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Manufacturing Consensus

Understanding Propaganda in the Era of Automation and Anonymity

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Propaganda, Social Media, and Political Bots

Introduction

Hernan is a self-professed digital "growth hacker."[1] He spends his days working on new, devious ways to market to clients online, with a focus on recruiting social media influencers to endorse particular products. His specialty—the product he most often works to promote—is politics. Specifically, he works to create authentic-looking interactions for campaigns, candidates, and causes. The key here is "authentic-*looking*." In truth, the support that Hernan drums up for his clients is anything but authentic. He is not an activist engaging in community organizing. He doesn't recruit actual organic, "grassroots" political supporters to work for a common cause. Instead, he traffics in what he calls "like exchanges" or "reaction exchanges."

Hernan, who is in his early thirties, spends most of his days staring at a computer screen in his office in Mexico City. From his chair, he recruits people across multiple social media sites to essentially rent out their profiles for money. He and his colleagues then take over the accounts of these "rising influencers," using them to like specific political content, post comments, watch video stories, and vote in online polls. Everything Hernan does is aimed at lending politicians and other clients the illusion of large-scale online support, amplifying their popularity—and artificially boosting attacks on their opposition. His goal is to manipulate social media algorithms to categorize particular people or topics as "trending," featuring the artificially boosted content and getting it in front of more and more "real" users. Hernan thus works to create a bandwagon effect for his clients—to actually recruit more real followers or adherents who believe in these false messages, drawn in because it seems that other users are.

If Hernan's efforts seem to fall into a gray area of political marketing—and if they seem too tangled to easily identify as "inauthentic"—it is by design. Hernan is a computational propagandist, like the Russian government hackers who notoriously sought to shift public opinion during the 2016 U.S. elections. Like Hernan, the Russians used various digital

tools and strategies—combinations of automated social media profiles (political bots) and fake profiles run by real people (sockpuppets)—to game social media systems. Hernan's political clients include a former Mexican presidential candidate, members of the Mexican Senate, and eight different candidates for various Mexican state governor races in 2021. Like many of his colleagues, he also does growth hacking for businesses, paying to use influencers' accounts to hype products. He operates a Twitter "phone farm" side business run by an entire team of employees, each of whom runs "hundreds" of sockpuppet accounts on the microblogging platform that interact with content and other users on behalf of clients. Unlike bot-run profiles, he claims, his thousands of phone farm accounts are difficult for Twitter to detect and delete.

A close friend of Hernan's, though, keeps his computational manipulation activities mostly focused on politics, not profit. Carlos Merlo became famous (or perhaps infamous) in Mexico for a profile BuzzFeed News wrote about him titled "Meet the 29-Year-Old Trying to Become the King of Mexican Fake News." In their introduction, the authors sum up the aspiring disinformation mogul's efforts: "Armed with millions of bots and thousands of fake Facebook pages, Carlos Merlo's digital marketing firm is trying to hijack Mexico's politics with fake news." He seems to be well on his way; Merlo claims that he successfully used thousands of bot profiles to spin the flow of information on behalf of powerful politicians during the 2018 Mexican election—all with little to no oversight from Twitter or Facebook. According to BuzzFeed, "Merlo estimates that these days, around 90 percent of all trending topics in Mexico are controlled by digital marketing firms."[2] Hernan says he has worked on multiple social media projects with Merlo but that his buddy had to go into hiding after the story about his operation ran. (According to Hernan, this has affected Merlo's business model; the two are now running a side-hustle selling face masks during the COVID-19 pandemic.) This claim is interesting, for according to an interviewee named Fausta—who specializes in tracking Mexican disinformation on social media—Merlo sought out the BuzzFeed reporters, pitching the story himself in hopes of propelling his own success.

Hernan and Merlo are just two of the many computational propagandists in Mexico, which (like India, the Philippines, and Ukraine) is home to a highly advanced market for computational propaganda. In these propaganda hubs, governments, militaries, nongovernmental organizations (NGOs),

partisan groups, and even wealthy individuals can choose from an array of firms or professionals who specialize in generating manipulative online political communication campaigns. In some of these countries, such as Venezuela and Russia, the regimes operate hybrid public-commercial entities, keeping some propaganda efforts in-house while others are sold to the highest bidder. Others, like the Brazilian state, run their own internal "offices of hate." In Brazil, these are a "clandestine network of bots, businessmen and bloggers" purpose-built "to rain vitriol on all who oppose President Jair Bolsonaro."[3]

But it's not just governments and powerful political entities that leverage computational propaganda to spin information flows over social media in their favor. Just as anyone can be a "journalist" on Twitter, anyone with an internet connection can be a propagandist. Never before have such large swaths of society been able to harness media (and the anonymity and automation tools enabled by the internet) to politically harass opponents and magnify their own political messages, many of which are rife with disinformation.

Modern Propaganda: The Manufacture of Consensus Online

This book is an exploration of modern propaganda, illuminated by my eight years in the field studying how different people use social media as a tool in efforts to control political conversations on- and offline. Historically, propaganda meant the messages (usually untrue or slanted) that were officially spread by governments on mass media in order to sway public opinion. Nowadays, people casually throw around the term *propaganda*, stretching it into near-unrecognizability; it is often used simply to cast doubt on a political rival's communication—or indeed on any position that people disagree with. But the term has a technical meaning, one related to the flow of information. In this book, when I say *propaganda*, I mean the use of politically biased information in considered attempts to manipulate or influence the opinions and actions of individuals and, more broadly, society. These propagandistic messages sometimes contain entirely false content, but they might also harness the power of partial truths. They may be deceptive, obscuring who is behind them and what their goals are, or they may be coercive, using threats or force to get people to act. They are designed to cause attitudinal and behavioral change. However, this change

need not be something as concrete as, say, getting someone to overhaul their political ideology or change their vote from one candidate to another. A great deal of propaganda is actually more focused on generating emotions, such as anger or apathy toward a given political system, in order to foment societal discontent. These types of campaigns are often more difficult to track, and many times they are deliberately constructed to hide mappable lines of cause and effect.

Crucially, contemporary coordinated and deliberate efforts to sow propaganda exist inside broader social and cultural contexts. They are often inextricable from their timing, semantic nuance (or lack thereof), and networked spread, and they are also intimately tied to both highly specific and broad systems of meaning. They are best understood in relationship to sociological circumstances. Their nature and the qualities that characterize them are, to me, more important than how many of these campaigns are occurring or how many people are participating in them. Early work on propaganda focused on ascertaining its psychological effect on individuals or small groups in controlled settings. I am less interested in this experimental approach than in propaganda's subjectivity and the way it is embedded in our contemporary world.

A few terms are central to my discussions here, and brief definitions of them will be helpful as you read the rest of this book. *Bias* means that a given political message is spread with particular political motivations in mind—with prejudice for or against specific ideas, people, or events. *Coercion* is focused on getting someone to do something via illicit means (through manipulation, violence, etc.). *Deception* is primarily about the intentions of the person spreading the message: it means that the motivations of the communication are opaque, that there is a lack of transparency about who is actually spreading a message and why. While it can also mean that the content of a given message is false—that the information provided is purposefully factually incorrect—not all factually incorrect information is deceptive; many people who spread propaganda believe that the content they are sharing is true. Messages that are simply factually incorrect are known as *misinformation*. The truth—events and ideas supported by empirically verifiable evidence—is not up for debate, but the framing of those facts is, and propaganda's framing can radically change how the reader interprets those facts. The type of propaganda

messages discussed in this book are always coercive but not always deceptive.

Of course, there are other types of messaging campaigns designed to change opinions and behaviors, such as public interest campaigns to encourage people to get vaccinated or to vote—messaging campaigns that are open about their intentions. These are not the kind of propaganda I am concerned with here. Under older definitions of propaganda, such campaigns have been considered propagandistic simply because they involve top-down efforts by states or other actors to alter behaviors of the populace. This book instead focuses on other, less transparent information-oriented endeavors, and particularly those that occur over digital media channels. I am looking at those automated and anonymous propaganda offensives that aim to drum up influence by amplifying some messages and suppressing others.

Note that my definition of propaganda updates the historical definition, most of which is based on the notion that propaganda flows from the top down—from the powerful elite to ordinary people. This is not the way power—or information—necessarily flows on the internet. As my years of research among those that make and launch propaganda campaigns has shown, social media and the internet now make it possible for nearly anyone to launch fairly sophisticated, computationally enhanced propaganda campaigns. Social media has "democratized" not only the ability to spread information but also the ability to spread propaganda.[4]

On the internet, those top-down information flows are upended; the internet allows for many-to-many communication rather than one-to-many communication. This means that anyone with access to a smartphone can make news, going "viral" for capturing the first video of a newsworthy event. It also means that regular citizens have in their pockets the power to spread propaganda to millions using social media. On Twitter, research shows, lies and conspiracy spread faster, and to many more people, than truth does.[5] Today, powerful groups like governments and corporations are able to effectively leverage their superior resources—and what technology theorist Langdon Winner describes as their "more sophisticated, more ruthless" approach—to efficiently spread potent anonymous and automated propaganda.[6] But this loaded messaging from elites exists alongside (and often capitalizes on) similarly manipulative digital content from all sorts of other folks.

The kind of digital propaganda I discuss in this book is manipulative, often deceptive, and often coercive: there is no "positive propaganda" here. This is not so for previous studies of propaganda; for influential scholars of broadcast-era propaganda, including Walter Lippmann and Edward L. Bernays, propaganda is not inherently illiberal nor does it necessarily constitute "bad" political behavior.[7,8] For these pre-internet scholars, propaganda is biased, certainly, but the morality of a given strand of loaded political communication is in the eye of the beholder. In contrast, the propaganda I discuss here is necessarily illiberal, always nefarious. The influence-oriented work of various groups of political actors, from the Russian government to the United States's multifarious alt-right, is realizing social media's potential as a communication tool that can divide rather than unify. They are harnessing the many-to-many communication ecosystem to produce a massive amount of noise, confusion, and polarization in order to obscure the facts of particular events and the motivations of those who put out biased narratives. It also makes it easy for us to ignore—or never even see—"takes" that do not perfectly match our own existing worldviews.

As its title suggests, *Manufacturing Consensus* is a continuation of the sense-making work on propaganda of Lippmann and, later, Edward S. Herman and Noam Chomsky.[9,10] As Antonio Gramsci argued, those in power work to engineer assent from the public via cultural hegemony.[11] Lippmann expanded this to propaganda in his seminal work *Public Opinion*, discussing how propaganda can be used in the "manufacture of consent." Following Lippmann, Herman and Chomsky titled their own book on the subject *Manufacturing Consent*, borrowing the term to describe the ways in which the news media control production of information to engineer perceptions of current events—often at the behest of the powerful few who hold the strings of massive media companies like Disney, News Corp, and Time Warner.

In this book, I extend and amend this idea for our present moment, focusing on the manufacture not of assent or consent but of *consensus*. Propaganda has changed to take advantage of the affordances of what we call the "new" media system, ushered in by the internet, social media, and related forms of digital communication.[12] Social media in particular, with its anonymity and capacity for automation, has allowed for a substantively different form of propaganda—one where both computational tools (such as

bots) and human-driven efforts (such as sockpuppets and partisan nanoinfluencers) allow various political groups to create the illusion of popular support for their ideas or candidates. In other words, these groups leverage social media and particular informational strategies—what my colleagues and I have termed *computational propaganda*—to manufacture *consensus* around ideas and people, creating "the illusion of popularity in an effort to create bandwagon support."[13] The bandwagon effect (in which people simply do what everyone else seems to be doing) works whether or not readers actively believe the information being pushed; the sheer volume of bogus information online creates the illusion of broad consensus unless users actively engage with and debunk it.[14]

Modern propaganda and its outcomes are not determined fully either by the technologies that make it possible or by the society from which it emerges, for the two are deeply intertwined. As the media ecosystem has expanded to include digital media, propaganda itself has changed to take advantage of it, for as Jacques Ellul argued, propaganda is a sociological phenomenon—a whole system of mediated control.[15] Various aspects of digital media, and particularly the tools enabled by social media, afford particular social undertakings. I use the broad definition of social media from Philip Howard and Malcolm Parks. They argue it "consists of (a) the information infrastructure and tools used to produce and distribute content that has individual value but reflects shared values; (b) the content that takes the digital form of personal messages, news, ideas, that becomes cultural products; and (c) the people, organizations, and industries that produce and consume both the tools and the content."[16] On social media platforms (by which I mean the websites themselves as well as the architectures that support them), people leverage the whole ecosystem of digital media tools to coerce others. They use humans to communicate with and control both humans and machines, and use machines to communicate to both humans and other machines. They leverage a wide variety of manipulation strategies, ranging from outright lies to selective truths.

As Yochai Benkler, Robert Faris, and Hal Roberts discuss, digital propaganda flourishes in a circular, networked media environment. They show how during the 2016 U.S. election, propaganda and disinformation spread throughout the whole media ecosystem, from digital to broadcast to print.[17] This often happens when legacy media report on successful

computational propaganda campaigns, attempting to debunk them. However, these attempts simply spread the propaganda further, legitimizing it and perhaps even increasing the bandwagon effect. The people who work to manufacture consensus use every media tool across multiple social media sites like Facebook, YouTube, Twitter, Weibo, and Telegram to control information flows, and the political bias and deception embedded in the information they share are designed to circularly interact with—and inform—propaganda flowing from traditional media organizations: newspapers, television stations, radios, magazines, and the like. When traditional media rely on social media data for story leads and informational sourcing, they simply repackage (and, more dangerously, legitimize) propaganda. As Whitney Phillips notes, a mainstream media organization's decision to report on a conspiracy theory (or a mass shooter's manifesto or extremist gathering, etc.) can give "oxygen" to the person or group that perpetuated the content or act in the first place, amplifying the cause of propagandists and hate groups.[18] Indeed, such organizations often begin to sow falsehoods or hate online precisely in order to get their content into the broader media ecosystem.[19]

Core Concepts

The research and arguments in this book are born out of my long-term set of research concerns centering on computational propaganda—the use of automation and algorithms over social media to manipulate public opinion.[20] As a doctoral student, I and a small team of other researchers began working to define and understand the sociotechnical concept of computational propaganda. I researched how these various automated and algorithmic tools and strategies were being used by a wide variety of groups around the world in efforts to control the flow of political information. For the first several years, my work primarily focused on analyzing the use of political bots: automated profiles on social media employed to communicate about politics, usually run by political groups hoping to spin conversations in their favor or to frame a given situation or person in a particular light. My colleagues and I analyzed how these automated social actors were deployed around the world during elections and political crises.[21,22] Since then, my individual work has focused on conducting networked ethnographic research among the people who build, combat, and

experience the propaganda campaigns waged using bots and other digital tools and tactics: industry experts, computer engineers, journalists, political campaign workers, PR consultants, and many others.[23] The insights in this book are primarily drawn from interview- and field-based work among these groups, which has taken place in various places around the world over the last eight years. To understand the ethnographic insights I offer here, we need a basic shared understanding of the technical underpinnings of the digital media systems that allow people to create and spread computational propaganda—the digital tools at the heart of propagandists' ability to spread disinformation and manipulate public opinion.

One of the key computational propaganda strategies is *automation*, which here refers to technology built to undertake particular functions with little human oversight. One example of automation is the *bot*—a software tool built to do autonomous tasks, including communicate with other users online. Bots are often core mechanisms for spreading computational propaganda. They can functionally extend the reach of a single person, allowing them to reach many more people than otherwise possible. A bot-herder controlling a set of given social media bots built to look like real human users can spread a given message one hundred or one thousand times more than they could without automation. Bots may be either mostly mechanical (they can be used to engage in simple mass copy/paste posting of the exact same content by rote) or partially human-controlled (accounts that are partially human-run and mix independent content with formulaic propagandistic content—a form of account that is much more difficult to detect). Increasingly, they can be encoded with learning and decision-making capabilities via advances in machine learning and artificial intelligence.

Another key component of computational propaganda is the *algorithms* that digital propagandists exploit. An algorithm is a defined set of procedures or instructions followed by a computer in order to solve a particular problem. Twitter's trending algorithm, for instance, determines what information is popular with users and serves that information to other users; it makes these curation decisions by analyzing the volume of content concerning a particular topic over time, with prioritization given to "sharp spikes" rather than long-term information growth.[24] Algorithms are human-designed and therefore have various types of bias hard-coded into them, but they often don't get necessary human oversight in their day-to-day

operations; they are therefore relatively easy for propagandists to manipulate.

As most people know, bots—which are growing increasingly sophisticated and difficult to detect—are often used to spread manipulative political content. Recently, though, sockpuppet accounts have become almost equally common vectors for political manipulation. Sockpuppets are real people who assume false identities online. While these accounts can't amplify content as quickly or as widely as automated tools, they play a crucial role in the spread of manipulative political messaging over digital media. They are particularly successful at triggering the bandwagon effect, for people are much more willing to trust information that comes from someone they know—even those whom they only know parasocially, like an Instagram or Twitch personality—than from a stranger.[25] I have recently begun to see social media influencers with relatively small accounts being used as sockpuppets to spread political or partisan information in large-scale propaganda campaigns.[26] These *partisan nanoinfluencers*—regular human social media users paid to share political content with less than ten thousand followers—may be chosen because they already ascribe to a particular politics, but many of them are hired simply because of the geographic region they live in, the demographic group they are a part of, or the communities they engage with. Their behavior is like a political form of native advertising on social media. Political groups use these accounts to sow biased information about given issues, candidates, and events—rather than about products or companies.

Sockpuppets and partisan nanoinfluencers are both forms of computational propaganda that use technological tools and platforms to spread coercive political messaging in two ways. Like bots, they explicitly seek to game the curatorial decisions of computational systems, manipulating the algorithms that drive social media engagement to get as many eyes as possible on the propagandistic content. But these types of accounts also operate in another way: they manipulate interpersonal information flows, delivering deceptive or biased material directly to their followers.

The Application of Computational Propaganda

Since at least 2010, a wide variety of political groups have used social media and other online communication tools to spread manipulative partisan messaging.[27] The Tea Party, a populist and antitax conservative group based in the United States, launched one of the earliest known campaigns from the safety of their computers in Iowa.[28] They used automated social media accounts—social bots—on Twitter to spread rumors that Massachusetts's Democratic candidate for Senate, former state attorney general Martha Coakley, was anti-Catholic.[29] Coakley ended up losing the contest to Scott Brown.

In 2018, an eerily similar campaign was pursued against Senator Claire McCaskill, who was running for reelection in a closely contested race in Missouri. The organization CatholicVote "created ad campaigns targeted to mobile devices that have been inside of Catholic churches." They used a variety of messaging tactics to vilify McCaskill, saying she was "pro-abortion . . . , unwilling to protect the Little Sisters of the Poor, and opposed Catholic judicial nominees because of their religious beliefs."[30] The hackers behind these homegrown attacks also worked with the Main Directorate of the General Staff of the Armed Forces of the Russian Federation (known as the GRU) to undermine her campaign online.[31] McCaskill lost.

What changed in the eight years—the better part of a decade—between these two internet-based propaganda campaigns? Nothing and everything. Both propaganda campaigns harnessed social media advertising and varying levels of automation to target specific demographic groups in particular locations with a muddy combination of fact and fancy. Both campaigns used the same digital toolbox, a combination of bots, ads, and memes. And both campaigns went unchecked by the platforms on which the propaganda offensives were partially waged—sites like Facebook and Twitter—and by the politicians in charge of regulating them.

But the tools used, while fundamentally the same, are now exponentially more sophisticated. Today, we deal not with the clunky, fairly obvious bots of the 2010s but with cyborg social media accounts run partly by people, partly by automated computer code—and now we seem to be approaching another evolution in computational propaganda, with sophisticated AI-enabled bots beginning to play a role in the manipulation of political information streams.[32] The propagandists themselves have also changed: they are now much more cunning, battle-hardened after years of working to

evade detection and deletion. The strategies for sowing misleading political content have evolved, as has the social context in which this content brews. These propagandists have unprecedented access to specific demographic and personal information from certain platforms, allowing campaigns to more accurately target particular people and subgroups with their propaganda. And as social media has exploded, reaching every corner of the globe, the parameters of the problem have radically expanded, both geographically and in terms of digital reach. We have gone from a few isolated cases occurring over a handful of social media platforms to a global phenomenon that involves media at all levels.[33]

In a little more than a decade, what began as an ad-hoc experiment with using new technology to keep Martha Coakley out of the U.S. Senate—so ad hoc, in fact, that one political strategist described it to me as a digital version of "throw things against the wall and see what sticks"—has now developed into a highly sophisticated and difficult-to-counter political strategy that is helping to decide elections across the globe at all levels of politics.

Why Should We Care About Propaganda in Communication?

The popular dictum about how social media companies make their profit is this: "If you don't know what the product is, the product is you."[34] Facebook, Twitter, and YouTube are for-profit entities focused on making money, but at first glance, it's hard to see what these firms are selling. Events like the 2016 Cambridge Analytica scandal made it clear what they are selling: social media companies store and trade on the vast amounts of personal data we place on their sites and applications. They sell information on our behavior to marketing firms, international conglomerates, and—yes—to political campaigns and their surrogates. Jaron Lanier and others have pushed the idea of users as products a step further. The product is not "you," a single user—the product being sold is imperceptible behavioral change on a massive scale.[35]

Lanier's argument is simple truth, for social media companies make nearly all their income from advertisements, and by definition, the motivation of an advertisement is to *change behavior*. Advertisements try to get someone to buy a product, visit a destination, or support a cause—or to vote a particular way, to support or oppose a particular issue, or even to

give up on civic engagement entirely. Uniquely, social media allows not just the familiar, identifiable traditional ads but also native ads—paid content that appears to be authentic, user-generated content. The native ads being run now are often nearly impossible to tell from "organic" content, for regular people can advertise on their own accounts without anyone—the social media firms that run the platforms or their followers—ever knowing they were paid for the content. Much of the time, even Twitter and Facebook don't know what's organic and what's not when it comes from a seemingly real account.

We don't yet really understand the behavioral effects of online ads.[36] It's easy to track whether a given ad on social media gets likes or comments, but it is much harder to track its influence on offline behaviors. This is as true for advertising-driven consumption as it is for online political propaganda. Indeed, it is even more difficult to track the behavioral changes from computational propaganda, which is not overt and identifiable political advertising: it includes the covert political propaganda driven by political bots, sockpuppets, gamed "trending now" social media recommendations, and influencers that I have sketched out above.[37]

What is the measurable effect of these political messages on our actions at the voting booth? Although scholars like Kathleen Hall Jamieson have argued that it is probable Russian trolls and hackers helped elect Donald Trump in 2016, such academics also rightly point out that there is still a lot we don't know.[38] What is more, we may never have certainty in such situations. But it is still crucial that we gather whatever information we can about how social media alters our lives. A large body of researchers are working to do this. But as Lanier notes, the task is made more difficult by the fact that the behavioral changes caused by online political propaganda are incremental—distributed and sociological in scale, imperceptible at any given moment. Change can happen without being measurable through experimental analyses. Just because we can't easily track a change from point A to point B—trace a line from being exposed to propaganda to voting a certain way—it doesn't mean that change does not happen.

The task is also made more difficult by the fact that, as Ellul pointed out, propaganda is all around us.[39] It's not as easy as tracking a single official campaign advertisement, let alone a comment from a talking head or a Twitter post made by a partisan nanoinfluencer. We simply can't measure

these effects at the individual psychological level. Propaganda is inextricable from the whole ecosystem in which we live, with ads, ideas, media technologies, news organizations, and mutable societal norms, values, and beliefs all smashed together. When we attempt to do a controlled experiment—for example, recreate a strand of manipulative political content in a vacuum to try to isolate its effects—it stops being propaganda because it's been separated from the complex sociocultural world in which propaganda operates.

This doesn't mean that we should give up on working to curb politically motivated disinformation or state-sponsored smear campaigns against journalists. What it does mean is that we don't have the luxury of waiting to respond to these problems until we fully understand how they affect human behavior. We must accept that the transmission, or communication, of propaganda leads to all sorts of consequences—some intended, some not—and focus on where the effects are clearest. We can, for instance, work to protect journalists and minority communities—groups that are often the primary targets of computational propaganda campaigns.[40,41,42]

We do know that bots can impact the actions of influential political actors and can change their digital behavior.[43] But to understand political influence in a digital world, we can't focus on tracking pure, empirically evidenced behavioral outcomes—direct notions of change as defined by traditional political science or psychology, which were theorized in an entirely different social and technological world.[44] Instead, we need to think about how to track the diffuse, incremental influence exerted by computational propaganda. Perhaps we should follow the recommendations of scholars like Kate Starbird, focusing on second-order changes rather than first-order ones.[45] In other words, we should focus not on how individual behaviors and ideas change but on how the entire system flexes and evolves. Systemic changes aggregate the changes taking place at the individual level, and they are more easily observed.

Politically motivated groups and individuals continue to regularly use bots in order to boost their communication. We should ask: What does *this* behavior tell us about broader social beliefs and practices? And what does computational propaganda tell us about the new culture of political communication?

The Makers and Trackers of Computational Propaganda

Computational propagandists have two key goals. I've sketched out the first already: to create the illusion of consensus through a bandwagon effect, legitimizing content being spread or manipulated by bots and other tools online and bringing it into parallel, organic conversations by other social media users. The second aims at a rather different version of consensus, one defined by widespread anger, apathy, and polarization—a consensus perhaps more akin to shared discontent. This consensus is designed to make people feel that because everything is terrible, and because the powerful will do what they want regardless, we should just let them do what they want because we can't change things.

The political bot makers I've talked to during this research know that they don't have to actually change people's minds. They simply need the media to regurgitate the algorithmic trends they game or report on the bogus controversies they create. When this happens, ordinary people pick up their intentionally sowed *dis*information—defined by Caroline Jack as "information that is deliberately false or misleading"—and spread it, unwittingly converting the disinformation into *mis*information, or "information whose inaccuracy is unintentional."[46] This is *information laundering*—a kind of relational organizing that takes advantage of people's trust in those they know or feel like they know to legitimize political tall tales and conspiracies.[47] These efforts, many a modern propagandist told me, were enough to sow confusion and polarization or undermine the political process.

The propagandists I interviewed were clear about their intentions and methods. According to someone I'll call Stanley, the head of a conservative U.S. political strategy firm that specializes in digital communication, Donald Trump and his constituents effectively used social media in 2016 as a "megaphone" to prime conversations, on- and offline, about various topics. Stanley openly admitted that he had personal knowledge that U.S. political campaigns were using social media bots to amplify critiques of Hillary Clinton and boost material supporting Trump.[48] The Russian government too used sites like Twitter and Facebook to carry out this kind of manipulation, and propagandists I've interviewed from Istanbul to Quito have made similar claims.

These attempts to manufacture consensus through computational propaganda campaigns are happening worldwide. Some autocratic governments, such as Russia and China, have realized the power of the bot as a tool for waging international cross-border manipulation campaigns; these two governments have used both extant and emerging social media tools in attempts to alter the tenor and flow of information during elections in countries from the Central African Republic to Taiwan to the United States.[49,50] Other autocrats simply seek to build their power at home by manufacturing consensus. For example, Narendra Modi and his Bharatiya Janata Party (BJP) have systematically used automation to spread disinformation over the encrypted messaging platform WhatsApp, seeking to boost their image across the subcontinent while simultaneously harassing and undermining their opposition.[51] Other budding despots around the world—Jair Bolsonaro in Brazil, Rodrigo Duterte in the Philippines, Muhammadu Buhari in Nigeria, and Recep Tayyip Erdoğan in Turkey—have made use of similar automated online tools to amplify their opinions across multiple platforms, from Twitter to YouTube to Facebook.[52,53,54,55] Even nongovernmental groups, ranging from small activist collectives to multinational corporations, are using automated and semi-automated communication technologies to disseminate political content that will benefit them.

Perhaps the scariest computational propagandists, though, are the individual operators who can harness small armies of bogus automated social media accounts and artfully place disinformation for their own means and ends. These are not sophisticated and well-resourced political actor groups like parties, lobbyists, or political consultants; they are simply people with varying motivations and levels of coding skill.[56] These *automated political influencers* may be personal political partisans who are highly invested in the outcome of a particular campaign, or they may be simply mercenaries—paid actors who have little interest in the social context or effects of their work. Whatever their reasons, these automated political influencers are now actors who (like hackers) must be taken seriously by even the most powerful entities.

Updating Understandings of Propaganda: From Broadcast to Digital Media

As the groups who can perpetrate sophisticated digital campaigns have evolved and broadened, so has the nature of the propaganda they produce. The anonymity and automation that are core facets of social media sites like Twitter, YouTube, Reddit, 4chan, and Gab allow propaganda and those who spread it to flourish in new ways. Even Facebook—which has a "real name" policy aimed at allowing only verified users—falls prey to malicious uses of automation, anonymity, and fake accounts on a large scale.[57] Yet these activities do not clearly fit into older definitions of propaganda. It is time for scholars of communication and media to revisit our understanding of propaganda.

In the academy, most theories of propaganda as a communication-based method of control still rely on understandings developed in the era of broadcast media—a time when television, radio, newspapers, and film were the primary media tools and therefore the main vehicles for propaganda. Similarly, those in journalism, government, and the corporate sector who are concerned with propaganda focus on the threat through the lens of past offensives on (or via) these legacy media tools. Today's propaganda is not a top-down, elite-only system of communicative control with relatively clear means and ends; it is a many-to-many mélange of networked, often automated political deceit that originates across a range of online social media applications, quickly spreads to other digital spaces, then makes the jump to legacy media platforms.

Because we are still relying on antiquated notions of propaganda, we struggle to deal with the threat of digital disinformation and other forms of online politicking. We continue to try to use outmoded methods of fact-checking and media literacy, which in our era of virality and "fake news" do not even make a dent. We focus on the activities of political parties and militaries, ignoring that social bots and the networked power of the web now allow nearly *anyone* to spread loaded political messages on a grand scale. We see propaganda as discrete rather than ubiquitous and continuous. In a networked, distributed digital world, modern propaganda cannot be rooted out entirely; we must learn instead to detect it, manage it, and design media and technology systems so that they are not so vulnerable to it.

Traditional social science studies of behavioral influence have long been the gold standard for politically and financially motivated groups who want to change who talks about what. Some methods of influence still in use today are grounded in century-old social science thinking; as Yochai

Benkler and colleagues write, "Walter Lippmann's words in *Public Opinion* might as well have been written in 2017 about behavioral psychology, A/B testing, and microtargeting as it was in 1922."[58] But how have these methods evolved with today's media tools? We must update traditional work on propaganda to take account of what we know about contemporary computational propaganda. Only then can we effectively combat attempts to manufacture consensus. Understanding digital propaganda in the context of long-held ideas about human belief and action can also properly contextualize our societal concerns about these problems, for propaganda has existed for as long as humans have leveraged media to influence opinion. It has always been both technological and social. Yes, it has been bolstered by media-based innovations throughout the ages and has evolved to take advantage of each shift, but this is not necessarily cause for doomsaying. We don't know the societal outcomes of computational propaganda yet, and broadcast media's hysteria about it may be more effective at causing polarization or political apathy than political bots could ever be.

Policymakers and social media companies continue to struggle to make sense of, and control, this new computational propaganda. During the 2020 U.S. presidential election, the U.S. government failed to deal with the use of social media bots and other inorganic information manipulation tactics such as partisan nanoinfluence. Firms like Facebook and their subsidiary WhatsApp are simply treading water in the face of what they call "information operations," despite the increasing urgency of the problem: viral misleading and violent content is a real threat in, for example, India and Myanmar, where people have been killed after particularly effective computational propaganda campaigns.[59,60,61]

We need to move toward a more unified understanding of modern propaganda—who does it, what it looks like, when it is most likely to occur, why we consume it, and how it works. We need new theories that will connect the dots among the answers to these questions and contextualize the ongoing empirical work on the subject. The ideas I present in this book, particularly its central notion of "manufacturing consensus," are a step toward bringing our concept of propaganda into the present day.

Methods

This work is part of an established tradition of scholarly efforts that study people and technology using qualitative techniques. This ethnographic or field-based research allows me to systematically describe the norms, values, and beliefs of both propagandists and their targets. It helps me to paint a picture, through the descriptions and stories in the following chapters, of the people behind the tools. Who are they? Why do they do what they do? How do they do it? What digital tools are central to their efforts?

The findings in this book are drawn from a variety of different sorts of fieldwork: networked (spread over multiple locations or field sites); information oriented (online ethnographic work); and of course traditional, face-to-face ethnographic study. I see this project as complementing big-data analyses of information from social media. That work illuminates quantitative details about political bots and their networks and communication; this project focuses on the qualities of political bot usage, as I try to understand what makers and trackers of computational propaganda feel about their activities, particularly as they relate to political contests and other civic events, and investigate their broader views about the flow of information over social media and emerging digital media tools.

What follows is an account of my eight years of international field research with the people who build and use bots to spread and track propaganda or to fight it. The concept of *manufacturing consensus* that I put forward here is drawn from interviews with over one hundred people around the world who have allegiances to numerous varying political groups and professions. Four distinct actor groups are at the center of this book: (1) political campaign workers, (2) technology industry experts, (3) journalists, and (4) automated political influencers. During my years of research, I spoke to people on all sides of the issue: people actively building and launching computational propaganda campaigns, tech industry experts and journalists working to respond to the growing threat of disinformation and online manipulation, and people who were on the receiving end of propaganda. All of their stories are here, and they provide the foundation for the solutions that I propose throughout.

My interviews with global experts focused on making and tracking computational propaganda provide particular insight into how these communicative technologies played a part during pivotal political events from North America to the Middle East. I most regularly refer to the propagandistic use of bots over social media during political events in four

countries: Ecuador, the United States, the United Kingdom, and Turkey. In order to provide background and contextual information, I also discuss cases of computational propaganda in a number of other countries around the globe: Brazil, Germany, Hungary, India, Japan, Mexico, Russia, the Philippines, South Korea, Taiwan, and Ukraine.

In order to understand where and with whom computational propaganda was originating, I spent time in several of the above countries during elections and other political events. I attended campaign gatherings, sat in on digital strategy workshops, visited major news outlets, went to conferences, and collaborated with social media companies and other technology firms. I wanted to develop a broad sense of the culture of the people spreading and tracking computational propaganda. Observation formed a portion of this work—I was regularly shown examples of bots and sockpuppet accounts in the wild. In order to gain access to those in the know about digital political strategy and actual political bot use, I had to spend time learning the ins and outs of the technology at hand. I had to scour the web and leverage connections (using a snowball sampling technique, discussed in more detail below) in order to meet the right people and learn the structures of various actor groups. I even learned to build simple bots; for the 2018 exhibit *The Future Starts Here* at London's Victoria and Albert Museum, I worked with a colleague to build an interactive political bot on Twitter aimed at educating people about computational propaganda.

It was difficult to get bot makers and propagandists to speak to me, let alone to divulge information on their illicit political communication activities. Illicit bot makers do careful work to stay hidden, and many of their campaigns are designed to be anonymous, deliberately hiding their origins. I was lucky to have colleagues who had conducted global qualitative work on digital political activism and control. They were able to put me in touch with a variety of people and political groups in North America, Europe, North Africa, and the Middle East with whom they had established connections. These contacts connected me with early-stage interviewees in these regions, who in turn grew into contacts elsewhere around the world.

This is called snowball sampling: you start with a few contacts who start the ball rolling, and they introduce you to others, who introduce you to still others. This technique is often used by researchers who work with hard to

reach or potentially hostile interview subjects, and it was a core method for my own work among political bot builders and propagandists. Once introduced to a potential interviewee with expertise on the latest propaganda techniques, I would often exchange numerous encrypted e-mails or private messages (using Signal or Telegram) with them, describing my project. I would estimate that one in every ten or fifteen e-mails resulted in a response, and perhaps one in thirty resulted in an interview. Surprisingly, though, once someone committed to being interviewed—after having gone through extensive back-and-forth on my project and having read and verbally consented to the informed consent document—they were quite candid about their influence-oriented activities. This was likely due, at least in part, to the fact that I spoke with all interview subjects on the condition of anonymity. This was a considered choice, oriented toward making them as safe and comfortable as possible. Other interviewees seemed willing to participate because they did not see anything wrong with their actions; these people either felt distanced from the work because they were paid to do it or they were proud of it, seeing it as innovative and clever.

In order to stay up to date and locate other potential interview subjects, I signed up for every mailer I could find on social bots, social media politics, and propaganda. I followed key players (and hundreds of bots) on social media and religiously went through their public messages and metadata. Political bot and sockpuppet accounts are often short-lived. Either they fulfill their task and are then taken down by their deployers to avoid a trail, or they are deleted by social media platforms because they violate terms of service, showing signs of spam or being used to harass other users. I regularly catalogued screenshots of known political bots and sockpuppets in order to save examples of particular tactics and types and to preserve now nonexistent (beyond the odd Wayback Machine snapshot) automated accounts. I made notations about what accounts showed signs of high automation; these notes, as well as my screenshots and other field notes, were stored using Zotero and Microsoft Excel. These notes were stored securely in an encrypted hard drive in a place separate from my computer.

I followed relevant events and important moments online when I could not be there in person, using news reports, community documents, and archived social media material to understand what happened. I also gathered secondhand accounts of these events via one-on-one interviews

with experts who had been in attendance or who had worked on particular computational propaganda campaigns. I often heard contradictions in stories of how events played out, or in how automation or other social media tools were used. Political campaigns, journalists, and activists regularly disagreed about how things happened—about what truth looked like. To get to the bottom of discrepancies in accounts, I worked to triangulate the competing accounts with online narratives from multiple sources.

Chapter Outline

In the following pages, I use the propaganda theories of the past to explain the gaps in our knowledge today and show how updating those foundational theories can help us better understand today's media landscape. I explain how the media through which we receive propaganda have changed and demonstrate that technologies like bots, alongside recommendation algorithms and advances in artificial intelligence (AI), have changed both the scale and scope of propaganda. I show how two particular features of social media, automation and anonymity, are central to the practice of computational propaganda. I discuss the changing face of the propagandist, suggesting that we take into consideration new actor groups active in the spread of political spin, particularly the automated political influencer. In outlining this emerging group, I discuss the ways the production of propaganda, like the production of information writ large, has become democratized: as I show, anyone can now build and launch political manipulation campaigns online.

Chapter 2 reviews how propaganda has been understood in times past. I build on, amend, and alter existing theories of propaganda to take account of the current era. This new theoretical work extends the propaganda model of Herman and Chomsky and complicates their view of the machinations of the mass media. I leverage their perspective, which is grounded in political economy, alongside the work of current media theorists and science and technology studies (STS) scholars in order to focus on the problems posed by propaganda in the era of the internet, particularly as they relate to communication, journalism, and media studies.

In chapters 3–6, I share evidence, stories, and insights from my years of fieldwork with the people who produce and track computational propaganda: those who spread this automated, social media–borne political

manipulation and those who track and report on it. I describe my discussions with political campaign workers, technology industry experts, journalists, and automated political influencers, uncovering how they feel about the political use of bots, sock puppets, partisan nanoinfluencers—why and how they do what they do. The chapters alternate between the perspectives of interviewees from well-resourced and well-organized groups: governments and social media corporations are discussed in chapters 3 and 5, and automated political influencers and journalists—those from less-resourced and less-organized groups—are discussed in chapters 4 and 6.

In chapter 3, I describe the activities of state-based producers of computational propaganda. Much of the early research into the political use of bots and social media focused on governmental use, which is the basis of traditional top-down models of propaganda. As I show, governments are still the most well-resourced—and therefore perhaps the most effective—users of computational propaganda. In this chapter, I discuss how political elites work to manufacture consensus using what I call "state-sponsored trolling."[62] I also show that some governments, particularly Russia and India, have rapidly adapted old propaganda strategies to new digital tools, while others, such as the United States and United Kingdom, are still adjusting to the new informational landscape.

In chapter 4, I consider how ordinary people—usually individuals, often with little to no financial backing and sometimes even with little technological know-how—use political bots and other tools and strategies. I call this unique and amorphous actor group "automated political influencers": *automated* because they rely on bots in some way to spread their messaging; *political* because the messages they spread are concerned with political events, ideas, and people; and *influencers* because they market their ideas on social media. The core transportable idea of this chapter is the concept of *democratized propaganda*—the internet and social media–enabled use of political manipulation by the masses. This concept emerged years into my work on computational propaganda; it took so long because I was hung up on the digital activities of powerful political entities. Through my fieldwork, though, I realized that many of the producers and trackers of bot-centric propaganda did not work for governments, political parties, militaries, or intelligence services. Many worked in loose collectives or individually, motivated by political beliefs or money (or

both). Here, I show that while automated political influencers are less organized and less resourced than governments, they are able to efficiently leverage guerilla marketing strategies to break through to virality and "mainstream" media coverage, and sometimes they get picked up by governments and made part of larger organizations.

In chapter 5, I zoom back out to examine the technology industry's role in facilitating computational propaganda and manufactured consensus. This chapter returns to lessons learned from Herman and Chomsky about big media's role in spreading propaganda. Here, though, the "big media" is big *social* media: new, globally powerful firms like Google and Facebook, which are deeply complicit in political manipulation campaigns across their various social media products. Contemporary versions of the traditional mass media of Herman and Chomsky's day (such as major media firms like Disney and News Corp) still play a large role in fostering propaganda, but they rarely do so by directly producing new propagandistic content. Instead, they spread propaganda by reacting to manipulative content on social media. In this chapter, I focus on the notion of bot-based algorithmic manipulation, sharing stories from interviewees which show that often their primary intentions were to use large numbers of bots to trick social media sites' trending algorithms; they wanted Facebook, YouTube, and Twitter to push propagandistic content on their front pages or sidebars, hoping that the content would be picked up by traditional news media. As I show, social media firms have known that this type of algorithmic gaming was a systemic problem, but they have failed to respond to it quickly or comprehensively enough.

In chapter 6, I zero in on journalism, exploring how reporters and news organizations are responding to the problem of computational propaganda. I show that some journalists seek to fight fire with fire, using social and political bots in their own work to keep up with the reach and volume of automated propaganda. Journalists often use bots as what I call *information radiators*, a term that came up in my interview with Al, a journalist who also built and used social media bots. I show how journalism (usually unwittingly) is exacerbating the problem: journalists often unintentionally amplify and legitimize disinformation spread by computational propaganda.[63] This is, in part, a structural problem, for news organizations are extremely under resourced—largely because social media companies have usurped their reporting and the advertising that had provided revenue

for news sources.[64] Journalists are also frequently the primary targets of computational propaganda attacks and large-scale online trolling campaigns. Political bots are used to stop journalists from communicating about particular stories or ideas due to fear of isolation and reprisal.[65]

The conclusion offers up a summary of the core arguments of this book and discusses paths for future research on political bots and the people who build and track them. I consider ways in which computational propaganda is changing—how both bots and their masters are becoming more sophisticated. Now, organized groups of human users (partisan nanoinfluencers) are making it more difficult than ever to detect manufactured consensus and bogus social media trends. I outline new incarnations of propaganda, most notably geopropaganda and encrypted propaganda, which rely on geolocation tools and closed messaging apps, respectively. Finally, I offer up some solutions to computational propaganda —pragmatic ideas on how to respond to the problem, aimed at policymakers, academics, technologists, and others.

Notes

1. Propaganda, Social Media, and Political Bots

1. As with all interviewees in this book, I've given Hernan a pseudonym.
2. Ryan Broderick and Íñigo Arredondo, "Meet the 29-Year-Old Trying to Become the King of Mexican Fake News," *BuzzFeed News*, June 28, 2018, https://www.buzzfeednews.com/article/ryanhatesthis/meet-the-29-year-old-trying-to-become-the-king-of-mexican.
3. Andrew Rosati and Mario Sergio Lima, "In Hunt for 'Office of Hate,' Brazil's Supreme Court Closes In," *Bloomberg*, June 22, 2020, https://www.bloomberg.com/news/articles/2020-06-22/in-hunt-for-office-of-hate-brazil-s-supreme-court-closes-in.
4. Samuel Woolley, "Manufacturing Consensus: Computational Propaganda and the 2016 U.S. Presidential Election" (PhD diss., University of Washington, 2018).
5. Soroush Vosoughi, Deb Roy, and Sinan Aral, "The Spread of True and False News Online," *Science* 359, no. 6380 (March 9, 2018): 1146–51, https://doi.org/10.1126/science.aap9559.
6. Langdon Winner, *The Whale and the Reactor* (Chicago: University of Chicago Press, 1986), 112.
7. Walter Lippmann, *Public Opinion* (1922; reprint, New York: Simon and Schuster, 1997).
8. Edward L. Bernays, *Propaganda* (1928; reprint, New York: Ig, 2005).
9. Lippmann, *Public Opinion*.
10. Edward S. Herman and Noam Chomsky, *Manufacturing Consent: The Political Economy of the Mass Media* (New York: Pantheon, 2002).
11. Antonio Gramsci, *Selections from Prison Notebooks* (Durham, NC: Duke University Press, 2007).
12. Sandra K. Evans et al., "Explicating Affordances: A Conceptual Framework for Understanding Affordances in Communication Research," *Journal of Computer-Mediated Communication* 22, no. 1 (2017): 35–52, https://doi.org/10.1111/jcc4.12180.
13. Woolley, "Manufacturing Consensus," 3.
14. This dynamic recalls the spiral of silence, that palpable fear of isolation people feel when realizing they might think differently from those around them. Elisabeth Noelle-Neumann, *The Spiral of Silence: Public Opinion—Our Social Skin* (Chicago: University of Chicago Press, 1993).
15. Jacques Ellul, *Propaganda: The Formation of Men's Attitudes* (New York: Vintage, 1973).
16. Philip N. Howard and Malcolm R. Parks, "Social Media and Political Change: Capacity, Constraint, and Consequence," *Journal of Communication* 62, no. 2 (2012): 359–62, https://doi.org/10.1111/j.1460–2466.2012.01626.
17. Yochai Benkler, Robert Faris, and Hal Roberts, *Network Propaganda: Manipulation, Disinformation, and Radicalization in American Politics* (New York: Oxford University Press, 2018).
18. Whitney Phillips, "The Oxygen of Amplification: Better Practices for Reporting on Extremists, Antagonists, and Manipulators," *Data and Society* (Data and Society Research Institute, May 22, 2018), https://datasociety.net/library/oxygen-of-amplification/.
19. Joan Donovan, "The Lifecycle of Media Manipulation," *DataJournalism.com*, n.d., https://datajournalism.com/read/handbook/verification-3/investigating-disinformation-and-media-manipulation/the-lifecycle-of-media-manipulation.
20. Samuel C. Woolley and Philip N. Howard, "Automation, Algorithms, and Politics: Political Communication, Computational Propaganda, and Autonomous Agents—Introduction," *International Journal of Communication* 10, no. 10 (October 12, 2016): 9.

21. Norah Abokhodair, Daisy Yoo, and David W. McDonald, "Dissecting a Social Botnet: Growth, Content and Influence in Twitter," in *Proceedings of the 18th ACM Conference on Computer Supported Cooperative Work and Social Computing* (New York: Association for Computing Machinery, 2015), 839–51, https://doi.org/10.1145/2675133.2675208.
22. Samuel C. Woolley, "Automating Power: Social Bot Interference in Global Politics," *First Monday* 21, no. 4 (March 10, 2016), https://doi.org/10.5210/fm.v21i4.6161.
23. Philip N. Howard, "Network Ethnography and the Hypermedia Organization: New Media, New Organizations, New Methods," *New Media and Society* 4, no. 4 (June 30, 2016), https://doi.org/10.1177/146144402321466813.
24. Gilad Lotan, "#FreddieGray—Is Not Trending on Twitter?" *Medium*, April 24, 2015, https://medium.com/i-data/freddiegray-is-not-trending-on-twitter-9e4550607a39.
25. J. Ratkiewicz et al., "Detecting and Tracking Political Abuse in Social Media," *Proceedings of the International AAAI Conference on Web and Social Media* 5, no. 1 (2021): 297–304, https://ojs.aaai.org/index.php/ICWSM/article/view/14127.
26. Katie Joseff, Anastasia Goodwin, and Samuel Woolley, "Nanoinfluencers Are Slyly Barnstorming the 2020 Election," *Wired*, August 15, 2020, https://www.wired.com/story/opinion-nanoinfluencers-are-slyly-barnstorming-the-2020-election/.
27. Panagiotis T. Metaxas, Eni Mustafaraj, and Dani Gayo-Avello, "How (Not) to Predict Elections," in *2011 IEEE Third International Conference on Privacy, Security, Risk and Trust and 2011 IEEE Third International Conference on Social Computing* (Boston: IEEE, 2011), 165–71, https://doi.org/10.1109/PASSAT/SocialCom.2011.98.
28. Eni Mustafaraj and Panagiotis T. Metaxas, "What Edited Retweets Reveal about Online Political Discourse," in *Analyzing Microtext: Papers from the 2011 AAAI Workshop* (Palo Alto: AAAI, 2011), 38–43.
29. Marion R. Just et al., "'It's Trending on Twitter'—An Analysis of the Twitter Manipulations in the Massachusetts 2010 Special Senate Election," SSRN Scholarly Paper (Rochester, NY: Social Science Research Network, August 23, 2012), https://papers.ssrn.com/abstract=2108272.
30. Thomas B. Edsall, "Trump's Digital Advantage Is Freaking Out Democratic Strategists," *New York Times*, January 29, 2020, https://www.nytimes.com/2020/01/29/opinion/trump-digital-campaign-2020.html.
31. Kevin Poulsen and Desiderio Andrew, "Russian Hackers' New Target: A Vulnerable Democratic Senator," *Daily Beast*, July 26, 2018, https://www.thedailybeast.com/russian-hackers-new-target-a-vulnerable-democratic-senator.
32. Samuel Woolley, *The Reality Game: How the Next Wave of Technology Will Break the Truth* (New York: PublicAffairs, 2020).
33. Philip N. Howard, *Pax Technica: How the Internet of Things May Set Us Free or Lock Us Up* (New Haven, CT: Yale University Press, 2015).
34. Jeff Orlowski, *The Social Dilemma*, streaming video (Netflix, 2020).
35. Jason Lanier, *Ten Arguments for Deleting Your Social Media Accounts Right Now* (New York: Henry Holt, 2018).
36. Randall Lewis, Justin M. Rao, and David H. Reiley, "Measuring the Effects of Advertising: The Digital Frontier" (Working Paper, National Bureau of Economic Research, October 2013), https://doi.org/10.3386/w19520; Tim Hwang, *Subprime Attention Crisis: Advertising and the Time Bomb at the Heart of the Internet* (New York: FSG Originals, 2020).
37. Joshua A. Tucker et al., "Social Media, Political Polarization, and Political Disinformation: A Review of the Scientific Literature," Hewlett Foundation, March 19, 2018, https://hewlett.org/library/social-media-political-polarization-political-disinformation-review-scientific-literature/.
38. Kathleen Hall Jamieson, *Cyberwar: How Russian Hackers and Trolls Helped Elect a President: What We Don't, Can't, and Do Know* (Oxford: Oxford University Press, 2018).

39. Ellul, *Propaganda*.

40. Nicholas Monaco, Carly Nyst, and Samuel Woolley, "State-Sponsored Trolling: How Governments Are Deploying Disinformation as Part of Broader Digital Harassment Campaigns," Institute for the Future, 2020, https://www.iftf.org/statesponsoredtrolling.

41. Kimberly Grambo, "Fake News and Racial, Ethnic, and Religious Minorities: A Precarious Quest for Truth," *University of Pennsylvania Journal of Constitutional Law* 21, no. 5 (January 1, 2019): 1299.

42. Becca Lewis and Alice E. Marwick, "Media Manipulation and Disinformation Online," *Data and Society* (Data and Society Research Institute, May 15, 2017), https://datasociety.net/library/media-manipulation-and-disinfo-online/.

43. Samuel Woolley and Douglas Guilbeault, "United States: Manufacturing Consensus Online," in *Computational Propaganda: Political Parties, Politicians, and Political Manipulation on Social Media*, ed. Samuel Woolley and Philip Howard (Oxford: Oxford University Press, 2018), 185–212.

44. Disciplines that have struggled to contend with how the rise of the web, writ large, changes their theories and models. See, e.g., Ekaterina Zhuravskaya, Maria Petrova, and Ruben Enikolopov, "Political Effects of the Internet and Social Media," *Annual Review of Economics* 12 (August 2020): 415–38.

45. Kate Starbird, Twitter post, October 9, 2019, https://twitter.com/katestarbird/status/1182093465603039232.

46. Caroline Jack, "Lexicon of Lies," *Data and Society* (Data and Society Research Institute, August 9, 2017), https://datasociety.net/library/lexicon-of-lies/.

47. "The Next Campaign Text You Get May Be from a Friend," *Wired*, January 2, 2020, https://www.wired.com/story/relational-organizing-apps-2020-campaign/.

48. Robert S. Mueller, *Report on the Investigation into Russian Interference in the 2016 Presidential Election* (Washington, DC: U.S. Department of Justice, 2019), https://www.justice.gov/storage/report.pdf.

49. Shelby Grossman, Daniel Bush, and Renee DiResta, "Evidence of Russia-Linked Influence Operations in Africa," Stanford Internet Observatory, October 29, 2019, https://fsi.stanford.edu/news/prigozhin-africa.

50. Nicholas Monaco, Melanie Smith, and Amy Studdart, "Detecting Digital Fingerprints: Tracing Chinese Disinformation in Taiwan," Graphika, 2020, https://graphika.com/reports/detecting-digital-fingerprints-tracing-chinese-disinformation-in-taiwan/; William M. Arkin, "As Tensions Rose, U.S. Intelligence Spotted Election Meddling by China, Russia, Iran," *Newsweek*, November 8, 2021, https://www.newsweek.com/tensions-rose-us-intelligence-spotted-election-meddling-china-russia-iran-1646722.

51. Taberez Ahmed Neyazi, "Digital Propaganda, Political Bots and Polarized Politics in India," *Asian Journal of Communication* 30, no. 1 (January 2, 2020): 39–57, https://doi.org/10.1080/01292986.2019.1699938.

52. Gabriel Pereira, Iago Bojczuk, and Lisa Parks, "WhatsApp Disruptions in Brazil: A Content Analysis of User and News Media Responses, 2015–2018," preprint, MediArXiv, May 4, 2020, https://doi.org/10.33767/osf.io/k2hjv.

53. Aim Sinpeng, Dimitar Gueorguiev, and Aries A. Arugay, "Strong Fans, Weak Campaigns: Social Media and Duterte in the 2016 Philippine Election," *Journal of East Asian Studies* 20, no. 3 (2020): 1–22, https://doi.org/10.1017/jea.2020.11.

54. "Social Media Propelled Ethnocentric Disinformation and Propaganda During the Nigerian Elections," Global Voices Advox, November 6, 2019, https://advox.globalvoices.org/2019/11/06/social-media-propelled-ethnocentric-disinformation-and-propaganda-during-the-nigerian-elections/.

55. Erkan Saka, "Social Media in Turkey as a Space for Political Battles: AKTrolls and Other Politically Motivated Trolling," *Middle East Critique* 27, no. 2 (April 3, 2018): 161–77,

https://doi.org/10.1080/19436149.2018.1439271.

56. Samuel Woolley et al., "The Bot Proxy: Designing Automated Self Expression," in *A Networked Self and Platforms, Stories, Connections*, ed. Zizi Papacharissi (New York: Routledge, 2018), 59–76.

57. Yazan Boshmaf et al., "The Socialbot Network: When Bots Socialize for Fame and Money," in *Proceedings of the 27th Annual Computer Security Applications Conference* (New York: Association for Computing Machinery, 2011), 93–102, https://doi.org/10.1145/2076732.2076746.

58. Benkler, Faris, and Roberts, *Network Propaganda*, 25.

59. Alex Stamos, "An Update on Information Operations on Facebook," About, Meta, September 6, 2017, https://about.fb.com/news/2017/09/information-operations-update/.

60. Shadab Nazmi, Dhruv Nenwani, and Gagan Narhe, "Social Media Rumours in India: Counting the Dead," *BBC News*, 2018, https://www.bbc.co.uk/news/resources/idt-e5043092-f7f0–42e9–9848-5274ac896e6d.

61. Paul Mozur, "A Genocide Incited on Facebook, with Posts from Myanmar's Military," *New York Times*, October 15, 2018, https://www.nytimes.com/2018/10/15/technology/myanmar-facebook-genocide.html.

62. Monaco, Nyst, and Woolley, "State-Sponsored Trolling."

63. Josephine Lukito et al., "The Wolves in Sheep's Clothing: How Russia's Internet Research Agency Tweets Appeared in U.S. News as Vox Populi," *International Journal of Press/Politics* 25, no. 2 (April 1, 2020): 196–216, https://doi.org/10.1177/1940161219895215.

64. Jennifer Alejandro, "Journalism in the Age of Social Media," Reuters Institute for the Study of Journalism, 2010, https://reutersinstitute.politics.ox.ac.uk/our-research/journalism-age-social-media.

65. Frederick Schauer, "Fear, Risk and the First Amendment: Unraveling the Chilling Effect," *Boston University Law Review* 58, no. 5 (1978): 685–732.

2. Understanding Manufactured Consensus

1. Harold D. Lasswell, "The Theory of Political Propaganda," *American Political Science Review* 21 (1927): 631.

2. Vindu Goel, Suhasini Raj, and Priyadarshini Ravichandran, "How WhatsApp Leads Mobs to Murder in India," *New York Times*, July 18, 2018, https://www.nytimes.com/interactive/2018/07/18/technology/whatsapp-india-killings.html; Timothy McLaughlin, "How WhatsApp Fuels Fake News and Violence in India," *Wired*, December 12, 2010, https://www.wired.com/story/how-whatsapp-fuels-fake-news-and-violence-in-india/; Mohammad Ali, "The Rise of a Hindu Vigilante in the Age of WhatsApp and Modi," *Wired*, April 14, 2020, https://www.wired.com/story/indias-frightening-descent-social-media-terror/.

3. Russel Mindich, "The Future of Organizing Is Relational," *Medium*, June 25, 2020, https://medium.com/outvote/the-future-of-organizing-is-relational-a435fb6e1a4c.

4. Walter Lippmann, *Public Opinion* (1922; reprint, New York: Simon and Schuster, 1997).

5. Harold D. Lasswell, *Propaganda Technique in the World War* (PhD diss., University of Chicago, 1926).

6. Edward L. Bernays, *Propaganda* (1928; reprint, New York: Ig, 2005).

7. Jacques Ellul, *Propaganda: The Formation of Men's Attitudes* (New York: Vintage, 1973).

8. Edward S. Herman and Noam Chomsky, *Manufacturing Consent: The Political Economy of the Mass Media* (New York: Pantheon, 2002).

9. Garth S. Jowett and Victoria J. O′Donnell, *Propaganda and Persuasion*, 5th ed. (Thousand Oaks, CA: SAGE, 2011).

10. Stanley B. Cunningham, *The Idea of Propaganda: A Reconstruction* (Westport, CT: Greenwood, 2002).