attract readership. While mainstream media sources often provide biased analysis and framing outside of the context of deliberate political subversion, disinformation campaigns regularly aim to discredit the mainstream media, and undermine their credibility.

[39] Benkler, Faris, and Roberts, 2018, 158.
[40] Benkler, Faris, and Roberts, 2018, 161, 164.
[41] Matthew A. Baum, "Sex, Lies and War: How Soft News Brings Foreign Policy to the Inattentive Public," *American Political Science Review,* 96 no. 1 (2002): 91.

By undermining the credibility of traditional sources, disinformation campaigns generate uncertainty, distrust, and confusion. Attempts to undermine the credibility of competing sources may be made explicit; that is, disinformation campaigns may promote skepticism and distrust of competing media sources by explicitly referring to them as corrupt, partisan, elitist, and untrustworthy.[42] Jonathan Rose (2017) author of "Brexit, Trump, and Post-Truth Politics" highlights the ways in which effective disinformation efforts aim to undermine the credibility of competing sources in order to nudge readers towards hyper-partisan, falsified news, writing that disinformation efforts "try to reinforce sincerely held beliefs while providing a supplementary narrative that 'the authorities' or 'the mainstream media' do not want you to know about it".[43] Attempts to sow distrust in competing claims to 'truth' may also be implicit, whereby the strategic effort to promote informational uncertainty is more obscured. However, disinformation need not explicitly disparage competing sources in order to confuse its target audience; by flooding the informational environment with targeted disinformation that diverges from those mainstream sources, citizens become unable to discern who can, and should, be trusted. For example, Kellyanne Conway, Counselor to U.S. President Donald Trump, sparked debate about the applicability of 'truth' in contemporary politics following her characterization of a demonstrable falsehood as an "alternative fact".[44] Two days later, former White House Press Secretary Sean Spicer condoned Conway's statements, stating that, "Sometimes we (the White House) can disagree with the facts".[45] These statements not only seek to undermine those sources

[42] Hybrid Centre of Excellence, 2019, 13.
[43] Jonathan Rose, "Brexit, Trump, and Post-Truth Politics," *Public Integrity,* 19 no. 6 (2017): 556. Doi: 10.1080/10999922.2017.1285540.
[44] Justin D. Garcia, "(Not So) White Lies 'Rapists,' 'Bad Hombres' and Donald Trump's Conflation of 'Mexicans' with 'Illegal Immigration' During an Era of Declining Migration from Mexico," in *Trumping Truth : Essays on the Destructive Power of Alternative Facts,* ed. Salvador Jiminez Murguía (Jefferson, NC: McFarland & Company, 2019), 16.
[45] Vincent F. Hendricks and Mads Vestergaard, *Reality Lost: Markets of Attention, Misinformation and Manipulation* (Switzerland: Springer International Publishing, 2019), 50.

who had identified the original lie, but also aimed to generate confusion about what constitutes a 'fact', and which sources could be trusted to accurately present voters with the 'truth'.

As previously mentioned, QAnon is a conspiracy group that promotes fake stories that have no element of 'truth' and thereby generate confusion and informational uncertainty. Ethan Zuckerman (2019), author of "QAnon and the Emergence of the Unreal", describes QAnon and similar groups that promote egregious falsehoods as contributing to what he refers to as "the Unreal", described as a "clash of realities" whereby "what's real to you is unreal to someone else".[46] While these radically different interpretations of reality undermine attempts at political consensus, Zuckerman argues that the most threatening aspect of "the Unreal" is that the existence of multiple realities "encourages the listener to doubt everything".[47] While it may be tempting to simply discount QAnon's online presence as a fringe movement peddling ridiculous, nonsensical conspiracies, these narratives contribute to an informational environment that renders consumers confused and "paralyzed" in their attempts to analyze 'truth'. Zuckerman (2019) fears that in the era of "the Unreal", of which QAnon is both a cause, and a symptom, confused consumers will either tune out all competing narratives, become disengaged from political discourse altogether, or will closely align themselves with leaders that intend to exploit the confusion of "unreality".[48] Yochai Benkler, Robert Faris, and Hal Roberts (2018) consider the strategic goals behind the deliberate generation of confusion by noting that some falsehoods are so extreme and partisan that "it is difficult to imagine that they are in fact intended to make people believe them, rather than simply to create a profound disorientation and disconnect from any sense that there is anyone who actually 'knows' the truth...they are left with nothing but to

[46] Zuckerman, 2019, 9.
[47] Zuckerman, 2019, 11.
[48] Ibid.

choose statements that are ideologically congenial or mark them as members of the tribe".[49] By undermining trust in traditional sources, whether explicitly or tacitly, disinformation aims to encourage polarized debate, marked by incompatible narratives that pander to emotions and hinder fact-based deliberation.

While the erosion of credibility aims to generate distrust, confusion, and uncertainty, these efforts may also push citizens towards sources that confirm their pre-existing biases. The contemporary informational environment has become saturated with sources that emphasize hyper-partisan narratives, thereby providing citizens with unlimited access to material that exists to confirm their pre-existing ideological commitments and identities. Consequently, distrust in traditional media perpetuates a cycle, or disinformation 'loop'; as trust decreases in mainstream media, the citizenry are more likely to turn to those news sources that reinforce their cognitive biases.[50] Politicians witnessing the hyper-partisan informational environment are motivated to align their policies and statements with those identity-confirming narratives so as to garner increased support. Furthermore, challenger politicians may also be inclined to emphasize bias-confirming narratives so as to ensure competition with the incumbent.[51] Benkler, Faris, and Roberts (2018) refer to the cyclical nature of contemporary disinformation efforts that aim to undermine trust and credibility as a "propaganda feedback loop" because "once it is set in motion the media, elites, and the public are all participants in a self-reinforcing feedback loop that disciplines those who try to step off it with lower attention or votes, and gradually over time increases the costs to everyone of introducing news that is not identify confirming, or challenges the partisan narratives and frames".[52] That is, disinformation that reduces the public trust in

[49] Benkler, Faris and Roberts, 2018, 37.
[50] Benkler, Faris, and Roberts, 2018.
[51] Ibid.
[52] Ibid., 79.

competing media narratives aims to promote uncertainty; this uncertainty promotes a general sense of distrust and skepticism, and may incentivize confused citizens to turn towards those sources that serve or confirm their beliefs, including those that share blatant, deliberate inaccuracies and exaggerations.

The targeting of traditional media poses a distinct threat to the political integrity of liberal democratic states. In order to have meaningful political contestation and fair elections, citizens must have access to sound information, reinforced by, at the very least, a minimal level of trust in the media responsible for providing that information. In response, the media must be capable of providing the citizenry with evidence-based facts which can then inform political debate; the existence of the free media therefore plays the critical role of providing citizens with the informational tools needed to understand critical issues and make political decisions.[53] That is, the integrity of democratic politics requires "some shared means of defining what facts or beliefs are off the wall and which are plausibly open to reasoned debate".[54] Should the public be unable to discern which media sources can be reasonably trusted, public knowledge becomes weakened, and the media loses its critical 'watchdog function'.[55] Importantly, many liberal democratic states are facing decreased levels of media trust, thereby providing disinformation efforts with a salient opportunity for exploitation. W. Lance Bennett and Steven Livingston (2018) note that "the hollowing of parties and diminished electoral representation" has resulted in decreased levels of trust amongst the citizenry of many liberal democratic states, with over half of European OECD states experiencing significantly lower rates of trust in the years following the

[53] Rose, 2017, 555.
[54] Benkler, Faris, and Roberts, 2018, 5.
[55] Alice Marwick and Rebecca Lewis, "Media Manipulation and Disinformation Online," *Data & Society Research Institute,* (2017): 45.

2008 financial crisis.[56] The erosion of trust in democratic institutions, coupled with pervasive skepticism in the credibility of traditional media sources, thereby provides an opportunity for alternative, falsified, or hyper-partisan narratives to flourish.

It is important to remember that the actors who engage in the deliberate attack on credibility need not be foreign actors, but can also be well-recognized public figures, politicians, and domestic news sources aiming to leverage the informational environment in their favour. In addition to Conway and Spicer's statements and Fox News' hyper-biased coverage, President Trump's vilification of mainstream media, which includes numerous references to these sources as 'corrupt', 'fake news' and 'fake media', has been well-documented.[57] Through his constant ridicule of mainstream media, President Trump aims to promote a widespread sense of confusion, whereby the citizenry are unsure as to whether they should trust the 'corrupt' media, or their president. Figure 1 below portrays a tweet from President Trump's Twitter account on March 19, 2019 denouncing 'fake news media' and claiming that the mainstream media poses a threat to the American people. Figure 2, dated July 2, 2017, depicts a still shot of a video depicting President Trump wrestling with CNN, tweeted from the official presidential account.

Figure 1: President Trump has aimed to strategically discredit mainstream sources through disinformation. Source: Trump, Donald (realDonaldTrump). "The Fake News Media has NEVER been more Dishonest or Corrupt than it is right now. There has never been a time like this in American History. Very exciting but also, very sad! Fake News is the absolute Enemy of the People and our Country itself!" 19 March, 2019, 8:24 a.m. Twitter.

[56] Bennett and Livingston, 2018, 127.
[57] Andrew S. Ross and Damian J. Rivers, "Discursive Deflection: Accusation of "Fake News" and the Spread of Mis-and Disinformation in the Tweets of President Trump," *Social Media & Society,* 4 no. 2 (2018): 2 Doi: 10.1177/2056305/8776010; Hannan, 2018, 215.

Figure 2: President Trump continues to use social media to denounce mainstream news source, CNN. Source: Trump, Donald (realDonaldTrump). "#FraudNewsCNN #FNN". July 2, 2017, 9:21 a.m. Twitter.

To conclude, disinformation efforts aim to generate informational confusion and chaos, thereby posing a threat to the governance structures of liberal democratic states that rely upon public access to credible information in order to allow for informed decision-making.[58]

2.3 *Exploitation of Democratic Values and Institutions*

While disinformation efforts often target fissures and contentions that pre-exist amongst its target audience, political subversion may also exploit certain democratic freedoms and liberties.[59] In order to provide voters with the information necessary to inform sound democratic decision-making, the liberal democratic media environment requires freedom of speech, coupled with the free sharing of information and a standard of journalistic integrity.[60] Crucially, freedom of speech encourages deliberation and contestation, and allows for public disagreement with the traditional media's reporting of 'news' without fear of arbitrary reprisal or punishment. Liberal democracies therefore require that the citizenry have access to reliable information to inform

[58] Hybrid Centre of Excellence, 2019, 11.
[59] Ibid., 10.
[60] Jardine, 2019.

public debate, yet freedom of speech protects the citizenry's right to disagree with, and to freely question, the particular interpretations presented by the free media.[61]

However, these democratic rights can also be exploited, as those actors who aim to spread disinformation can peddle inaccuracies, undermine the traditional press, and spread emotive, hyper-partisan, or falsified narratives under the guise of 'freedom of speech', prompting relatively few repercussions. That is, disinformation campaigns, targeted against liberal democratic states, benefit from a political structure that promotes the liberal values of freedom of speech and freedom of the media, meant to encourage sound political debate and allow for competing interpretations of 'truth'. Liberal democratic states are therefore fundamentally constrained in their ability to limit those narratives that paint traditional media as 'corrupt, unreliable, and expurgated' and which encourage citizens to turn towards 'alternative facts' or less credible sources of news.[62] Efforts to counter disinformation campaigns are perceived as attempts to silence diverging opinions, or as regulating competing claims to 'truth' and prompt criticisms that the state is stifling freedom of speech, thereby further eroding trust in the credibility of liberal democratic institutions. To conclude, disinformation campaigns recognize, and exploit, the challenges that liberal democracies face in tackling the deliberate dissemination of falsehoods which target democratic values and principles, whilst also maintaining a commitment to those very freedoms.[63]

3. Disinformation as a Historical Phenomenon

Despite the growing public awareness regarding the threat of 'hybrid' tactics, the strategic usage of disinformation is not a new phenomenon.[64] Julie Posetti and Alice Matthews

[61] Ibid.
[62] Hybrid Centre of Excellence, 2019.
[63] Ibid., 10; Jardine, 2019.
[64] Heidi J.S. Tworek, *News from Germany: The Competition to Control World Communications,*

(2018) argue that the first documented case of disinformation occurred in 44BC, when Octavian engaged in a disinformation campaign against competing general Mark Antony which involved the printing of brief slogans on coins, meant to tarnish his reputation.[65] From the use of disinformation campaigns to demonize or demoralize enemy forces throughout WWI and WWII, to the use of forgeries and fake stories throughout the Cold War, disinformation has continued to feature prominently in military and political strategy.[66] As previously mentioned, disinformation need not be spread by a foreign actor; for example, Robert Chesney and Danielle Citron (2018) argue that American forces deliberately disseminated "misleading accounts" of the 1898 explosion of the USS Maine in order to "incite the public towards war with Spain".[67] Not only is the strategic use of disinformation itself a historical phenomenon, but efforts to strike against the morale, emotive inclinations, or general will of an adversary's polity, particularly through the targeting of the population, has also featured prominently throughout the history of military strategy.[68] Therefore, strategic disinformation, meant to generate political subversion, uncertainty and chaos, is not novel. However, the forms, efficacy, scope, and scale of disinformation have been influenced and transformed in light of the proliferation of new and emerging technologies.

1900-1945 (Harvard University Press: 2019).

[65] Julie Posetti and Alice Matthews, "A short guide to the history of 'fake news' and disinformation," *International Center for Journalists,* (2018): 1-19.

[66] Ibid., Nicholas J Cull et. al, " Soviet Subversion, Disinformation and Propaganda: How the West Fought Against it: An Analytic History, with Lessons for the Present," *LSE Consulting Final Report,* (2017): 1-81; Hebert Romerstein, "Disinformation as a KGB Weapon in the Cold War," *Journal of Intelligence History,* 1 no. 1 (2001): 54-67. Doi: 10.1080/16161262.2001.10555046.

[67] Robert Chesney and Danielle Citron, "Deepfakes and the New Disinformation War: The Coming Age of Post-Truth Geopolitics," *Foreign Affairs,* 98 no. 1 (2019): 150.

[68] Telley, 2018, 6.

3.1 *Technology and its Historical Influence on Political Communications*

Increased public awareness regarding the threat of hybrid tactics, including disinformation, can be explained, in part, by contemporary technological advancements that have facilitated the destabilizing spread of rumours, falsehoods, and conspiracies. Importantly, innovation and developments in communications technology has long influenced the informational environment and the structures of political communication; that is, the particular platform, or 'interface' through which the public communicates and engages with politics has always fundamentally influenced the forms, organization, and limits of political discourse. The emergence of new communications technologies not only transforms the ways in which the citizenry receives information (for example, through reading print, watching television, or viewing posts on social media), but also influences the types of political discourse that the citizenry engages in.[69] Ronald J. Deibert (1997) outlines the ways in which mediums can exert influence on political communication, writing, "a change in the mode of communication will 'favour' certain forces and ideas by means of a functional bias towards some and not others".[70] The distinct medium of communication, "far from being an empty vessel or transparent channel", is biased towards certain types of discourse, and therefore influences public expectation regarding political norms, standards of appropriateness, and credibility.[71] Furthermore, the distinct ways in which one engages in political subversion and disinformation have historically been linked to technological development and advancement.[72]

[69] Wiesenberg and Tench, 2019.
[70] Ronald J. Deibert, *Parchment, Printing and Hypermedia: Communication in World Order Transformation*, (Columbia Uniersity Press: 1997) 30.
[71] Deibert, 1997, 22.
[72] Cull, Culbert, and Welch, 2003; Power, 2017.

The advent of the Gutenberg printing press in 1439, which allowed for pamphlets and flyers to be reproduced and widely disseminated, revolutionized political propaganda.[73] The significance of this technology for political communication, dissent, and strategy is well-represented by the case of the Protestant Reformation, whereby reformer and dissident Martin Luther utilized the printing press to communicate with, and mobilize a disenfranchised audience. Steve Fuller (2018) notes that by allowing Protestant Reformers to question the 'expertise' of the monarchy and "delegitimize the authority of the Roman Catholic Church by urging the faithful to read the Bible for themselves," the printing press fundamentally transformed the political structures that predated it.[74] Interestingly, Luther's printed propaganda was often "published in the vernacular, to stoke German nationalism".[75] Therefore, even early political communications were tailored to resonate with those inclinations, concerns, and identities that pre-existed amongst the target audience in order to effectively increase mobilization. This technology revolutionized political communication and propaganda, and thereby had a "world-changing, strategic impact" on the informational environment. Most notably, the effective use of this technology prompted a violent religious conflict that culminated in the Peace of Westphalia, thereby provoking the creation of the international state-centric model of international affairs that largely prevails to this day.[76] Similarly, Benedict Anderson's 1983 book *Imagined Communities* argues that the advent of the printing press and the subsequent rise of print capitalism facilitated "fixed" communication across linguistic groups, and therefore allowed for the creation of communities that transcend the traditional limitations of physical space and linguistic

[73] Steve Fuller, *Post-Truth: Knowledge As A Power Game,* (Anthem Press: 2018); Posetti and Matthews, 2018; Joanna M. Burkhardt, "Combating Fake News in the Digital Age," *Library Technology Reports,* 53 no. 8 (2017): 3-99.
[74] Fuller, 2018, 11.
[75] Telley, 2018, 3.
[76] Telley, 2018, 3.

difference.[77] Thus, print capitalism, coupled with increased literacy and vernacularism, allowed for the unification of peoples, and created the necessary conditions for nationalist, "imagined communities" to flourish; the advent of print, in part, had therefore "set the stage for the modern nation".[78]

The proliferation of news print media also allowed for what Posetti and Matthews (2018) have referred to as the "first-large scale news hoax", where, in 1835, the New York Sun published several false stories that depicted space creatures and other life forms found on the moon.[79] These famous "Moon Hoax" stories, while fraudulent, were incredibly popular and were widely reprinted by other newspapers, thereby demonstrating the speed and ease at which the printing press allowed falsehoods to spread.[80] By allowing for political information to be widely shared with its target audience, the printing press had begun the decentralization of political communication and propaganda.

The advent of radio communications addressed the geographical limitations of paper and print, rendering the electorate increasingly accessible to political messaging.[81] The well-documented use of radio and wireless technology in Nazi Germany to spread anti-Semitic falsehoods elucidates the ways in which these emerging technologies facilitated widespread political propaganda.[82] Heidi Tworek (2019) writes that the radio has become a symbol of Nazi propaganda precisely because its structural qualities were perceived to be particularly effective by the Nazis who "believed in the power of the spoken word and the cinematic to convince, often

[77] Benedict Anderson, *Imagined Communities*, (London: Verso, 1983; London: Verso, 2006) 46). Citations refer to the 2006 Verso edition.
[78] Anderson, 2006, 46.
[79] Posetti and Matthews, 2018, 1.
[80] Brian Thornton, "The Moon Hoax: Debates About Ethics in 1835 New York Newspapers," *Journal of Mass Media Ethics,* 15 no. 2 (2000): 89-100.
[81] Clyde R. Miller, "Radio and Propaganda," *The Annals of the American Academy of Political and Social Sciences,* 213 (1941): 69-74.
[82] Tworek, 2019.

much more than the written".[83] As technology continued to improve, innovations in satellite radio further expanded the political audience that could be effectively reached. Benkler, Faris and Roberts (2018) outline the influence of satellite radio communications, writing, "satellite distribution to ground stations allowed national syndication on a scale and quality that transmission over copper wire had not, significantly increasing the potential reach of this new format".[84]

The advent of videography further transformed the informational environment, and subsequently revolutionized the forms and efficacy of political propaganda. It is important to note that imagery as a form of political communication is particularly effective due to the human inclination to feel that 'seeing is believing', and therefore that imagery is unmediated; that is, images communicate through visuality and emotion in ways that allow them to serve as "visual facts".[85] By virtue of its visuality, the use of imagery and videography in political messaging communicates a sense of credibility, believability, and truth. The effects of imagery and videography on political communication are well-represented by the advent of television. Hannan (2018) outlines Neil Postman's (1985) seminal thesis, "Amusing Ourselves to Death: Public Discourse in the Age of Show Business", that television is a medium for communication that was fundamentally designed to encourage entertainment and amusement.[86] However, the popularity of the television also meant that amusement became intertwined with politics, as the television eventually became the primary provider of political coverage and news for a significant portion of the electorate. Like previous technological developments, the advent and

[83] Ibid., 118.
[84] Benkler, Faris, and Roberts, 2018, 321.
[85] Simone Molin Friis, "'Beyond Anything We Have Ever Seen': Beheading Videos and the Visibility of Violence in the War Against ISIS," *International Affairs,* 91 no. 4 (2015): 735. Doi:10.111/1468-2346.12341.
[86] Hannan, 2018; Neil Postman, *Amusing Ourselves to Death: Public Discourse in the Age of Show Business,* (Penguin Books: 1985).

proliferation of television allowed for rapid, widespread dissemination of news and political information beyond the limits of pre-existing technologies.

By interacting with politics through a medium that aimed to promote entertainment and amusement, however, the standards, norms, and expectations of political communication were themselves transformed; that is, political discourse became a source of entertainment.[87] Hannan (2018), echoing Postman (1985), argues that television communicates with its viewers through short, catchy clips and "fleeting images" that are "not conducive to deep, critical and challenging reflection but rather to its opposite-to shallow, uncritical, and unchallenging mental preoccupation".[88] Baum's (2002) analysis of "soft news" media further elucidates the significant influence that television, with its structural inclination towards entertainment-based programming, has had on political communication. As previously mentioned, Baum (2002) argues that the association between an increased awareness of foreign policy crises and "soft news" consumption amongst those who are traditionally disinterested in politics must be explained within the context of "cheap framing" and "low cognitive cost" learning.[89] That is, the framing and repackaging of foreign policy issues as "entertainment" renders this information increasingly accessible, and therefore increases the likelihood that politically uninterested people learn about these issues. As "soft news" media sources often include television programs that "piggyback" foreign policy information onto "low-cost entertainment-oriented information", receiving information about politics from these sources requires "little cognitive energy".[90] While its ability to provide political information at "low cognitive cost" may expand participation in political debate, television's emphasis on entertainment undermines the quality

[87] Postman, 1985; Hannan, 2018, 215.
[88] Hannan, 2018, 216.
[89] Baum, 2002, 94.
[90] Baum, 2002, 91.

of debate[91]; that is, increased public access to 'news' that frames politics as entertainment normalizes the discontinuity and fragmentation of political discourse, thereby undermining sound, fact-based political contemplation and debate.

While television's inherent emphasis on visuality may increase the perceived 'believability' of political propaganda, Baum's (2002) research on "soft media" also notes that print media, including magazines and newspapers, often frame political information as entertainment[92]; that is, the desire to emphasize sensationalistic, dramatic interpretations of events in order to increase readership and appeal to the human desire for drama does not emerge alongside the advent of the television, but existed within the context of earlier forms of political communication, including print media. Television programming does, however, emphasize entertainment and recreation, and therefore its popularity as a medium of political communication has contributed significantly to the deterioration of political discourse. Consequently, the advent of the television not only transformed the informational environment by changing the way that the electorate received information, but also influenced the expectations and standards of appropriateness for political discourse and credibility.

In the contemporary era, access to information and political coverage is predominantly facilitated by the widely-accessible communications technologies of the Internet and social media, which have supplemented and in some cases supplanted newspapers, radio, and to some extent, television, as the primary medium through which some segments of the citizenry receive and engage with politics. However, the structures of these contemporary technologies, which encourage virality and sensationalism, have altered the informational environment to such a

[91] Ibid.
[92] Baum, 2002, 93.

degree that their proliferation has also facilitated a significant shift in the scope, scale, and efficacy of political subversion and disinformation.

4. Disinformation in the Contemporary Era

4.1 *Decentralizing Political Communication*

As previously mentioned, the Internet and social media have become some of the primary forums through which the citizens of liberal democratic states receive news and political information. While television remains a significant tool for political communication, a 2018 Pew survey found that 68% of Americans receive news from social media.[93] Examples of common social media platforms that provide 'news' and political information include well-known sites such as Facebook, Twitter, and Reddit, but also include YouTube, 4Chan, blogs, and 'Tor-protected' websites such as Snapchat, WhatsApp, and Gab.[94] With an estimated 2.25 billion active Facebook users, and 336 million Twitter users as of September 2019, these widely-accessible communications technologies have revolutionized the speed and ease with which citizens receive political information.[95]

Firstly, the advent of the Internet has allowed for rapid, widespread access to news and political information that bypasses the limitations of time and space which constrains communications through other mediums. These technologies have provided users with global communication and immediate access to up-to-date news. The proliferation of these technologies has also ensured that the ability to express and circulate 'information' is nearly universal. That is, the accessibility of the Internet, 'smart phones', and social media has meant that the informational environment is almost entirely decentralized, allowing anyone to create and

[93] Elisa Shearer and Katrina Eva Matsa, "News Use Across Social Media Platforms 2018," Pew *Research Centre: Journalism & Media,* (2018): 2.
[94] Bennett and Livingston, 2018, 129.
[95] Jardine, 2019.

disseminate text, audio, and video content that can be shared widely and instantaneously.[96] Consequently, Internet technology was heralded for its potential to promote democratization and positive political change, as users could use the Internet and 'smartphones' to shed light on international injustices and mobilize global support in response.[97] However, the decentralization of communication has also allowed an increasingly large pool of both state and non-state actors to become involved in the dissemination of political 'facts' or 'truths', thereby increasing the number of sources that claim to represent credible interpretations of political reality.[98] By allowing an increasingly large number of actors to participate in 'news' and political debate, Internet users can easily access any number of sources in order to 'prove' or reinforce their strong partisan biases and inclinations.

Secondly, the global proliferation of the Internet and social media, and our reliance upon these technologies, has fundamentally changed the ways in which the citizenry engages with politicians and politics more generally. Politicians need not depend overwhelmingly on journalists or formal media teams to communicate with voters, as these communication technologies allow politicians to communicate directly with their electorate. Positively, the use of social media by politicians has allowed voters to feel as if their politicians are accessible and relatable. For example, former American President Barack Obama's 2012 electoral success, and overall popularity, has, in part, been credited to his social media presence and the ability to effectively use social media to connect and resonate with target audiences.[99] However, it is important to recall that these technologies not only affect the ease and speed at which the

[96] Ross and Rivers, 2018, 3; Benkler, Faris, and Roberts, 2018, 280.
[97] Benkler, Faris, and Roberts, 2018, 318; Vaidhyanathan, 2018.
[98] Jardine, 2019.
[99] Hannan, 2018, 218.

citizenry receives political information, but that the structure of these technologies are embedded with biases that influence our expectations and understandings of political discourse.

4.2 *Hyper-exaggerations, Sensationalization, and Virality*

Social media sites, particularly those that aim to increase user engagement through targeted advertising and highly personalized content, are designed to promote virality, sensationalism, and hyper-exaggeration.[100] When social media users resonate strongly with a particular story or post, they are more likely to 'share', 'like' or comment on said post, thereby increasing user engagement and advertising revenue.[101] Thus, user engagement relies upon an emotive, visceral reaction that prompts further dissemination and 'sharing'. Benkler, Faris, and Roberts (2018) outline the virality bias embedded within social media, which is "designed to produce cathartic outrage in its readers and viewers and to be rewarded by clicks and views... aiming to produce a sense of 'us against them'".[102] In an analysis of political discourse both off and on social media, Benkler, Faris and Roberts (2018) consistently found that Facebook, in general, tends to promote a more partisan discourse than other social media sites, including Twitter.[103] Similarly, Howard et. al (2017) found that amongst voters in Michigan, a key state, 'junk news', defined as news "characterized by ideological extremism, misinformation and the intention to persuade readers to respect or hate a candidate or policy based on emotional appeals" was shared more frequently via social media compared to more traditional media sources in the months leading up to the 2016 US election.[104]

[100] Hannan, 2018, 219; Marwick and Lewis, 2017, 42.
[101] Hannan, 2018, 220; Jane Suiter, "Post-Truth Politics," *Political Insight,* 7 no. 3 (2016): 25-27. Doi: 10.1177/2041905816680417.
[102] Benkler, Faris, and Roberts, 2018, 233.
[103] Benkler, Faris, and Roberts, 2018, 53.
[104] Philip N. Howard et. al,"Junk News and Bots during the U.S. Election: What Were Michigan Voters Sharing Over Twitter," COMPROP DATA MEMO 2017.1, (2017): 1-5.

Furthermore, social media users, who have become conditioned to expect sensationalized political debate, are becoming less likely to engage with well-reasoned, lengthy political statements presented on social media, precisely because the medium is not designed to support this sort of discourse; instead, effective political communication is increasingly marked by the predominance of clever, shocking, 'trolling' jabs and comments.[105] Interestingly, Hannan (2018) argues that President Trump's 2016 victory, and subsequent popularity amongst his support base, can be explained by his ability to recognize that political discourse mediated by social media requires emotive, visceral communication as opposed to highly-formulated, diplomatic discourse.[106] Trump's boisterous, confrontational form of communication is therefore well-suited for social media, and resonates with a significant swath of users that have come to expect sensationalism and shock-value from social media posts. The medium through which an increasing percentage of citizens are receiving political information and engaging in political discourse is structurally designed to bolster emotive content that sparks anger, scandal, and hyper-exaggeration, thereby transforming the forms and expectations for contemporary political discourse.

Importantly, the inclination towards emotionality and virality, inherent to the structure of social media, has created critical opportunities for disinformation. Those who aim to promote disinformation by peddling falsehoods, conspiracies, and rumours (including those that may be patently inaccurate or grossly misleading), by tapping into the emotions, identity, and biases of a target audience benefit from the widespread use of social media for political debate. As social media is structurally disposed to pander to sensationalism, disinformation campaigns that are capable of "tapping into a market for anger and unabashed partisanship" ensure that they will

[105] Hannan, 2018, 220.
[106] Ibid.

receive ample attention in the form of 'clicks' and 'shares'.[107] Social media also provides firms with a financial incentive to spread disinformation. As hyper-exaggerations, inaccuracies, and misleading stories resonate with a target audience and generate user engagement, those responsible for their dissemination benefit financially from increased ad revenue.[108] That is, disinformation, circulated via social media, need not be motivated by a desire to disrupt political unity, erode competing claims to credibility or sow discontent; however, the financial incentive to peddle inaccuracies still generates political consequences when inaccuracies are read, shared, and taken as truth.

The use of algorithms by social media sites also contributes to the hyper-partisan structure of social media communication, thereby providing further opportunities for disinformation. For example, Facebook utilizes algorithms that analyze user history in order to determine user preferences and identify what type of sources and stories receive the most engagement, so that each individual user's online experience can be tailored to reflect those preferences and interests.[109] Again, these sites have a financial incentive to integrate algorithms and data analytics, as information about the preferences, tastes, and opinions of its users allows advertisements to reflect those preferences. However, these algorithms have also insulated social media users from competing narratives and worldviews, thereby contributing to hyper-polarization of contemporary political debate. Internet activist Eli Pariser's (2011) seminal book, *The Filter Bubble* first outlined the ways in which political advertising and news stories are tailored based on an individual user's history, thereby creating "echo chambers" that insulate

[107] Suiter, 2016, 27.
[108] Bennett and Livingston, 2018, 133; Daniel Kreiss and Shannon C. McGregor, "The 'Arbiters of What our Voters See: Facebook and Google's Struggle with Policy, Process, and Enforcement around Political Advertising," *Political Communication,* 36 no. 4 (2019): 499-522. Doi: 10.1080/10584609.2019.1619639.
[109] Alexis C. Madrigal, "What Facebook Did to American Democracy," *The Atlantic,* October 12, 2017. Accessed January 16, 2020. https://www.theatlantic.com/technology/archive/2017/10/what-facebook-did/542502/.

users from narratives and ideologies that differ from their own.[110] This process allows political advertisements and news stories to be directed towards those who are most inclined to believe them and absorb their message based on their user histories, resulting in what former Facebook president Sean Parker has coined a "social-validation feedback loop" that reaffirms and exploits cognitive biases, dissent, and political fissures.[111] Social media users who are less likely to be introduced to those stories that challenge or contradict their worldview are vulnerable to targeted disinformation campaigns that aim to exploit those very inclinations.[112] For example, Figure 3[113] below depicts websites, Liberal Society and Conservative101, covering the same news story about Kellyanne Conway's position within the Trump administration. Despite covering the same set of events, these dramatically different headlines demonstrate the ways in which news stories, shared on social media, are reframed in order to confirm cognitive biases, and stir an emotive response from their target audience. Furthermore, a highly personalized user experience has allowed disinformation efforts to become increasingly discrete, targeted and self-reinforcing; as these stories are circulated amongst the social media communities of a target audience, they receive "reinforcement through repetition", resulting in what Benkler, Faris, and Roberts (2018) coin "network propaganda".[114]

[110] Eli Pariser, *The Filter Bubble: How the New Personalized Web is Changing What We Read and How We Think,* (Penguin Books: 2011); Jardine, 2019.
[111] Zeynep Tufekci, "It's the (Democracy-Poisoning) Age of Free Speech," *Wired,* January 16, 2018. Accessed January 16, 2020. https://www.wired.com/story/free-speech-issue-tech-turmoil-new-censorship; Peter Fernandez, "The Technology Behind Fake News," *Library Hi Tech News,* 34 no. 7 (2017): 3, Doi: 10.1108/LHTN-07-2017-0054.
[112] Pariser, 2011.
[113] Craig Silverman, "This Is How Your Hyperpartisan Political News Gets Made," *Buzzfeed News*, February 27, 2017. Accessed January 16, 2020. https://www.buzzfeednews.com/article/craigsilverman/how-the-hyperpartisan-sausage-is-made.
[114] Benkler, Faris, and Roberts, 2018, 201.

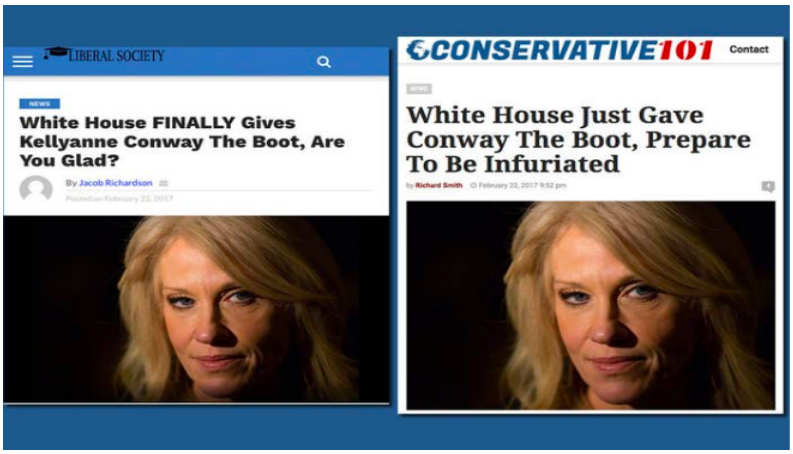

Figure 3: Headlines from Liberal Society and Conservative101. Source: "This is How Your Hyperpartisan Political News Gets Made" by C. Silverman, 2017. Buzzfeed News.

As the user experience within these social media sites becomes increasingly personalized and reflective of their individual data history, the ability to achieve a sound, fact-based debate across the political spectrum becomes strained. In a media environment that is structurally designed to promote hyper-partisan, ideological affirmations, and obscures which sources are being sent to users with different biases and beliefs, the 'facts' that should form the basis of political deliberation are no longer universal, thereby undermining efforts towards political deliberation.[115] To conclude, the contemporary informational environment, where citizens are increasingly receiving information from the Internet and social media, is marked by a predominance of sites that are structurally designed to promote user engagement, virality, and sensationalization. These factors, coupled with the use of algorithms that insulate from competing worldviews, create new opportunities for targeted, effective disinformation campaigns. It is important to reiterate that while social media and the Internet have proliferated globally, the challenges associated with disinformation campaigns are particularly salient for

[115] Madrigal, 2017; Pariser, 2011.

liberal democratic states, which espouse commitments to the values of freedom of speech, free access to information, and free media.

4.3 *The Era of Post-Truth Politics?*

While efforts towards the strategic destabilization of an adversary's political integrity are not new, the forms, efficacy, scale, and scope of disinformation efforts have largely reflected the emergence of communication technologies that transformed the informational environment, and subsequently, opened up new opportunities for political propaganda. Within the contemporary context, the advanced communications technologies of the Internet and social media have created a decentralized informational environment that, through the use of algorithms and the structural promotion of virality, erodes political discourse. The increased dependence on these communications technologies has thereby allowed political influence and subversion to become individualized and targeted.

Consequently, some academics have suggested that the contemporary media landscape has ushered in the era of 'post-truth' politics, whereby political discourse is driven by appeals to emotions, and cognitive biases, as opposed to fact-based analysis.[116] For liberal democracies that rely upon a standard of trust in the free media and access to credible information to inform political debate, or assume that certain interpretations of 'truth' will prevail, the era of 'post-truth' politics poses a salient threat to the integrity of democratic decision-making processes and institutions. It is within this framework and media environment that the advent of artificial intelligence (AI) poses a distinctly pertinent threat to the political integrity of liberal democratic states. The integration of AI, capable of rapidly amassing and analyzing user data, automating

[116] Suiter, 2016, 25; Rose, 2017, 556; Davies, 2016; Vasu et. al, 2018, 26; Hannan, 2018, 215.

the dissemination of falsehoods, and mimicking human interaction, exacerbates the precision, speed, and perceived credibility of disinformation efforts.

5. The Emergence of Artificial Intelligence

Contemporary developments in the field of AI, defined broadly as an "integrated system that incorporates information acquisition objectives, logical reasoning principles, and self-correction capacities", has triggered an onslaught of investment, research, and public debate regarding both the tactical advantages, and potential threats posed by these emerging technologies.[117] Importantly, investment in AI technology is fundamentally focused on the development of "intelligent machines and software that can reason, learn, gather knowledge, communicate, manipulate and perceive the object".[118] In light of AI's ability to learn and operate with a level of independence, scholars, military analysts, and representatives from the defense industry have begun considering the tactical advantages associated with the integration of AI into military capabilities; namely, research has aimed to outline the ways in which machine learning and advanced coding might allow for independent precision targeting, swarm communication, and instantaneous data collection and analysis.[119] Consequently, AI is being incorporated into many aspects of the contemporary military apparatus, including surveillance, cyber infrastructure, defense, and target identification.[120] Recognizing the aforementioned tactical advantages associated with military AI, many states, including the United States, China, Israel,

[117] Feldstein, 2019, 5; Telley, 2018, 6.
[118] Anveet Pannu, "Artificial Intelligence and its Application in Different Areas," International *Journal of Engineering and Innovative Technology (IJEIT),* 4 no. 10 (2015): 79-84.
[119] Ian GR Shaw, "Robot Wars: US Empire and geopolitics in the robotic age," *Security Dialogue,* 48 no. 5 (2017): 451-470. Doi: 10.1177/09670I06I17713157; Kenneth Payne, *Strategy, Evolution and War: From Apes to Artificial Intelligence.* (Georgetown University Press: 2018); Paul Scharre, "Robotics on the Battlefield Part II: The Coming Swarm," *Center for a New American Security* (2014): 24.
[120] Michael Horowitz, Paul Scharre, Gregory C. Allen, Kara Frederick, Anthony Cho and Edoardo Saravalla, "Artificial Intelligence and International Security," *Centre for a New American Security Series on Artificial Intelligence and International Security,* (2018): 1-28.

Russia, and the United Kingdom have begun investing heavily in these emerging technologies. It is important to note that AI also offers advantages for civilian sectors, including transportation, energy, finance, healthcare, and marketing.[121] Significant investment into both the military and civilian uses of AI suggest that this technology will continue to proliferate globally, and will be integrated into a wide number of fields and applicable sectors.[122]

Given its contemporary relevance, scholars have also begun considering the ways in which AI might influence political targeting and information warfare.[123] This section outlines the three most significant ways that the introduction of AI transforms the scope, scale, and efficacy of contemporary disinformation efforts. Firstly, AI is capable of rapidly amassing and analyzing huge swaths of data, thereby providing adversaries with the tools necessary for constant analysis and surveillance of public sentiment in ways that allow disinformation efforts to be increasingly targeted and discrete.[124] Secondly, AI's speed ensures that disinformation efforts can be automated and instantaneous, as elucidated by the introduction of 'bots', which spread automated political messages en masse to pollute the media environment and influence public sentiment. Lastly, AI's machine learning capabilities allow intelligent systems to be trained on data in order to learn, and effectively mimic, the ways that humans interact and communicate, as exemplified by recent concerns about 'deepfake' technology.

In order to analyze the effects of AI on disinformation efforts, it is important to first provide a brief overview of the ways in which AI systems can be differentiated from more simple algorithms. As previously mentioned, social media sites use algorithms that utilize social

[121] Abouayoub, 2018; Ramos and Liu, 2011; Juneja, 2018; Jiang et. al, 2017; Davenport and Kalakota, 2019; Columbus, 2019.
[122] Feldstein, 2019, 10; James Johnson, "Artificial Intelligence & Future Warfare: Implications for International Security," *Defense & Security Analysis,* 35 no. 2 (2019): 151. Doi:10.1080/14751798.2019.1600800.
[123] Feldstein, 2019, 5; Telley, 2018.
[124] Leon, 2019; Davies, 2016; O'Leary, 2013, 97.

media data about user preferences in order to tailor content accordingly and ensure that these users are exposed to viewpoints and political ads that affirm their pre-existing inclinations and cognitive biases. These algorithms amass and process user data in order to trigger a calculated, coded response, and therefore only act or formulate a response in light of explicit programming and coded instruction.[125] What differentiates AI algorithms, however, is their ability to learn; that is, AI systems are capable of self-correcting, improving and adapting their predictions as they accumulate new information. Machine learning, which involves the training of an AI system on social media data in order to recognize patterns and anomalies, allows these systems to make similar inferences, predictions and analysis when introduced to new data.[126] Machine learning therefore allows for the recognition of patterns and inferences that are not explicitly pre-programmed into the AI algorithm, whereas simple algorithms entail more explicit, "if, then" programming.[127]

5.1 *Microtargeting: Data Analysis, Psychometrics and Public Sentiment*

The "Internet of Things", refers to the increasing number of objects and activities that are becoming interconnected and facilitated via the Internet, thereby blurring the differentiation between public and private life.[128] Networked devices that require an Internet connection include "vehicles, household appliances, medical devices, electric meters and controls, street lights, traffic controls, smart televisions, and digital assistants such as Amazon Alexa and Google Home", all of which facilitate the collection of an abundance of highly-personalized data.[129]

[125] Anish Talwar and Yogesh Kumar, "Machine Learning: an artificial intelligence methodology," *International Journal of Engineering and Computer Science,* 2 no. 12 (2013): 3400-3404; Sarah Lemelin-Bellerose, "Artificial Intelligence: Current Situation, Risks and Outlook," Library of Parliament In Brief Series, no. 2019-06-E, (2019): 1.
[126] Talwar and Kumar, 2013, 3400; Kertysova, 2018, 57.
[127] Talwar and Kumar, 2013, 3402; Lemelin-Bellerose, 2019, 1.
[128] Christopher S. Yoo, "The Emerging Internet of Things: Opportunities and Challenges for Privacy and Security," *Centre for International Governance & Innovation,* 2019. Accessed January 16, 2020 https://www.cigionline.org/articles/emerging-internet-things; Davies, 2016.
[129] Yoo, 2019.

Further, the current dependence upon smartphones and social media has resulted in the production and availability of highly individualized user data. For example, Facebook sorts its users into categories based upon their "location, demographics, age, gender, languages spoken, relationship status, education level, work status and place of employment, income, 'ethnic affinity', generation, life events, politics, Facebook connections".[130] Taken together, the reliance upon these contemporary technologies for everyday activities, social engagement, and political debate, has resulted in an abundance of data. Importantly, this data can be used to gauge public sentiment; for example, politicians and political campaigns often turn to social media sites, particularly Twitter, in order to engage in 'sentiment analysis', whereby analysts attempt to gauge how voters are perceiving the political environment, and observe what type of political discourse the citizenry are engaging in, in order to tailor political messages in response.[131] The accumulation and analysis of individual data in the name of personalized services and targeted advertisements is intensified under what Shoshana Zuboff (2019) refers to as a system of "surveillance capitalism". Zuboff's (2019) theory of "surveillance capitalism" argues that the range of activities that make up the human experience, including individual behaviour, interests, and personality traits are being amassed, sold, and purchased in the "behavioural futures marketplace", whereby surveillance capitalist companies such as Google, Facebook, and Microsoft, use data analytics and computational prediction to engage in predictive analysis that "forecasts what we feel, think, and do".[132] The accumulation and analysis of individual data therefore provides the surveillance capitalists with the ability to not only predict, but to directly influence our human behaviour. That is, surveillance capitalists, capable of using individual data

[130] Kreiss and McGregor, 2019, 504.
[131] Davies, 2016.
[132] Shoshana Zuboff, *Surveillance Capitalism: The Fight for a Human Future at the New Frontier of Power* (New York, NY: Public Affairs, 2019) 95.

to predict future behaviour, can "nudge, coax, tune, and herd behavior toward profitable outcomes".[133] Data, therefore, can be used to provide a sense of how the citizenry are feeling, and how they are responding to the political environment both in the present, and presumably, in the future. Importantly, the "Internet of Things" and the rise of "surveillance capitalism" have facilitated the creation and collection of such significant amounts of data that it has become difficult for humans to analyze, or make sense of, all user data.

AI algorithms, however, are capable of rapid analysis and can therefore be used to interpret vast amounts of user data, at speeds beyond the limits of human analysis. Put simply, AI technology is capable of analyzing more data faster than human cognition allows. Daniel E. O'Leary (2013) outlines some of the advantages associated with using AI to interpret 'big data', writing, "under situations of large volumes of data, AI allows delegation of difficult pattern recognition, learning, and other tasks to computer-based approaches...In addition, AI contributes to the velocity of data, by facilitating computer-based decisions that lead to other decisions".[134] When used to analyze social media data, AI can provide continuous, rapid and up-to-date analysis of public sentiment.[135] William Davies (2019) highlights the advantages associated with using AI to interpret big data by "bringing data from a wide range of sensory devices, and converting this into a constantly evolving narrative about the near future".[136] Importantly, this sort of observation and analysis is not inherently nefarious, or necessarily intended to undermine political cohesion. For example, many scholars have examined the ways in which firms have

[133] Zuboff, 2019, 25.
[134] O'Leary, 2013, 97.
[135] Davies, 2016.
[136] Ibid.

begun to use AI to monitor the reputations of companies and their products online, so as to ensure customer satisfaction.[137]

When used by actors attempting to engage in disinformation however, the ability to constantly analyze the vast swaths of data associated with public sentiment, online engagement, and rates of 'clicks' and 'shares', allows those that have an interest in disseminating strategically-formulated falsehoods to use AI as a tool for constantly evaluating how the public is feeling. Those who aim to disrupt the informational environment or spread disinformation can therefore use AI in order to analyze public sentiment, and update political messages accordingly, in order to ensure that targeting is effective, relevant, and direct.

AI's data-analysis capabilities also allow for algorithmic inference about an individual user's psychological make-up. Trained on an abundance of user data, AI can engage in pattern recognition in order to infer what sort of person each individual user is, and can then put forth recommendations regarding what sort of political messaging would be most effective, and what sort of sources are most likely to generate high rates of user engagement.[138] AI-facilitated microtargeting therefore allows disinformation efforts to make inferences about their intended audience using data analytics, psychometrics, and pattern recognition in order to precisely target those that are most likely to consume, believe, and spread disinformation with highly-individualized, emotive narratives.[139] Chris Meserole and Alina Polyakova (2018) outline the ways in which AI promotes microtargeting, writing that, "AI will make it far easier for malicious

[137] O'Leary, 2013, 97.
[138] Horowitz, Scharre, Allen, Frederick, Cho, and Saravalle, 2018, 5.
[139] Fuller, 2018, 16; Pariser, 2012; Fernandez, 2017, 3.

actors and legitimate advertisers alike to track user behaviour online, identify potential new users to target, and collect information about users' attitudes, beliefs, and preferences".[140]

The use of psychometrics and AI inference to reinforce bias is well-represented by the case of Cambridge Analytica, wherein AI was used to "identify individuals' unique characteristics, beliefs, needs, and vulnerabilities", in order to deliver "highly-personalized content" leading up to the 2016 American presidential election and 2016 UK Brexit referendum.[141] Christopher Telley (2018) considers the ways in which AI, data analytics, and big data make political targeting more direct and precise, and outlines some of the tools used by Cambridge Analytica, writing, "adding machine learning to information operations allows users to microtarget the audiences most susceptible to the latest behavioural psychology techniques, to exploit emotion and bias and to concentrate on those target groups that are best placed to affect the desired outcome".[142] Interestingly, AggregateIQ (AIQ), a Canadian company that provided user data to Cambridge Analytica, was found to have engaged in a data-harvesting scam, offering participants a £50 million prize for correctly guessing the results of the European football championships. Participants were required to provide their name, contact information, and how they intended to vote in the upcoming Brexit referendum; this data was then analyzed in order for political messages, shared via social media, to be targeted towards those who were deemed most likely to vote "Leave".[143] Figure 4 and 5, taken from the British House of Commons Digital, Culture, Media and Sport Committee (2017) report on disinformation are examples of political ads disseminated by the "Vote Leave" campaign, who circulated over 50 million ads in

[140] Chris Meserole and Alina Polyakova, "Disinformation Wars." *Foreign Policy.* May 25, 2018. Accessed January 16, 2020. https://foreignpolicy.com/2018/05/25/disinformation-wars/.
[141] Kertysova, 2018, 64.
[142] Telley, 2018, 2.
[143] House of Commons Digital, Culture, Media and Sport Committee, "Disinformation and 'fake news': Final Report," *Eighth Report of Session 2017-19* (2017).

the months leading up to the Brexit vote (House of Commons, 2017-19). Importantly, these ads were targeted towards those who were deemed to be more likely to vote "Leave". The images depicted in Figure 4 below aimed to stoke fear amongst the electorate regarding the economic and social threats associated with the accession of other countries into Europe, a common trope amongst anti-EU advertisements.

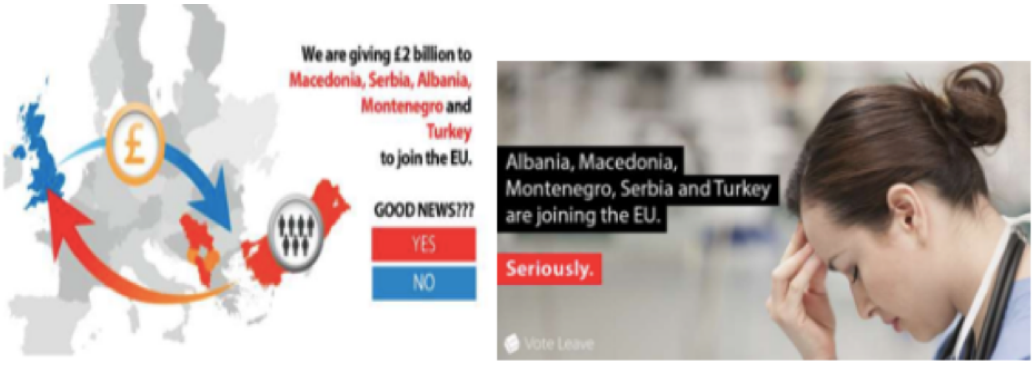

Figure 4: Political ads targeted to voters leading up to the 2016 Brexit referendum. Source: "Ads supplied by Facebook to the DCMS Committee" by the British House of Commons Digital, Culture, Media and Sports Committee.

Figure 5 depicts an advertisement which falsely argued that a "leave" vote would ensure that the UK's National Health Service (NHS) would receive an additional £350 million weekly, an inaccuracy that has since been debunked. To conclude, it is precisely AI's ability to analyze large amounts of user data that poses a significant threat to the political unity of liberal democratic states; as data analysis capabilities allow for AI inference to be more up-to-date, comprehensive, and detailed, disinformation becomes increasingly personalized, targeted, and effective.

Figure 5: Political ads falsely reported that a "leave" vote would provide the British NHS with an additional £350 weekly. Source: "Ads supplied by Facebook to the DCMS Committee" by the British House of Commons Digital, Culture, Media and Sports Committee.

5.2 *Automated Disinformation: The Proliferation of Bot Technology*

AI not only allows for disinformation to be spread at unprecedented speeds, but also allows for its automation. While the proliferation of the Internet and social media have allowed for rapid, global communication, one of AI's distinct tactical advantages is its ability to "parse and organize information at great speeds", thereby allowing for the automation of AI-facilitated political messages that effectively mimic genuine human communication.[144] The threat of AI-facilitated disinformation is therefore partly derived from its ability to spread targeted falsehoods, en masse, at rapid speed, thereby limiting human efforts to remove or counter these narratives in real-time.

The emergence of 'bots' on social media elucidates the ways in which AI allows for the intelligent automation of subversive political messaging. Put simply, bots are robots that engage in automated online communication. Crucially, bots are meant to mimic human behaviour, so that the user interacting with the bot is incapable of discerning that it is in fact a robot. Large-

[144] Philip Howard, Samuel Woolley, and Ryan Calo, "Algorithms, bots, and political communication in the US 2016 election: the challenge of automated political communication for election law and administration," *Journal of Information Technology & Politics,* 15 no. 2 (2018): 82. Doi: 10.1080/19331681.2018.1448735.

scale disinformation efforts that utilize bot technology often employ "botnets", defined as networks of bots that are designed to perform a task en masse, such as spamming, denial-of-service attacks, or the systematic spreading of a particular narrative.[145] These bots, connected through a "collection of algorithms" can be coordinated in the pursuit of a strategic goal, whether that be boosting a politician's popularity by spamming political advertisements, engaging with target audiences, or disseminating curated disinformation.[146] Prior to the advent of AI, bots were only capable of sending out pre-written messages on a pre-determined schedule. The integration of AI into bot technology, however, has allowed them to learn, adapt, and engage with dynamic online communities and environments in order to interact with users in ways that seem authentic.[147] That is, the advent of machine learning and AI have allowed bots to learn about the ways humans communicate online, so that their own online interactions appear genuine and 'human-like'. It is also important to note that the ability of bots to spread messages en masse, and in ways that effectively mimic real human interaction, is likely to improve. Andrej Duh, Marjan Slak Rupnik, and Dean Korošak (2018) highlight the ways in which bots are expected to evolve, writing that further AI development and improved machine learning "will increase their human-like properties, coordination, and interaction potential, making them extremely difficult to detect and classify into strictly binary bot/human class".[148]

The introduction of bots into the contemporary media landscape poses distinct threats to the political debate of liberal democratic states. As previously mentioned, the integration of AI into bot technology allows for the creation of networks of automated bots that are

[145] Ibid., 83.
[146] Ibid.
[147] Elizabeth Dubois and Fenwick Robert McKelvey, "Political Bots: Disrupting Canada's Democracy," *Canadian Journal of Communication,* 44 no. 2 (2019): 27-33.
[148] Andrej Duh, Marjan Slak Rupnik, and Dean Korošak, "Collective Behavior of Social Bots is Encoded in Their Temporal Twitter Activity," *Big Data,* 6 no. 2 (2018): 113. Doi: 10.1089/big.2017.0041.

indistinguishable from human users. AI also allows bots to deliver political messages that are similar, but not identical; through machine learning, human coders can feed the AI an example of a particular narrative or political message that they wish to have spread.[149] AI is increasingly capable of analyzing and understanding natural language, thereby allowing for the creation of bots that are capable of 'reading' online communications and discerning what types of opinions and messages are being circulated amongst their target audience.[150] Coders are therefore no longer required to specify which keywords trigger a response from the bot; instead, the AI itself can learn about what sorts of political communications represent a "right-leaning" or "left-leaning" opinion, and can tailor its response accordingly, allowing for the intelligent, dynamic automation of disinformation.[151] AI can then use these examples to independently create similar messages, or embellish existing narratives with further misperceptions or falsehoods.[152]

Consequently, these bots, engaging on social media in tandem, can be used to create the illusion that a particular politician, party, or message has more support than they actually do, or contribute to the illusion that there is "public consensus where there is none".[153] In addition to the perception of popularity, bots are also capable of engaging in effective spamming campaigns, whereby the AI identifies competing arguments or narratives circulating online, and drowns them out with opposing messaging, thereby denying the spread of competing claims to credibility, in real time.[154] Brundage et. al (2018) outline the ways in which bots can be used to prevent citizens from accessing credible or competing news sources, writing that, "bot-driven,

[149] Dubois and McKelvey, 2019, 28; Sarah Kreps and Miles McCain, "Not Your Father's Bots: AI Is Making Fake News Look Real." *Foreign Affairs*, August 2 2019. Accessed January 16, 2020. https://www.foreignaffairs.com/articles/2019-08-02/not-your-fathers-bots.
[150] Horowitz, Scharre, Allen, Frederick, Cho, and Saravalle, 2018, 6.
[151] Ibid.
[152] Kreps and McCain, 2019.
[153] Howard, Woolley, and Calo, 2016, 86; Katina Michael, "Bots Trending Now: Disinformation and Calculated Manipulation of the Masses," *IEEE Technology and Society Magazine,* 36 no. 2 (2017): 6.
[154] Howard, Woolley, and Calo, 2016, 82.

large-scale information-generation attacks are leveraged to swamp information channels with noise (false or merely distracting information), making it more difficult to acquire real information".[155] Thus, bots do not only undermine other's claims to credibility by drowning out competing messages, but are also used to boost and legitimize certain narratives through the perception of public support. While these types of activities may not involve the deliberate dissemination of falsehoods or blatant lies, the ability to actively change the public's perception of a person, group, or idea's popularity undermines the electorate's ability to access credible information about the current political climate.

The systematic use of bot networks on Twitter in the days leading up to both the 2016 Brexit referendum, as well as the 2016 American election of President Donald Trump elucidate the particular threat posed by the proliferation of AI-facilitated bots for liberal democratic states.[156] In relation to elections, it is precisely the ability to operate en masse, with similar messaging, that allow botnets to influence political debate in salient, often destabilizing, ways. Swarms of bots, programmed to systematically spread messages of support for a particular candidate, or used to drown out competing opinions, deceive voters about public sentiment on political issues, thereby undermining access to an authentic, unmediated informational environment. By polluting the informational environment with inaccuracies and polarizing narratives, bots undermine the electorate's ability to access credible information needed to inform political decisions; consequently, strategically organized bots threaten voter autonomy.[157] Philip N. Howard and Bence Kollanyi (2016) outline the threats posed by the automation of

[155] Miles Brundage et. al, "The Malicious Use of Artificial Intelligence: Forecasting, Prevention, and Mitigation," *Future of Humanity Institute, University of Oxford, Centre for the Study of Existential Risk, University of Cambridge, Center for a New American Security, Electronic Frontier Foundation, OpenAI,* (2018): 29.
[156] Philip N. Howard and Bence Kollanyi, "Bots, #StrongerIn, and #Brexit: Computational Propaganda during the UK-Eu Referendum," *COMPROP RESEARCH NOTE, 2016.1,* (2016): 2.
[157] Starbird, Arif, and Wilson, 2019, 12.

information operations leading up to an election, writing that, "the pervasive use of bots over social media heightens the risk of massive cascades of misinformation at a time when voters will be thinking about their options and canvassing their social networks for the sentiments of friends and family".[158] In the months leading up to the American presidential election, fake stories about Democratic candidate Hillary Clinton were systematically spread to particular segments of the American electorate on social media platforms in an effort to influence voter behaviour.[159] Importantly, this political propaganda emphasized, and exploited, pre-existing biases regarding Clinton; Philip Howard et. al (2018) note that anti-Clinton propaganda included "large networks of highly automated accounts on Twitter and fake accounts on Facebook that promoted the accusation that Hillary Clinton was corrupt, and pushed the varied junk news stories about her involvement in pedophilia rings or the mysterious deaths of FBI agents.[160] Furthermore, bots peddling an 'anti-EU' message targeted segments of social media users with false information leading up to the Brexit referendum in the United Kingdom in 2016, thereby influencing the information accessible to voters prior to the vote.[161]

Lastly, bots also pose a distinct threat to efforts, on behalf of liberal-democratic states, to hold actors accountable for their misuse. Bots can disappear quickly, and it is incredibly difficult to attribute which actors are responsible for their creation. Importantly, there are also larger ethical and philosophical questions, fundamental to the proliferation of AI more generally, about holding any human operator or coder responsible for the actions of a machine that exercises a

[158] Howard and Kollanyi, 2016, 5.
[159] Bence Kollanyi, Philip N. Howard and Samuel C. Woolley, "Bots and Automation over Twitter during the U.S. Election," *COMPROP DATA MEMO 2016.4,* (2016): 1-5; Eirikur Bergmann, *Conspiracy & Populism,* (Palgrave MacMillan: 2018).
[160] Howard, Woolley and Calo, 2018, 90; Burkhardt, 2017, 14.
[161] Fuller, 2018; Marco T. Bastos and Dan Mercea, "The Brexit Botnet and User-Generated Hyperpartisan News," *Social Science Computer Review,* 37 no. 1 (2017): 38-54. Doi: 10.1177/0894439317734157; Howard and Kollanyi, 2016, 1.

degree of independence.[162] It is not clear, under current legal frameworks, to what extent a coder could be held responsible for the particular actions and statements of the machine, thereby undermining efforts towards attribution and responsibility for the nefarious use of bots that employ AI. To conclude, the integration of AI into disinformation efforts has allowed for the creation of human-like networks of bots that can be employed to disseminate coordinated political messages. The automation of disinformation allows for the distortion of public sentiment in ways that seem natural and 'human-like', thereby misrepresenting democratic debate, and undermining voter autonomy.

5.3 *AI-Facilitated Forgery: The Threat of 'Deepfake' Technology*

AI, used in conjunction with machine learning and neural networks, exacerbates the destabilizing effects of informational aggression through its ability to create believable media. As previously mentioned, AI has been heralded for its ability to amass and analyze significant amounts of data through machine learning, whereby coders create a training set of data samples, run the algorithm on the data, and create inputs and structures for the algorithm to follow. The AI is then evaluated for its ability to learn, find patterns, and adapt to the introduction of new data.[163] While machine learning has allowed companies such as Amazon and Netflix to generate recommendations for users based on user history, predictive analytics becomes problematic when AI systems are trained on data from social media, including pre-existing examples of effective disinformation, in order to mimic the ways in which humans write and share information online.[164] What differentiates AI from previous technological advancements that

[162] Robert Sparrow, "Killer Robots," *Journal of Applied Philosophy,* 24 no. 1 (2007): 62-77; Marcus Schulzke, "Autonomous Weapons and Distributed Responsibility," *Philosophy & Technology,* 26 (2013): 203-219. Doi:10.1007/s13347-012-0089-0.
[163] Talwar and Kumar, 2013, 3401.
[164] Cade Metz and Scott Blumenthal, "How A.I. Could be Weaponized to Spread Disinformation." *The New York Times,* June 7 2019. Accessed January 16, 2020. https://www.nytimes.com/interactive/2019/06/07/technology/ai-text-disinformation.html.

historically facilitated political subversion, therefore, is that the introduction of AI allows the technology to become an active participant in the production of believable media and disinformation. That is, AI's ability to learn, to adapt, and to mimic human engagement allows for the independent generation of fake news stories that seem as if they were written by humans, yet are produced by AI to effectively reflect those pre-existing biases, fears, and stereotypes that are most likely to resonate with its intended audience.[165]

Given AI's ability to independently embellish hyper-exaggerated stories and falsehoods, scholars have begun expressing concern over the advent of 'deepfake' technology, whereby AI is used to produce text, video and audio forgeries that include the strategic manipulation of images and speech.[166] Deepfakes use AI to engage in 'deep learning'; systems, trained on large data sets to create 'neural networks', are then able to "infer rules and replicate patterns by sifting through large data sets" to reproduce similar types of media.[167] Deepfake programmers then employ a second algorithm, often referred to as the 'discriminator', which attempts to spot the artificial content. When the discriminator is successful in identifying the fake content, the AI's neural networks can 'learn' from these mistakes in order to improve.[168] Thus, the application of deepfake technology involves the use of AI to create new content, as well as the use of different algorithms to test the deepfake content in order to spot mistakes and improve believability.

One of the most pertinent concerns for liberal democratic states facing the emergence of deepfake technology relates to their ability to seem genuine and credible. For example, Sarah Kreps and Miles McCain (2019) used a publicly-available version of GPT-2, an AI system built

[165] Brundage et. al, 2018, 6.
[166] Greg Allen and Taniel Chan, "Artificial Intelligence and National Security," *Harvard Kennedy School Belfer Center for Science and International Affairs* (2017): 1-111; Brundage et. al, 2018, 46.
[167] Chesney and Citron, 2019.
[168] Ibid.

by OpenAI research, to test the AI's ability to produce believable text.[169] GPT-2 uses machine-learning in order to learn from pre-existing statements about falsehoods in order to "synthesize additional details and quotes so as to make the fabricated event seem real".[170] The researchers prompted the AI with two paragraphs from a credible news article, from a mainstream media source, examining international tensions between the West and North Korea, and allowed the AI to complete the story. Survey respondents read three fabricated stories, and 72% of respondents found the AI-generated article to be credible. Further, even the 'worst', least credible text tricked 58% of respondents, and 25% said they would share at least one of the stories on social media, thereby demonstrating the potential for deepfake media to not only be believable, but self-reinforcing.[171] While deepfake technology that produces text may be capable of communicating believably, the use of deepfake technology to produce video, image, and audio forgeries presents particularly destabilizing threats for political discourse and media trust. As previously mentioned in relation to the advent of television and videography, scholars have long considered the role of imagery in securitization practices, whereby images tend to be seen as unmediated, and serve as 'visual facts'.[172] Similarly, video deepfakes exploit the human inclination to believe that images are credible and genuine.[173] For example, videos of American Democratic House Speaker Nancy Pelosi 'stammering' or 'slurring' throughout speeches were widely circulated on Facebook, Twitter, and YouTube throughout 2018 and 2019.[174] The videos, which experts believe were likely doctored in order to depict Pelosi as sick, weak, or intoxicated, were shared by prominent

[169] Kreps and McCain, 2019.
[170] Ibid.
[171] Ibid.
[172] Friis, 2018, 735.
[173] Chesney and Citron, 2019; Brundage et. al, 2018, 46.
[174] Charles Towers-Clark, "Mona Lisa And Nancy Pelosi: The Implications of Deepfakes." *Forbes,* May 31, 2019. Accessed January 16, 2020. https://www.forbes.com/sites/charlestowersclark/2019/05/31/mona-lisa-and-nancy-pelosi-the-implications-of-deepfakes/#30173a584357.

politicians, including President Donald Trump and his personal lawyer, former New York City mayor Rudy Giuliani, thereby demonstrating the widespread appeal of convincing video media.[175] Importantly, these videos were not believed to have used deepfake technology, but were doctored using editing software; however, the perceived authenticity and widespread circulation of this video demonstrates the threat posed by the advent of AI, which will allow these videos to become increasingly believable.

As these forgeries use AI to mimic content created by humans, deepfakes may be used to depict politicians, activist groups, and other important actors in ways that are designed to incite an emotive response from the target audience. Deepfakes may therefore create salient opportunities for "blackmail, intimidation, and sabotage".[176] Similar to the threats posed by AI-facilitated microtargeting, there is a concern that deepfakes could be shared in precise, targeted ways; that is, deepfakes will be curated and designed to resonate with those audiences that are most likely to perceive them as 'true' precisely because they seem to 'confirm' or legitimize pre-existing suspicions, fears, and ideological commitments. As previously mentioned in regards to bot technology, AI is capable of shaping perceptions, and generating chaos and confusion "through the rapid and effective mimicry of human empathy with that audience".[177] These forgeries will be particularly destabilizing not only because they mirror pre-existing inclinations and biases, but because the integration of AI allows for these audio and video forgeries to feel genuine, as if the audience is witnessing unmediated 'truth'. When forged videos and images are targeted at a particular audience or utilize imagery which is bound to trigger an emotive

[175] Ibid.
[176] Kertysova, 2018, 67; Chesney and Citron, 2019.
[177] Telley, 2018, 1.

response, deepfakes could be strategically deployed in support of "inciting violence, discrediting leaders and institutions, or even tipping elections".[178]

Furthermore, the advent of deepfakes contributes to the erosion of trust in the media by discounting traditional conceptions of 'evidence' and 'proof' in ways that threaten to severely polarize political debate. Prior to the advent of AI, the proliferation of the Internet decentralized the media landscape, and social media algorithms created 'echo chambers' and feedback loops that allowed users to only interact with those forms of media that reaffirm their cognitive biases. However, the advent of AI and deepfake technology provides the opportunity for audiences to hold all media stories as false when they contradict theor ideological-commitments and beliefs. As citizens become aware of the threat of deepfakes, and struggle to discern whether an audio, video, or text file is a forgery, they will become increasingly inclined to declare all media that discounts their cognitive biases as false. Significant improvements in AI technology may mean that all videos, speech, and audio files can be discounted as 'deepfakes', thereby undermining any semblance of objective consensus on 'truth', proof, or evidence, and allowing audiences to declare those stories that reaffirm their cognitive biases as 'authentic' or 'real', and disregard those that contradict. Greg Allen and Taniel Chan (2017) examine the dangers of AI-facilitated forgery on trust in media, writing, "The existence of widespread AI forgery capabilities will erode social trust, as previously reliable evidence becomes highly uncertain...The growth in this technology will transform the meaning of evidence and truth in domains across journalism, government communications, testimony in criminal justice, and, of course, national security".[179] The subsequent erosion of trust in media provides actors with an opportunity for plausible deniability. That is, politicians, and other actors found to be engaging in inappropriate behaviour

[178] Chesney and Citron, 2019.
[179] Allen and Chan, 2017, 30.

may be inclined to argue that they have fallen victim to convincing deepfake technology. Increased public awareness regarding the threat of deepfake propaganda may therefore support the inclination to discount all sources or news stories that do not align with pre-existing ideological commitments, further subverting the institutional trust required for sound democratic debate.

Importantly, free deepfake services are becoming increasingly available. For example, the technology used by Kreps and McCain (2019) is free and publicly available, and could therefore be used, in its current state, by adversarial actors attempting to engage in political subversion through AI-facilitated forgery. More concerning still, scholars have noted that continued technological development and further advancements will only allow deepfake technology to become cheaper to make, and more accessible; innovation in AI technology will progress in ways that improve the ability to generate artificially-produced propaganda that is indistinguishable from authentic sources.[180] The ability to produce artificial propaganda which uses text, imagery, and videography that appears 'true' will become an accessible option for those who wish to sow discontent, provoke confusion, and erode trust in other forms of media.

6. Conclusion: Future Policy Challenges & Responses

Given the threat posed by AI-facilitated disinformation campaigns, policy-makers have begun formulating recommendations aimed at reducing their destabilizing effects. However, current recommendations often emphasize debunking, regulation of speech, or the adoption of technological responses; importantly, these options risk inadvertently bolstering disinformation campaigns through the stifling of fundamental liberal democratic values and fail to address the underlying preconditions that allow disinformation efforts to succeed.

[180] Kertysova, 2018, 11; Kreps and McCain, 2019.

6.1 *The Insufficiency of Debunking*

A number of think tanks and academic analyses have argued that disinformation can effectively be countered by increasing access to impartial sources tasked with providing fact-checking or debunking services.[181] However, these efforts do not recognize that the threat posed by disinformation campaigns is not that the citizens of liberal democratic states do not have access to reliable sources. Indeed, there do exist several mainstream sources that remain committed to journalistic integrity, truth, and fact-checking.[182] However, these 'solutions' fail to note that one of the strategic aims of disinformation efforts is the erosion of trust in mainstream media; therefore, those who are most likely to consume disinformation (and correspondingly, those that would supposedly benefit from fact-checking) often do not trust those sources that are responsible for debunking falsehoods, and are instead inclined to perceive debunking as proof of the untrustworthy, corrupt nature of the mainstream media. Benkler, Faris and Roberts (2018) outline the ways in which those mainstream sources that aim to refute false information are inherently disadvantaged, writing, "the mainstream media then become a source of confirmation for the opposite side of the political spectrum because they, on average, will find more lying in the bias-confirming media".[183] As AI allows for the effective spread of disinformation on social media sites, structurally designed to promote virality and sensationalization, efforts to publicly debunk disinformation may inadvertently draw attention to the very narratives that they aim to disprove. Furthermore, efforts to refute false or misleading information are often too slow to effectively counter the spread of these narratives once they have been shared with their target audience.[184]

[181] Kertysova, 2018, 3, 20.
[182] Benkler, Faris, and Roberts, 2018.
[183] Benkler, Faris, and Roberts, 2018, 336.
[184] Telley, 2018, 2.

More importantly, it is, in part, human nature to gravitate towards those opinions and sources that fit best with our pre-existing inclinations and beliefs. Debunking initiatives fail to recognize that AI-facilitated microtargeting, coupled with the existence of social media sites that benefit financially from tailored content, aim to insulate their targets within 'echo chambers', whereby they can engage solely with those sources that reaffirm their cognitive biases. Efforts to spread the 'truth' fail to recognize the strategic, deliberate and calculated ways that these falsehoods are designed to resonate with pre-existing inclinations, particularly in the era of automated, microtargeted disinformation facilitated by AI.[185] The ability for precision-targeted political messages to exploit pre-existing cleavages and erode trust in alternative sources, coupled with the decentralization of the informational environment, will ultimately undermine efforts to successfully debunk these falsehoods.

6.2 *Maintaining Liberal Values*

As previously mentioned, democracies rely upon access to a reliable media ecosystem, supported by a general sense of trust in mainstream media sources. However, liberal democratic values also include respect for freedom of speech and free media. Those who argue in favour of instituting regulations intended to counter disinformation have often called for the creation of impartial regulators, responsible for identifying the most serious cases of strategic disinformation. However, efforts to limit or counter disinformation through the regulation of certain forms of speech are fundamentally problematic, in that they may inadvertently undermine those same liberal values. Efforts to regulate disinformation falsely assume that democratic political discourse can ever offer a clear, reliable articulation of a singular 'truth'. Given the low levels of trust in mainstream media, regulators tasked with identifying even the most egregious

[185] Telley, 2018, 2.

acts of disinformation will certainly invite claims of bias, political affiliation, and corruption, further fueling the narratives that are often espoused by disinformation campaigns. While the era of 'post-truth' politics poses a salient threat to liberal democratic institutions and processes, efforts to counter disinformation through the regulation of speech risk bolstering anti-media conspiracies and eroding those very democratic principles that allow for differing interpretations of political reality.

6.3 *Over-Emphasis on Technological Causes and Solutions*

Policy-responses aimed at countering hybrid threats often call for an assessment of internal vulnerabilities, in order to address the wide array of potential political, social, economic, or informational targets of hybrid aggression.[186] In relation to the hybrid tactic of informational operations and disinformation campaigns, policy must similarly address the underlying causes of effective disinformation campaigns that are not solely based on the development of new communications technologies. Too often, policy responses focus on technology as both the cause and solution for disinformation, as exemplified by recent calls for using AI to combat disinformation. That is, policy-responses have begun advocating that AI's machine learning capabilities, trained on previous cases of disinformation, should be used to detect falsehoods and flag anomalies in online communication.[187] While technology may provide opportunities for confronting specific cases of inaccurate or misleading reporting in the short-term, they fail to address the underlying contentions and fissures that must pre-exist in order for disinformation campaigns to effectively strike against the political structures of liberal democratic states.

Developments in technology, including innovations in AI, have certainly provided adversarial actors with the tools needed to engage in effective disinformation campaigns.

[186] Cullen and Reichborn-Kjennerud, 2017, 24.
[187] Kertysova, 2018, 59.

Consequently, efforts to address the distinct threats posed by AI, in particular through regulation of deepfake technology and calls for increased transparency from social media sites offering political advertising, are crucial first steps needed to reduce the exacerbation of disinformation efforts in the age of AI. However, policy responses to disinformation must first address the domestic issues at the core of the contemporary disinformation problem, including those internal contentions, fears, and biases that have eroded trust in mainstream media, and fueled the disinformation loop. Policy responses must also resist the inclination to solely examine the threat posed by foreign actors engaging in disinformation campaigns. While foreign states have effectively used hybrid tactics to target the political structures of democratic states, domestic actors often participate in the deliberate spreading of inaccuracies in order to garner support from an ideologically-motivated target audience.

6.4 *Addressing 'Populist' Trends*

While policy responses to disinformation should not over-emphasize technological solutions, alternative options that focus on the groups of individuals who are assumed to be most susceptible to disinformation efforts, including those campaigns that seek to affirm biases and those that generate confusion, risk denigrating these groups as uneducated, gullible 'populists' that have been easily 'tricked', or 'duped'. The characterization of populists as irrational, ignorant citizens with restricted access to information was popularized by Richard Hofstadter's (1955) *Age of Reform*, which has been since criticized for its descriptions of populists as conspiracists suffering from "paranoid tendencies" and "native simplicity".[188] These sentiments have been echoed by contemporary analyses of populists in the 'post-truth' era, which reiterate that 'uneducated', or 'irrational' people are more susceptible to the tactics of disinformation

[188] Richard Hofstadter, *The Age of Reform* (New York, NY: Vintage Books, 1955); Nils Gilman, "Revisiting Hofstadter's Populism," *The American Interest,* 14 no. 1 (2018).

campaigns that seek to affirm biases, generate confusion, and undermine trust in competing sources. For example, Nils Gilman (2018) argued that Hofstadter's characterization of populists "bears uncanny resemblances to our own contemporary populists", and notes that populists lack concrete ideology and demonstrate a propensity towards hostility to institutionalization, rendering them "easily subject to manipulation".[189]

However, responses to the threat of disinformation that denigrate the people who believe falsehoods, conspiracies, and deliberate exaggerations are inherently counter-productive. Michael Lind (2020), author of *The New Class War: Saving Democracy from the Managerial Elite*, argues that characterizations of these voters as "gullible dimwits who are easily manipulated by foreign propaganda or domestic demagogues" promotes alienation and isolation, and therefore entices them further towards the very narratives that counter-disinformation efforts aim to address.[190] More importantly, these condescending depictions fail to address the legitimate grievances expressed by 'populists', and may also confirm their anti-elitist suspicions. Interestingly, Gilman (2018) notes that government policy responses, with their reliance upon the technocratic bureaucracy, may fail to sufficiently address those grievances, which require genuine consideration.[191] Responses to the threat of disinformation, particularly those directed at domestic audiences and the internal biases that resonate with those audiences, must therefore avoid condescending portrayals that discount these individuals as uneducated, paranoid, and ignorant.

To conclude, the proliferation of AI will pose distinct threats to liberal democratic states facing a media environment marked by 'post-truth' political debate. As demonstrated by the

[189] Gilman, 2018.
[190] Michael Lind, *The New Class War: Saving Democracy from the Managerial Elite* (London, UK: Penguin Random House, 2020), 91.
[191] Gilman, 2018.

recent boom in investment into AI technology, and the associated international interest in the tactical advantages offered by AI, it is clear that this technology will continue to improve and proliferate. Through the ability to amass and analyze 'big data' and thereby provide constant analysis of public sentiment, AI offers actors with a salient tool for microtargeting. AI has also allowed for the automation of political messaging, including the use of bots, capable of polluting political debate with carefully crafted political messaging and spam. The threat posed by bots has been elucidated by their use in online forums and social media sites leading up to elections in the UK and US. Lastly, AI's machine learning capabilities have allowed for the intelligent and independent creation of believable propaganda, indistinguishable from media created by humans. Deepfake technology, capable of producing believable audio, video, and text forgeries, undermines traditional forms of 'evidence', allows for the creation of media that 'confirms' or legitimizes pre-existing inclinations, and further erodes trust in competing media sources. Technology will continue to improve and will subsequently continue to provide the tools needed to effectively target political unity, debate, and trust in democratic institutions. In response, policy-makers must first understand the ways in which technology has historically influenced political discourse. However, in the age of AI-facilitated disinformation, countermeasures must also emphasize those pre-existing political and social fissures that allow destabilizing exaggerations, misrepresentations, and falsehoods to flourish and erode liberal democratic institutions and processes.

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