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Of Humans, Machines, and Extremism: The Role of Platforms in Facilitating Undemocratic Cognition

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OF HUMANS, MACHINES, AND EXTREMISM: THE ROLE OF PLATFORMS IN FACILITATING UNDEMOCRATIC COGNITION

ABSTRACT

The events surrounding the 2020 U.S. election and the January 6 insurrection have challenged scholarly understanding of concepts like collective action, radicalization, and mobilization. In this article, we argue that online far-right radicalization is better understood as a form of distributed cognition, in which the groups' online environment incentivizes certain patterns of behavior over others. Namely, these platforms organize their users in ways that facilitate a nefarious kind of collective intelligence, which is amplified and strengthened by systems of algorithmic curation. In short, these platforms reflect and facilitate a certain kind of *undemocratic cognition*, fueled by affective networks, resulting in events like the January 6 insurrection and far right extremism more broadly. To demonstrate, we apply this framing to a case study (the "Stop the Steal" movement) to illustrate how this framework can make sense of radicalization and mobilization influenced by undemocratic cognition.

keywords: undemocratic cognition; online extremism; radicalization; publics; Facebook

Introduction

On January 6, 2021, a mob stormed the U.S. Capitol building, breaching the walls for the first time since 1814. Images from the day are striking - from rioters breaking glass and looting offices, to the Capitol dome rising above clouds of smoke in the aftermath. But among these scenes of destruction and rage, media reports focused on one trend in particular: the omnipresence of paraphernalia emblazoned with the capital letter Q - a signal of numerous rioters' support for the QAnon conspiracy, which holds that "the world is run by a cabal of Satan-worshiping pedophiles" (Roose 2021). Though the QAnon community had made headlines in the months leading up to and after the 2020 election, with many warning that the conspiracy had grown beyond the niche online spaces where it began, the images of the "QAnon Shaman" and other insurrectionists wearing clothing and waving flags and posters with giant Qs as they stormed the Capitol was a stark reminder of the community's social and political power - as well as their ability to mobilize.

Despite the media's focus on dramatic figures such as the QAnon Shaman and others like him, QAnon supporters were in fact just one node in a much larger network of protestors; it was this wider coalition--the "Stop the Steal" movement--which was ultimately responsible for gathering the insurrectionists in Washington, DC, that day. Started by politically well-connected far-right activists, the "Stop the Steal" organizers had exploited the affordances of Facebook in order to attract and mobilize enraged citizens who believed the election had been stolen from Donald Trump--and, as an extension, from them. Notably, reports about who was in the crowd on January 6 found that a majority of those who participated had no formal allegiance or oganizational membership in far-right militias or white supremacist groups (Pape and Ruby 2021). Rather, the January 6 insurrection--and the "Stop the Steal" movement which inspired it-- was largely an act of otherwise "average" white Americans.

The constitution of the January 6 crowd, though it seemingly took many journalists by surprise, was not unexpected to scholars, many of whom had been warning about the effects of "whitelash" for years prior to January 6, highlighting its mobilizing power (Embrick et al. 2020; Lippard, Carter, and Embrick 2020; Sengupta, Osborne, and Sibley 2019) and its growing association with acts of collective, and visible, violence (Amarasingam and Argentino 2020). Moreover, the role of Facebook in organizing the insurrection was also predictable, as scholars have continually shown how social media algorithms actively push people toward extremist content (Daniels 2018), how extremist celebrities exploit the affordances of social media platforms (Lewis 2018), and how extremist content–posts that invoke fear and rage in users–is often amplified by the platforms themselves (Merrill and Oremus 2021).

Taken together, these interventions have provided much-needed insights into the mechanics of digitally-mediated radicalization: the problem of online extremism, in this telling, is one of vulnerable individuals falling prey to dangerous extremist ideas that spread quickly and easily due to the technological affordances of social media platforms combined with the lack of oversight by the companies running those platforms. As a result of this diagnosis, scholars from various disciplines and practitioners have largely formed a consensus around the need for more curation on the part of social media companies and platforms, with the goal to protect individuals from encountering harmful ideas by suppressing or banning these ideas and blocking the users or groups who espouse them (Donovan 2020; Ganesh and Bright 2020; Gillespie 2018; Van Dijck, de Winkel, and Schäfer 2021).

Removing extremist ideas from specific social media platforms might be an effective solution, but it is, ultimately, an incomplete one. While suppressing or otherwise curating the content that circulates in online spaces might work to push that content off certain platforms, it does little to prevent the people and groups espousing this content from gathering *elsewhere* and radicalizing further (Jasser et al. 2021). And this is precisely what happened with the "Stop the Steal" movement on Facebook; though the platform removed the original "Stop the Steal" Group after only a couple days, similar Groups proliferated "at a pace that outstripped Facebook's ability to keep up" and started organizing off-platform as well (Bond and Allyn 2021).

It is clear, then, that calls to prevent online radicalization by blocking, (shadow)banning, or otherwise curating the content shared on social media are insufficient and for two reasons. First, by focusing primarily on the ways that individuals encounter extremist ideas and information on social media platforms like Facebook, these calls largely overlook the *collective* dimensions of radicalization (Smith, Blackwood, and Thomas 2020)--the ways that Facebook Groups functioned not just as sites of information dissemination but also of socialization, identity, and collective meaning-making.

Second, and following, scholars and practitioners have largely focused attention on the role of ideas–and, in particular, the effects of disinformation–in facilitating processes of online radicalization. But while the effects of false and misleading content on users' preferences are mixed (Guess & Lyons 2020), this emphasis on substance threatens to ignore the *affective* ways that users process information. Focusing on ideas, in other words, overlooks the underlying systemic causes that lead these ideas to be taken up and used to mobilize (often violent) collective action - the ways that platform architectures are designed to privilege, push, and encourage certain *affective* attachments among their groups, users, and content.

In this paper, then, we suggest an alternative approach to the study of online radicalization. Rather than focus on the ways that individuals encounter content shared on social media, we instead highlight how digital media ecologies shape and are shaped by the users who

participate in them. We argue, in other words, that online radicalization is best understood as a *collective* and *affective* process that is being facilitated by an increasingly fragmented and personalized (often algorithmically-driven) platform ecology. Building on existing research on algorithmic curation, cognition, and networked affect, we show how digital platforms not only curate and channel certain content to individual users, but also facilitate a particular mode of collective thinking that we term *undemocratic cognition*.

Undemocratic cognition, as we understand it here, is a distributed and affective response to a set of social circumstances (both organic and manufactured). Though many interested in networked affect largely focus on the *individual* affective responses, here we highlight instead the role of *groups*—undemocratic cognition, on this reading, is a *collective* and *affective* process through which groups respond to changing social circumstances. But while democracy, as political scientists have long argued, requires habits of open-mindedness and active participation in its citizens, undemocratic cognition occurs when those same citizens fail to engage in these (self-)critical modes of thinking, and instead form *unreflective* affective attachments to a particular community or worldview.

Understood using this framework of undemocratic cognition, we can more clearly see how groups like the Boogaloo Bois, "Stop the Steal", and QAnon–feeling threatened by socio-cultural shifts that disrupt their political power–withdraw from the wider public sphere and instead focus critical attention on their own communal goals and identities. Aided by digital platforms' persuasive design, including the use of algorithms and other affordances which work to amplify affective responses and channel users into personalized 'echo chambers,' these groups' undemocratic cognition culminated in discourses of collective violence that, ultimately, influenced events like the January 6 U.S. Capitol Insurrection.

In the following sections, we begin with an overview of how scholars have previously examined the processes of online radicalization and extremism in terms of individuals and information, focusing primarily on the individual characteristics and (corrupted) information environments that make users of digital technologies susceptible to extremist ideas. Drawing from theories of distributed cognition, as well as the literature on affective networks and democratic theory, we then suggest the alternative framework of undemocratic cognition to understand the processes of radicalization as something that occurs at both a material (e.g. digital platforms) and symbolic (e.g. ideology) level; it is a process through which technological affordances facilitate unreflective affective attachments to, and among, *groups*. In doing so, we hope to bring together various threads of research on algorithmic curation, collective action, political communication, cognition, and networked affect to illustrate how all of these different bodies of literature can better inform our understanding of the current political and social crisis that the U.S. and many other countries are facing.

We then show how this approach better captures the complexities of online radicalization by applying it to the "Stop the Steal" movement on Facebook and the organization of the January 6 insurrection. Although we are not presenting empirical data in this article, our descriptive approach and naming of the phenomenon we have observed is a necessary first step in theorizing the processes that drive it. We conclude by suggesting how this framework of undemocratic cognition might not only inspire future research questions, but also continue the conversations regarding the implications of an individual-focused approach to understanding, and addressing, online radicalization.

Radicalization, Affect, and Undemocratic Cognition

The use of the Internet as a space for recruitment and indoctrination into far-right extremist rhetoric is a problem as old as the social web itself. Since the early-to-mid 1990s, when scholars and policymakers watched the launch of Stormfront - a then-bulletin board for white nationalists to gather in support of David Duke's Senatorial campaign (Daniels 2009) - many have tracked the proliferation of extremist groups who use digital technologies to recruit, gather, and disseminate ideas to the wider public. And, in the years since, we have witnessed an explosion of new tactics in online recruiting and mobilization, as the far right media ecosystem expanded from the more traditional forums (like Stormfront) to include spaces like Facebook Groups, Twitter, Instagram, YouTube, and TikTok as well as dedicated "alt-tech" platforms like Gab, Discord, and Telegram (Donovan, Lewis, and Friedberg 2019).

Responding to this expanding far-right digital ecosystem, scholars have largely approached the question of online mobilization by examining distinct, though interlocking, factors. Some highlight the ways that the design of digital platforms affords radicalization (Carter and Kondor 2020; Donovan et al. 2019; Koehler 2014; Marwick and Lewis 2017; Massanari 2015), while others have pointed to the ways that the role of corporate logics of libertarian "free speech" and the over-reliance on artificial intelligence for moderation lead to failures in moderating extreme content (e.g. Gillespie 2020; Jereza 2021; Lewis 2020). Still others attempt to identify the individual personality traits or psychological characteristics that lead one to be susceptible to these 'dangerous' technological environments (Bilewicz and Soral 2020; Koehler 2014; Odag, Leiser, and Boehnke 2019). Taken together, this work reflects a general consensus regarding the processes of online radicalization: vulnerable individuals are fed extremist content by social media platforms and corporations set on maximizing engagement (and profit) - at whatever the social cost.

But while it is certainly true that individual behaviors, technological affordances, and corporate decision-making have a role to play in the spread of extremism online, these explanations are nevertheless insufficient. By focusing attention on *individual* prolicivities toward extremist content, much of the literature on online radicalization largely fails to account for the wider *social* and systemic conditions that make those individual characteristics salient. Radicalization, in other words, is not just an individual process, but a *collective* one (Smith, Blackwood, and Thomas 2020); approaching radicalization as a problem of faulty individual judgments or corrupted information environments, then, fails to fully account for the role of community in making these decisions, as well as the *affective* responses that often lead us to join communities - and to stick around in the face of new, and competing, information.

In this section, we build on existing literature to introduce an alternative framework for understanding the processes of online radicalization and extremism: *undemocratic cognition*. Combining insights from work on actor-network theory, connective action, affect theory, distributed cognition, and democratic theory, we argue that undemocratic cognition involves the formation of unreflective *attachments* to not just information, but also communities, in response to users' feelings of perceived alienation and powerlessness. The problem with algorithmically mediated platforms, then, is not just the well-documented curation and dissemination of information, but also the feelings and relationships they cultivate in and between users.

Networks, affect, and distributed cognition. Originally developed as a model for understanding the dynamics of group-level decision-making in scientific communities, the concept of distributed cognition (dcog) - like that of actor-network theory - is a helpful

framework for understanding the dynamic relationship between humans, machines, and the forms of intelligence and agency both bring to certain communities of practice (Fox 2000; Hutchins 2014; Latour 2005; Moran, Nakata, and Inoue 2012). Taking a "dcog" approach to the study of online extremism, then, would emphasize the reciprocal interactions between users and their algorithmic environments. As Tania Bucher argues, "while algorithms certainly do things to people, people also do things to algorithms" (Bucher 2018:117). This dynamic relationship between user and machine is one that is ever-evolving; it continually impacts both the human and non-human agents within a given situation.

But the interactions between users and their social media environments are characterized by more than just rational cognition; there is also an *affective* dimension (Dean 2010; Johnson 2018; Papacharissi 2015). As Johnson notes, online radicalization involves a social process of "affective networking," which allows strategic actors to "crowdsource paranoia" (2018, 101) that is then amplified by algorithms that force these connections via otherwise disparate data points (van der Nagel 2018). The digital ecologies facilitated by platforms like Facebook, then, are populated by both human and nonhuman actors that connect, create, and spread forms of crowdsourced paranoia into communities that, for example, mobilize white supremacists, spread conspiracies like QAnon, and bridge to other communities, as in the case of anti-vaccination bridging from "wellness" into more extreme ideologies (Smith and Graham 2019). In all of these examples, affect plays a key role in the processes of radicalization, as paranoia is deeply felt; it not only shapes a person's worldview, but also binds people together within groups (Ahmed 2013; Johnson 2018). Both hate, and paranoia, especially within the current social and political context, work to affectively mobilize reactionary groups as they respond to perceived threats to the dominant (white) social order.

But whereas some scholars may often view this affective process through the lens of the individual neoliberal subject (Dean 2010), taking a dcog approach reminds us that these "individual" processes of radicalization are always systemic; individuals are drawn to this content as a result, in part, of their position within a wider system. As scholars have demonstrated, large-scale communication networks have been used to successfully mobilize resources and collective action framing for social movements (Bennett and Segerberg 2012) and have helped movements to mobilize resources and build a shared identity among members (Milan 2015).

Taken together, these frameworks suggest a model of circulation in which not just cognitive processes, but also emotions, are distributed across members of a group, between people and computers, and over time. The infrastructural logics of these platforms configure users' options and actions in ways that, especially in the case of far-right radicalization, brokers information and cognition in ways that encourage more intense affective content and engagements--not just for individuals, but between and among groups as they engage in collective attempts at meaning-making (Milan 2015). By combining insights from dcog and affect theory, then, we are able to see the interplay between humans and the tools they use, and to better understand the cognitive and affective processes through which these mental representations of events and knowledge are shared, created, and manipulated by users and the groups to which they belong.

Undemocratic Cognition. Approaching the problem of online radicalization through the lens of distributed cognition and affect, we can see how specific digital environments facilitate a form of distributed thinking that we call here *undemocratic cognition*. We define undemocratic

cognition as a collective process facilitated by large-scale social media infrastructures that organize and steer people toward certain social epistemologies by way of their affective responses. Unlike connective action, which is a way of making sense of mobilization, identity building, and resource sharing in political movements (Bennett and Segerberg 2012), undemocratic cognition is an *ontological* process that is accelerated by social media infrastructure and algorithms, creating deeper schisms and disagreements on what constitutes reality.

Democratic politics - especially in a diverse society - requires that citizens cultivate specific habits and attitudes. Chief among these is a disposition of open-mindedness; democratic political systems requires that citizens have "a mind that is open to, and thus receptive of, new and different ideas, views, and perspectives… [and that] consciously strives to identify and overcome bias and prejudice in order to give every point of view a chance of being heard and fairly considered" (Landemore 2018:796; Hare 2004). And, as a cooperative activity, democracy also requires the active participation by citizens in making decisions that affect their lives (Barber 2004; Pateman 1970). Without active participation, citizens will become passive and open to domination (Tocqueville 1969; Young 1990). But active participation will result in stasis and stagnation if it is not coupled with a spirit of open-mindedness (Dewey 1916).

Certainly, active and open-minded participation in democratic politics is no easy feat. As many have long argued, the participatory demands of democracy are quite high. As a result, scholars have spent considerable time and effort elaborating strategies through which to cultivate the requisite habits and attitudes in citizens. Some have pointed to the role of education (Dewey 1916), while others highlight the importance of informal norms and institutions, like friendship or neighborliness (Allen 2004; Rosenblum 2016). Using the framework of distributed cognition, however, here we emphasize the role of the social and cultural environment in facilitating the requisite democratic practices and affects - or in thwarting them.

The current digital social environments in which people find themselves are characterized by fragmentation and hyper-personalization, as spaces like Facebook Groups proliferate. This proliferation accelerates a fragmentation of 'the public' that makes it easier to fall prey to propagandistic ideas that promise quick and easy answers and, as a result, makes it more difficult for users to cultivate a habit of open-mindedness (Forestal 2021; Lasswell 1938). Likewise, the increasing use of personalized algorithms - often invisible or opaque to users - discourages users from making their own decisions, individually and collectively, about what content is "worth" entering into the public discourse. Instead, on platforms like Facebook, Instagram, and TikTok, users are encouraged to rely on a personalized algorithmic feed that passively nudges them into informational and ideological spaces that mirror a certain representation of (un)reality, even as it influences--and is influenced by--their unthinking action (Alfano, Carter, and Cheong 2018; Daniels 2018; Johnson 2018).

The result is that these technological affordances are changing our very habits of cognition and contestation over what constitutes a "shared" reality and cultural system (Couldry and Hepp 2016), creating a largely passive public--one that is unlikely to seek out new and challenging information, but is instead primed to be mobilized by outside actors (Lasswell 1938)--just as we saw on January 6. To illustrate the ways that Facebook, and other algorithmically-guided social media, not only encourage forms of connective action but *undemocratic cognition*, we turn to the (in)action of Facebook and the role that Facebook groups played in the January 6 U.S. Capitol insurrection.

January 6 and "Stop the Steal": A Case Study

Following the January 6 attack on the Capitol building, commenters quickly took to explaining how such an extraordinary event could have happened. Many identified the rhetoric stemming from former President Donald Trump immediately following his election loss (Barry, McIntire, and Rosenberg 2021), while others pointed to the role of far-right militias in organizing the insurrection (Goldman, Benner, and Feuer 2021), arguing that it was the underlying ideology of "right-wing extremism" that, ultimately, was the root cause of the attack (Chapman 2021). In addition to these motivating factors, however, most scholars and commenters were also quick to point out the fundamental role of digital platforms in facilitating and sustaining the movement (Nguyen and Scott 2021): the insurrectionists, wrote one outlet, "planned Wednesday's event on social media and, as it was happening, gleefully live streamed the destruction" (Heilweil and Ghaffary 2021)**.**

But while digital platforms undoubtedly played a role in facilitating the events of January 6, we argue that the too-common diagnosis of "echo chambers" (Barry and Frenkel 2021; Gardels and Berggruen 2019) is incomplete. Instead, what January 6 highlights for us is the political power of undemocratic cognition and the role of digitally mediated social organization in facilitating it. In this section, we show how approaching January 6 through the lens of undemocratic cognition reveals more about how and why the events took place in the manner they did, highlighting the role of Facebook Groups in generating and sustaining the "Stop the Steal" movement that mobilized the insurrection (Yin and Ng 2021). Ultimately, Facebook algorithms actively pushed people into joining Groups based on a number of factors that the algorithm identified about the users, including their dissatisfaction with the 2020 US election results; once formed, however, Groups were able to out-maneuver auto-moderators through coded language and other means of evading censorship (Bond and Allyn 2021).

Importantly, content shared within these Groups included more than simple calls to mobilize and the details of organizing a protest. Instead, many of these Groups' posts included resources that effectively socialized members into certain social epistemologies, particularly in persuading them further that the election was "stolen." Responding to disappointments following Trump's electoral loss, for example, Groups circulated information claiming that the mainstream media were "lying" to them and that the Internet was the space for their members to learn the "truth." In effect, *Stop the Steal*, and other Facebook Groups like it, were doing more than simply raising consciousness or encouraging members to engage in political mobilization; rather, they worked to fundamentally alter their members' patterns of thought and provided alternative symbolic resources for understanding their realities (Smith et al. 2020). Analyzing these engagements through the lens of undemocratic cognition can therefore help to better explain the dynamics at work in extremist movements, like those who violently burst into the public imagination on January 6, and who continue to organize and evolve using these technologies.

Facebook Groups, Echo Chambers, and Fragmentation. In October 2010, Facebook introduced Groups as a "social solution" to the problem of sharing (Siegler 2010). Intended to help users share content more effectively--to avoid the problems associated with 'context collapse' (Marwick and Boyd 2011) -- Groups were designed as a way to "create and maintain a space for sharing with the small communities of people in your life, like your roommates, classmates, co-workers and family" (Mark Zuckerberg, quoted in Arthur 2010). In May 2019, following numerous privacy complaints, Facebook launched the "More Together" advertising

campaign aimed at convincing users to embrace the Groups function as a way of exerting more control over who sees content that users share on the platform (Lepitak 2021).

Yet in the intervening decade, it is clear that Groups have transformed from benign social spaces into something more dangerous for democratic politics. By August 2020, 70% of Facebook's most popular "civic" groups had become breeding grounds for hate speech, violent rhetoric, misinformation, or otherwise toxic content and behavior that was actively being promoted to other users (Cox 2021). And, as is clear from internal documents, Facebook's executives have been aware of the severity of this problem since at least 2016 - that 64% of members joining extremist communities had been encouraged to do so by Facebook's own recommendation tools, including the "Groups You Should Join" and "Discover" functions (Silverman, Mac, and Lytvynenko 2021).

The transformation of Groups was exacerbated by Facebook's affective dimension. As recently leaked internal documents have revealed, Facebook is designed to exploit the affective responses of its users, pushing people toward more and more polarized and extremist content (Bond & Allen 2021; Hao 2021; Silverman et al 2021). Facebook's recommendation systems-- like the "Discover" page that suggests Groups to join--are designed to prioritize affectively polarizing content, pushing it into people's feeds (Merrill and Oremus 2021). And, again, there is evidence that the company knew about the dangerous effects of this combination of Groups and affect: data scientists confirmed in 2019 that posts soliciting 'angry' reaction emojis were more likely to include misinformation and toxicity, meaning that Facebook's design worked to systematically amplify the most inflammatory content on its platform, while also siphoning people into Facebook Groups that reflected and refined this kind of content (Cox 2020, 2021).

And we can see these dynamics at work in the months leading up to January 6. Mere hours after the election on November 3, 2020, thousands of Trump supporters began gathering in the original *Stop the Steal* Facebook Group. Echoing the "big lie" that the election had been "stolen," the *Stop the Steal* Group was characterized by what an internal Facebook report called a "rise in angry vitriol and a slew of conspiracy theories" (Silverman et al. 2021). And this affective response was a powerful one: by the time the original *Stop the Steal* Group was shut down by Facebook, only three days later, it had garnered 360,000 members, and had been growing at a rate of 10,000 new members every hour (Bond and Allyn 2021).

The power of users' affective responses to the election, channeled by Facebook into the collective spaces of *Stop the Steal* Groups, created conditions ripe for undemocratic cognition. Users, facing the undesired election outcome, were "afraid and confused" (Silverman et al. 2021). Tapping into those feelings of confusion and rage, individual"super-inviters" -- who invited ⅔ of the Group's members -- were able to take advantage of the platforms' technical affordances, including recommendation algorithms and disappearing "stories," in order to grow the *Stop the Steal* Group at an astronomical rate (Silverman et al. 2021). And this rapid growth helped to quickly proliferate an alternative worldview - one that played to members' emotions and ultimately"normalized delegitimization and hate"--so widely that simply banning the original Group could not remove its effects (Silverman et al. 2021).

More than just a simple "echo chamber" encounter with information, then, *Stop the Steal* and Groups like it tapped into users' feelings of alienation, rage, and confusion by providing ready-made - though false - answers that reduced members' cognitive dissonance related to losing the election. In effect, the combination of Facebook Groups and personalized recommendations facilitated a distributed affect that ultimately created a wholly separate cognitive and emotional ecosystem–one shaped and shaped by users and platforms.

The effects: undemocratic cognition. As a result of promoting this distributed affect, Facebook facilitated what we call here undemocratic cognition in its users. As recent leaked internal documents have revealed, Facebook is designed to exploit the affective responses of its users, pushing people toward more and more polarized and extremist content (Bond and Allyn 2021; Hao 2021; Silverman et al. 2021). Social media environments are, after all, not just helpful tools for thinking; they shape our processes of meaning-making - as well as the affective mechanisms that go into these processes. As the analysis above shows, the *Stop the Steal* movement's success was due in large part to its unique combination of distributed cognition and affective appeals. More than just an effect of Facebook's personalized recommendation tools, it was their combination with Groups' *collective* dimensions that ultimately facilitated undemocratic cognition in their members. *Stop the Steal* was, for example, a "closed" Group, meaning members had to be approved by administrators; the result was that its administrators could use the Group to recruit new members while also prohibiting users with other views from joining. The result is that *Stop the Steal* was, like similarly constructed anti-vaxxer Groups, "able to serve undiluted misinformation without challenge" (Pilkington and Glenza 2019).

This 'closed' social environment of *Stop the Steal* was, moreover, exacerbated by Facebook's algorithm-driven recommendation system, which helps to cultivate a "'small world' network structure," in which "information diffuses quickly and easily through the network" as users move between multiple Groups with a similar focus (Smith and Graham 2019:1323). Importantly, the dynamics at play cannot be reduced to merely the effects of disinformation. Crucial to the success of the *Stop the Steal* Group - and others like it - was the feeling of belonging and meaning-making they engendered in members. These Groups were not characterized simply by misguided judgment; they were so popular because they spoke to members' feelings of confusion and anger by providing soothing "truth" for the former and a source to blame - and actions to take - for the latter.

Ultimately, then, this combination of closed Groups, personalized algorithms, and affective attachments led to undemocratic cognition in the Groups' members. Because they formed affective attachments, without critical engagement, members cultivated the habits of active political participation but without the attitude of open-mindedness that renders such participation democratic. The result was, as John Dewey predicted almost a century ago, the cultivation of a "dogmatic habit of mind" that accepts some ideas "without question and without reason" (Dewey 2008:188). By keeping people within highly specific and algorithmically curated feeds that are meant to keep users on the platform for as long as possible by fulfilling all of their needs, Facebook created not just an echo chamber but encouraged and prioritized certain modes of thinking, feeling, participation, and engagement over others. And the effects of this undemocratic cognition continue: even as the specific *Stop the Steal* Groups have lost momentum (at least at the time of writing), movements like QAnon continue to engage in similar processes of radicalization and undemocratic cognition.

Future Directions and Possible Research Questions

The framework of undemocratic cognition that we have introduced here is a first step in attempting to more fully explain the phenomenon of radicalization and extremism that we see unfolding on social media platforms and seeping into political and social life offline as well. While scholars and practitioners have attended to these troubling trends, they have largely done so by focusing either on individual characteristics or on the information those individuals

encounter online. Missing from these accounts, however, is an analysis of the *collective* and *affective* dimensions of online radicalization. Drawing from diverse literatures, including dcog, actor-network theory, connective action, and affect theory, however, in this paper we provided a framework for thinking through the processes of radicalization. Online extremism, we argue, is caused, at least in part, by a mode of undemocratic cognition that is facilitated by the hyper-personalized and fragmented structure of algorithmically mediated platforms.

Instead of supporting the kind of open-minded reflective participation required for democratic politics, the proliferation of collective spaces like Groups, combined with personalized recommendation tools like "Groups You Should Join" and "Discover," result in active and organized movements with deep affective ties that remain committed to false, yet comforting, narratives even in the face of new information. Though we are constrained here by word count and the exploratory nature of the present study, we nevertheless propose undemocratic cognition as a productive framework for understanding the processes of radicalization in our current socio-technical era. Though we are not able to engage them fully here, we conclude by suggesting how the framework of undemocratic cognition can open new and fruitful avenues for future study. In particular, we highlight here two areas of interest--1) motive and design and 2) offline political and social context-- before identifying other bodies of literature that may prove generative for such discussions.

Motive and Design. Our present study has looked at the effects of digital platform design. But these design choices are made by companies for specific reasons; these motivations must therefore also be accounted for in parsing the causes and effects of radicalization, and the role of group processes as a fundamental part of these phenomena (Smith et al. 2020). The affectively charged networks of paranoia that have long fueled undemocratic cognition are, ultimately, tied to the profit-driven models that motivate platforms' design and moderation decisions. Facebook, for example, has been criticized for encouraging the spread of content that appeared to be "news" but was actually anti-Clinton, anti-Democratic party conspiracy theories--because such content led to more engagement from users (Johnson 2018).

And this continues even today, despite Facebook's claims that they have attempted to mitigate these issues, as multiple whistleblowers revealed evidence that online platforms - motivated, in part, by the libertarian ideologies of their corporate owners - privilege and even prioritize far right content (Schradie 2019) while suppressing more progressive, left-leaning media and views (Bauerlein and Jeffery 2020). We still see, for example, that right-wing "news" websites like *The Daily Caller* still have the most popular and circulated posts on the platform (Edelman 2021) while wellness communities that spread anti-vaccine and COVID-19 misinformation remain abundant on the platform (O'Sullivan et al. 2021). Additionally, researchers have found that many of the same organizations and funders who have long paid for the creation of more traditional right-wing media and public opinion campaigns similarly fund online far-right content (Schradie 2019).

Taken together, this work demonstrates the multitude of ways that Facebook is still profiting from, and pushing the contribution and sharing of online content that create the "affective networks" (Johnson 2018) that feed communicative capitalism and bind people, devices, links, and content together (Dean 2010), captivating and capturing them within these online spaces. Undemocratic cognition, then, takes shape and further influences their actions, both online and offline, and is shared with others to similarly captivate them into these ontologies. Rather than creating a public square, Zuckerberg and Facebook have created the

conditions for undemocratic cognition to occur - namely because Facebook's profit model is directly at odds with any kind of democratic process or ideals of the public sphere in general.

Offline Social and Political Context. Just as a dcog approach highlights the importance of investigating design motives, so too does it suggest the need to explore the offline context in addition to the technological affordances of online platforms, like those we examine here. Since online politics mirrors offline political context, in that the wealthy and powerful control and manipulate public discourse to perpetuate hegemonic systems, examining undemocratic cognition calls for an expanded analysis--one that considers the interactions *between* online and offline communities and contexts.

Much of the extremist organizing that occurs in digital spaces, for example, is part of a long tradition of conservative and right-wing movements that exploit and feed into white Americans' fear of losing cultural power and dominance in the United States (Belew 2018; Carstarphen et al. 2017; Daniels 2009). Moreover, although these groups are interpreted or treated as reactionary, these movements are attempting to actively preserve and expand the dominant ideology of white supremacy–a system that has defined American politics since the beginning–as much as possible, (Mills 1999). In short, these movements are reactionary in that they are *reacting* to what they believe to be a threat to their system and dominance in all facets of American social, political, and cultural life. The role this dominant political discourse–one that aims to preserve hegemonic systems–plays in the types of beliefs spread in these networks is therefore a crucial dimension to study (Larson and McHendry 2019), particularly in the context of undemocratic cognition.

Finally, the role of politicians in encouraging modes of undemocratic cognition warrants further investigation in their role as opinion leaders and co-creators of this process. In the case of January 6, for example, former president Donald Trump and his allies in the Republican Party played a significant role in embracing and encouraging conspiracy-driven movements like "Stop the Steal" (Alfano et al. 2018; Inwood 2019; Karabell 2021). Approaching this phenomenon through the lens of undemocratic cognition, then, highlights how radicalization is both an online and offline process, spurred by social media but driven by offline political and social forces. While this shift in Republican Party rhetoric is not new--but is rather responding to radicalization processes that have been occurring for much longer on the Evangelical Right-- it has nevertheless found a new opportunity in QAnon and other digitally mediated movements. This kind of polarization is, of course, reflected in the design of big data and machine learning technologies (Chun 2021). Yet focusing on the technological biases does not account for the *group* dynamics that are also central to radicalization as well (Smith et al. 2020).

Future Research. Though undemocratic cognition points to new areas of study, it need not start from scratch. Rather, future research examining this phenomenon may be aided by previous scholarship on, for example, cults and the role that cultural and societal crises plays in the popularity of populist politics that aim to undermine democracy. One possible avenue of study, then, might be to incorporate our framework with existing research on cults, radicalization, and affect, in order to conduct interviews, virtual ethnographies, and case studies from non-U.S. and non-Global North countries to highlight the various contours and dimensions by which undemocratic cognition occurs in different political, social, and cultural contexts.

Similarly, we must de-emphasize individual psychology and motive, and examine these processes from the view of how social relations and political action are being brought together in

these digital networks (Johnson 2018). Many existing interventions, responding to increasing far-right and white supremacist terrorist attacks, radicalization, and the violent effects of platform-distributed undemocratic cognition, focus attention on solutions like media and digital literacy initiatives, fact checking, and other ways of combating disinformation with "good" information. But while these attempts are laudable and well-funded, research has demonstrated that they are also largely futile (Horgan, Meredith, and Papatheodorou 2020); these initiatives all target individuals and their information consumption habits, without taking into account that individuals encounter information in ways that are systemic and collective (Livingston and Bennett 2020). The problems we are facing with online radicalization are not, in other words, ones that can be corrected with more 'correct' information or deradicalization initiatives alone, nor can they be solved with deplatforming and other attempts at mitigating its spread. Instead, in an attempt to contribute to this scholarship, undemocratic cognition is a way of understanding these shared resources and deeply affective ontological frames, and how collective socialization into these modes of thought occurs within these networks, aided by both human and non-human agents in the form of social media algorithms.

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