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BOOK REVIEW

Lie Machines: How to Save Democracy from Troll Armies, Deceitful Robots, Junk News Operations, and Political Operatives by Philip N. Howard, published by Yale University Press, New Haven, Connecticut, USA, 2020, xviii+221 pages.

If the year 2020 had another label besides being the COVID-19 year, it would perhaps be the 'Year of Misinformation and Disinformation'. While the netizens of almost all parts of the world have been experiencing the menace of 'information disorder' for a while now, in 2020 it surpassed all boundaries. After witnessing the COVID-19 'infodemic', the battle of narratives among states regarding the origin of virus, and the tweets surrounding the much-awaited 2020 United States (US) election results, one should have little doubt regarding the intensity and impacts of misinformation, disinformation, conspiracy theory, and hate speech. Even those who were previously little skeptical about the seriousness of the issue, have started to come on board this year. While the concept of misinformation and disinformation has become very popular in this process, the large-scale operation that goes behind popularizing such content is still less known to the general public. This is where Professor Philip N. Howard, the Director of the Oxford Internet Institute (OII) and statutory Professor of Internet Studies at Balliol College, University of Oxford, intervenes with his book *Lie Machines: How to Save Democracy from Troll Armies, Deceitful Robots, Junk News Operations, and Political Operatives*. The book offers an insight into Professor Howard's journey of investigating the impacts of digital media on political life around the world and his cutting-edge research on computational propaganda at OII. It brings fascinating details of foreign interference into light through online platforms and public opinion manipulation by domestic political actors. Although the book came out in the first half of 2020 and does not cover the highlights of the year like disinformation surrounding the pandemic and the US elections, it is still very timely and helps in breaking down why we are seeing and what we are seeing on our newsfeed.

The book is based on the fundamental premise that the internet has always been a powerful tool for political communication, but the tone and timbre of what was communicated, and for which purposes, has changed in a way that needs immediate attention. For instance, the use of internet by democracy advocates during the Arab Spring protests of 2010-12 and the use of social media by former US President Barack Obama in his 2008 US presidential campaign was politically powerful but in a very different manner than what we see today. Hence, what has changed in these few years and how is it possible that the communication tools which were once used to coordinate protests for advancing democracy, has now put several advanced democracies into a kind of democratic deficit? Moreover, how has social media transformed from a hub of citizen journalism to something that

deeply threatens the primary exercises of democracy like elections and referenda? The book is an endeavour to answer these burning questions. To do that, Professor Howard gives a detailed account of 'Lie Machines' which he broadly defines as "social and technical mechanisms for putting an untrue claim into service of political ideology." Throughout the book, he breaks down the lie machines by revealing the political economy of the producers, disseminators, and marketers of political lies and makes convincing arguments regarding the necessity for governments and citizens to dissect the lie machines and take effective measures to prevent it from doing further damage to democracies.

Like the previous books of Professor Howard, *Lie Machines* is a compelling read. The book is instantly relatable for those who regularly consult OII researches and can be an extraordinary resource for those who wish to work on such topics. The book provides useful insights even for general readers. The narration is seamless and the author does not overwhelm the readers with technical terms. Instead of portraying it purely as a technological issue, the author perceives the topic as a socio-technical issue and explains the concepts in layman's terms to allow the readers get a good grasp on the subject. The book spans over 221 pages and is divided into six chapters. In each chapter, the author puts forward few questions and arguments and then critically analyzes those in the sub-sections.

In chapter one, the author gives a detailed breakdown of how political regimes across the world have developed sophisticated socio-technical systems to manipulate their own public as well as the citizens of a foreign country. Regarding domestic actors, Professor Howard argues that "all governments try to shape public opinion, though different regimes do this in varying ways under diverse circumstances." To justify his argument, he uses examples of democratic government's attempt to shape public opinion during military or economic crises and authoritarian regime's frequent use of censorship, surveillance, and public opinion manipulation. In doing so, it is seen that many a time political actors deploy a blend of human and automated systems, i.e., lie machines which carefully craft propaganda and lie to secure specific outcomes which often result in serious consequences for the society. Professor Howard observes that such divisive digital media campaigns have heightened ethnic tensions, revived nationalistic movements, intensified political conflict, and even resulted in political crises in many countries around the world. At the same time, it has weakened public trust in journalism, democratic institutions, and electoral outcomes. The combination of these immediate and slow-drip effect is what makes lie machines particularly dangerous and that is what the author tries to highlight throughout his book.

Lie machines are also deployed by foreign actors in attempts to interfere in domestic affairs of a target state. Professor Howard opines that at present such campaigns are ongoing in different countries. The activities of the Internet Research Agency (IRA) of Russia stands out in this regard. To explain IRA's activities in polarizing the US public and interfering in US elections, Professor Howard provides a summary of his previously published works on IRA.[1] Thus, instead of reading several reports on IRA, researchers and academics can get a holistic view of the issue in this book. Moreover, foreign intervention is no more limited to Russia. Professor Howard observes that during the 2019 Hong Kong protests, the Chinese government propagandists activated their social media networks to convince the world that the activists were violent radicals with no popular appeal. His research further finds that besides Russia and China, five more countries, i.e., India, Iran, Pakistan, Saudi Arabia, and Venezuela were also running campaigns targeting citizens in other countries in 2020.[2]

After an overview of how domestic and foreign actors deploy lie machines in chapter one, the author provides a breakdown of the lie machines by revealing the political economy of its producers, disseminators, and marketers in chapter two, three and four, respectively. First, he introduces troll armies as the producers of political lies. Next, he provides extensive insight into the production strategies of troll armies by observing that "if the history of the internet is the history of spam, the history of social media is similarly intertwined with the history of trolls".[3] He discusses how private troll firms have sprung up in many cities of the world and how they provide 'social media services' and 'political consulting' for any kind of client starting from government agency, political party, dictator to candidates campaigning for election. As per his research, such troll armies operated in seventy countries around the world in 2020. Alarmingly, the activities of these trolls are not limited to their country of origin, rather they also generate campaigns targeting users outside their own countries. Here a detailed analysis of the activities of IRA's troll armies in the 2016 US election is provided. An account of the professional trolls used in Brazil during three presidential campaigns, one presidential impeachment campaign, and the race for mayor of Rio is shared. Likewise, the activities of troll armies in China and Venezuela are also briefly addressed.

In chapter three, the author provides very interesting and elaborate analysis of bots as distributors of political lies and propaganda. He discusses the kinds of bots

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[1] Philip N. Howard, Bharath Ganesh, Dimitra Liotsiou, John Kelly and Camille François, *The IRA and Political Polarization in the United States*, Oxford, UK: Oxford Internet Institute, University of Oxford, 2018.
[2] Samantha Bradshaw and Philip N. Howard, *The Global Disinformation Order: 2019 Global Inventory of Organised Social Media Manipulation*, Oxford, UK: Oxford Internet Institute, Oxford University, 2019.
[3] Finn Brunton, *Spam: A Shadow History of the Internet*, Cambridge, MA: MIT Press, 2013.

widely seen today, how they function and also how to trace and identify bots. Citing the wide use of bots in US elections, he states that the 2016 US presidential election stands as a watershed moment for understanding the evolution of computational techniques for spreading political propaganda across online social networks. He gives insights into his research on tracking the most prominent Clinton-related, Trump-related, and politically neutral hashtags and the role of bots in those. Computational propaganda from political bots is also seen in many other countries around the world. Brief accounts of such activities in Azerbaijan, Argentina, Bahrain, China, Ecuador, Iran, Russia, Syria, Thailand, Turkey, Vietnam, Venezuela, and the United Kingdom (UK) are mentioned in the book. Previously, bots were widely seen in the Syrian crisis where security services loyal to the Syrian government were detected trying to spin the news coming out of the country. His study shows that the pro-regime bots started to choke off the #Syria hashtag, making it less and less useful for getting news and information from the ground. Investigation later revealed that the bots originated in Bahrain, from a company called Eghna Development and Support.[4] This is a very useful example for understanding the growing culture of businesses offering political campaign solutions to other countries. In this regard, the case of the notoriously famous Cambridge Analytica briefly comes up.

After discussing the trolls and bots as producers and distributors of political lies, in chapter four, the author discusses the marketing entities involved in this process. According to Professor Howard, "It is safe to say that every country in the world has some homegrown political consulting firm that specializes in marketing political misinformation. Their campaigns may be limited in scope, or they may be more about sowing confusion and negative campaigning than about pushing public opinion in one direction." Here he provides some real examples of political consulting firms and also discusses some firms using fictitious names but depicts their real-life operations. While each of these components of lie machines is powerful in their own accord, they function best when they are well-coordinated and work in harmony. In his words, "…the complete system of producing, distributing, and marketing political lies can have a significant impact on the course of current events, public understanding of crucial issues, and international affairs."

Before moving to the discussions on impacts, in chapter five the author brings up some thought-provoking analysis on data mining and the use of digital footprints by the actors of computational propaganda. He suggests that in order to understand how the modern political campaigns work, some knowledge of the data-mining industry is required because it supplies information to campaign managers

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[4] Anas Qtiesh, "Spam Bots Flooding Twitter to Drown Info about #Syria Protests", *Global Voices Advocacy*, 18 April 2011; Neal Ungerleider, "Behind the Mystery of Spam Tweets Clogging Syrian Protesters' Streams", *Fast Company*, 21 April 2011.

to decide whom to target, where, when, with what message, and over which device and platform.[5] He observes that most citizens do not know about this process or about their information that is held, bought, and sold by campaigns, advertising firms, political consultants, and social media platforms. Although data mining has been an active industry for decades, the difference that social media makes is that these services provide new kinds of data that allow more detailed insight into how particular people think and feel. At this stage, the author designs some scenarios in which information about a person's political affiliations combined with credit card records, can provide a campaign professional sufficient data to make inferences about how to organize the facts into a theory the person is likely to believe. It also has significant offline use beside using these data to send targeted online political advertisements. As an example, the author shows how such data feeds the apps that advise campaign workers on whom to visit during the campaign period and with what message. He shares that both Brexit and Trump campaign canvassers used apps that could identify the political views and personality types of a home's inhabitants, allowing canvassers to ring only at the doors of houses that the app rated as receptive. Canvassers had scripts tailored to the personality types of residents and could feed reactions back into the app. That data then flowed back to campaign managers to refine overall strategy.[6]

While tracing the overall impacts of lie machines, Professor Howard analyzes a few contemporary cases. He brings up the case of the Brexit referendum in 2016 which saw a record number of propaganda and disinformation about the costs and benefits of being a European Union (EU) member. One prominent example of political lie during that period was the Vote Leave campaign's announcement that the country would save £350 million a week which would be put toward public health care. Although the country's statistics authority said that the number was wrong, study showed that in the days before the Brexit referendum, nearly half the public believed the claim to be true. This particular message is seen as a significant turning point of the campaign. In the 2016 US elections, pro-Trump bots, trolls, and ad-buys greatly inflated a range of sensational, conspiracy, and extremist myths about Hillary Clinton. Professor Howard's study finds that during that election period, for each link to a story produced by a professional news organization, there was another link to content that was extremist or a form of junk news. While these cases make us rethink many things related to the US election and Brexit referendum, measuring the direct impact of online content on people's decisions is not an easy task. The beauty of the book is that the author does not even attempt to do that. Instead, Professor

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[5] Philip N. Howard, *New Media Campaigns and the Managed Citizen*, New York: Cambridge University Press, 2006.
[6] Hannes Grassegger and Mikael Krogerus, "The Data That Turned the World Upside Down", *Vice*, 01 January 2017.

Howard presents very rational arguments to explain how such contents play a role in decision making.

The author recognizes that the lie machines cannot confuse everybody or it may not be possible to sway the opinion of a very large number of people towards a particular outcome every time. However, lie machines can mislead a small fraction of the public whose decision can dramatically change the overall outcome. He explains this by analyzing the cases of politically competitive swing districts. A misinformation campaign in such cases can provide the one or two percentage points to make a vote change from 50–50 to 51–49. For example, in the 2016 US elections, fake news stories were concentrated in swing states where a few percentage points of change in voter opinion gave Donald Trump the edge in claiming victory for the entire state.[7] Moreover, large amounts of misinformation about an issue can prevent consensus, create political deadlock, and have serious consequences for the health and welfare of communities and neighborhoods. This can subtly lead a large number of people to distrust the institutions of democracy. Although the direct connection between misinformation and voting decision is hard to pinpoint on paper, through a series of constructive arguments the author tries to portray very realistic scenarios where lie machines can significantly contribute in forming opinions. This is one of the strengths of the book.

Beside discussing the crisis faced by democracies at present, the author also shares his concerns about grave threats that are likely to emerge in the coming days. He opines that the real threats to democracy lie ahead when several advanced technologies will be used to create even more convincing propaganda and disinformation. In this regard, he cautioned about the use of data from personal devices to shape politics.[8] The internet of things, Artificial Intelligence (AI), and augmented and virtual reality are the next technologies that have great potential to change the way citizens explore political news and content. AI-driven fake users will be even more convincing because they will be trained to be dynamic and interactive like real human. There is also a huge risk of foreign governments applying these techniques in influence operations. The author emphasizes on the magnitude of these threats by stating, "the question is not whether political parties in democracies will start using AI on one another—and us—but when."[9]

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[7] Philip N. Howard, Bence Kollanyi, Samantha Bradshaw and Lisa Maria Neudert, *Social Media, News and Political Information during the US Election: Was Polarizing Content Concentrated in Swing States?*, Oxford, UK: Oxford Internet Institute, University of Oxford, 2017.

[8] Philip N. Howard, 2006, op. cit.

[9] Philip N. Howard, *Pax Technica: How the Internet of Things May Set Us Free or Lock Us Up*, New Haven, Connecticut: Yale University Press, 2015.

Center to these discussions of current and future threats to democracies are the social media platforms and private firms whose role and responsibilities are increasingly being scrutinized. The author draws an interesting analogy to help the readers understand the power these companies possess at the moment. He narrates that the churches kept the best records of public life for many centuries. Then, governments and libraries held the best records of public life for several centuries. At present, the monopoly of information preservation lies with just a handful of technology firms who have the best data on us as individuals, on our networks, and on public life. This is often exploited by the social media companies for their advertisers. In the words of the author, the firms buy, sell, and steal personal data as a service to lobbyists, foreign governments, disreputable politicians, and individuals who want to promote misinformation. But despite all these, they mostly shy away from taking responsibility for what happens on their platforms. For example, social media companies insist that they are not publishing platforms and not responsible for what is disseminated to their users. But their algorithms disseminate misinformation in almost every election, political crisis, and complex humanitarian disaster. Thus, it has become absolutely necessary to address these loopholes.

However, the author does not overwhelm the readers with the problems. Rather, he chalks out a comprehensive strategy through which citizens and governments alike can redesign the way digital media functions and take back control. For that to happen, he suggests that policymakers should focus on five basic reforms. He speaks of market regulations that guide firms on how and when they can profit from information about individuals and societies. Additionally, users should have the access to clear explanations of the algorithms that determine what news and advertisements they are exposed to, and those explanations should be confirmed by regular public audits. Next, he specifically highlights social media. However, contrary to popular perception, Professor Howard argues that the answer is more social media—not less. He advocates for transparency and 'Truth Machines'. He suggests that the social media must provide easy access to professionally produced, high-quality political news and information. It should supply socially valuable data to libraries, public agencies, and civil society groups, so that these organizations can work on collectively valued projects. Relevant data should be in shared repositories and available for analysis, instead of being hoarded by selected private firms. While these ideas appear like a complete strategy to rethink and reorganize digital communication and data use, the practicality can be questioned in some cases. One can doubt if all democracies have institutions that can implement these ideas. Many experts also advocate for the creation of an overarching international system to hold online media platforms accountable, instead of relying on individual governments. Nonetheless, the book offers very timely suggestions that can be a great starting point for policymakers and relevant stakeholders.

While the book undoubtedly adds a feather to Professor Howard's cap, it is not without its limitations. The first observation is regarding the title of the book. The name *Lie Machines* is catchy and perhaps would lead many enthusiastic readers to immediately pick it off the shelf, however, not everything in online platforms can be labelled in black and white. It is particularly complex in political information as politics in post-truth society has several grey areas. This is the biggest struggle of fact-checkers all around the world in determining political content. This has also been reflected in the book as most cases shared are termed as political propaganda, misinformation and junk news. Therefore, the title seems to be an oversimplification of a very complex real problem. The second issue noticed is the inadequate coverage on countries beyond the USA, UK, and Russia. Apart from a hastily written paragraph on Myanmar and some mentions of India, Pakistan, Thailand, and Vietnam here and there, South and Southeast Asia are largely left untouched. This risk alienating enthusiastic readers from this part of the world half way through the book. There are also mentions about Turkey, Iran, and Venezuela exercising their lie machines on international affairs, but the book offers very little insight into those. It is unwise to assume that Professor Howard is not aware or concerned about these countries because the OII's yearly report on computational propaganda covers all these countries. However, the absence of such discussions in the book is a little disappointing for readers who had high expectations from the author after his phenomenal work in *Pax Technica.* One can only hope that OII adequately focuses on these countries in the upcoming research projects. Apart from these few drawbacks, the book is undoubtedly an excellent piece of work. The author is spot-on in pointing out that the war against misinformation is an endless series of small battles and giving interested citizens the tools to monitor and direct the flow of their data will be fundamental to a future-proof democracy. The book *Lie Machines* is part of Professor Howard's persistent efforts towards that direction and like always, he manages to carry his readers along with him.

Reviewed by
Ayesha Binte Towhid
Research Officer
Bangladesh Institute of International and Strategic Studies (BIISS)