**CAU SUMMER 2024 WEEK 1, JULY 7-13**
**COURSE:** The Truth About Fake News
**FACULTY:** Alexandra Cirone, Assistant Professor in Government, Faculty Fellow in Democratic Innovations at Yale University
**LOCATION**: Lincoln Hall, Room 149

# Schedule of Readings

**Read for Tuesday's class:**

- Lazer et al, 2018: The Science of Fake News (see pdf)
- Knight Foundation Brief, Avoiding The Echo Chamber About Echo Chambers (see pdf)

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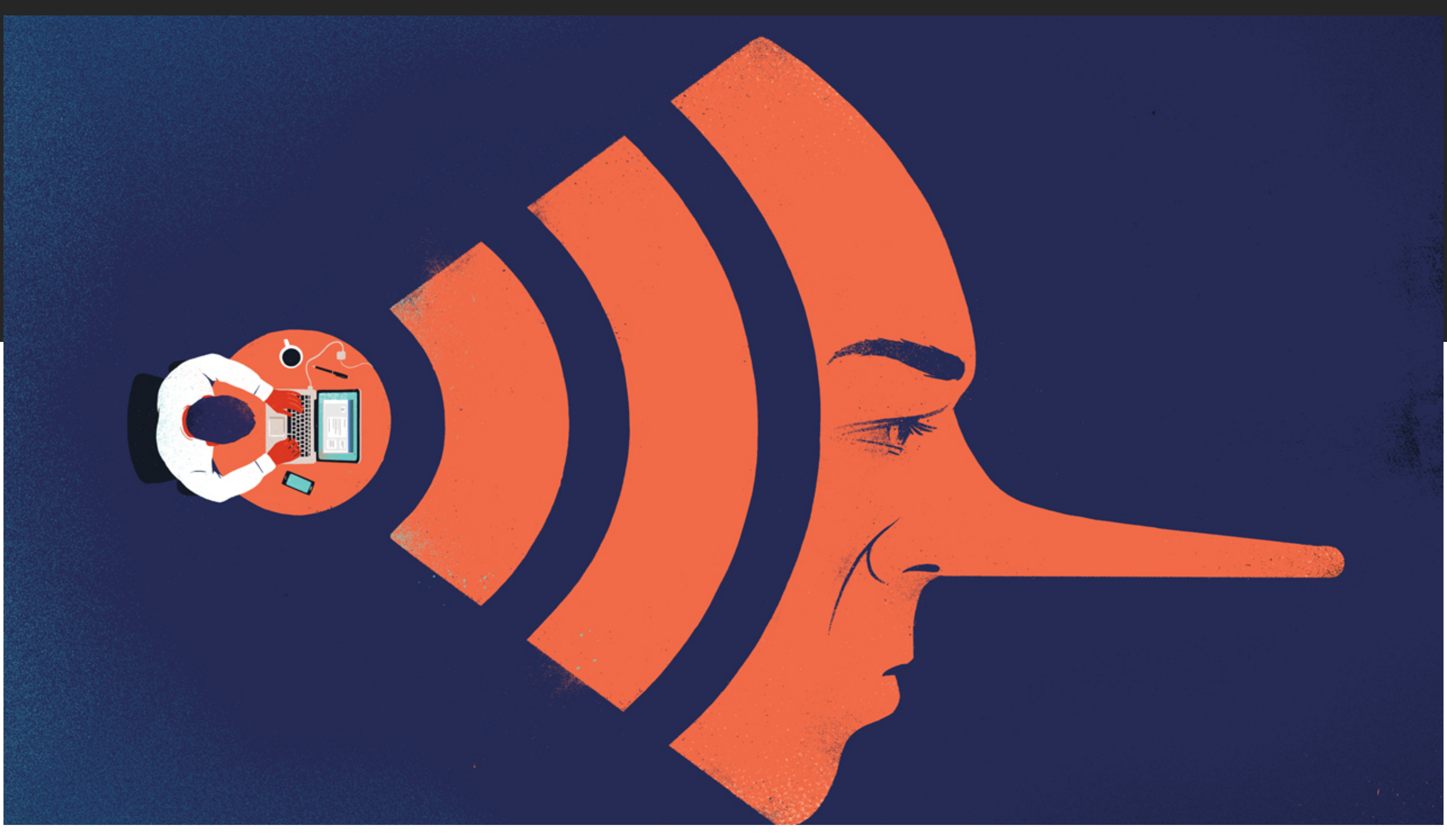
# As U.S. election nears, researchers are following the trail of fake news

Projects seek to understand, and block, spread of disinformation

26 OCT 2020 • BY GREG MILLER



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It started with a tweet from a conservative media personality, accompanied by photos, claiming that more than 1000 mail-in ballots had been discovered in a dumpster in Sonoma county in California. Within hours on the morning of 25 September, a popular far-right news website ran the photos with an "exclusive" story suggesting thousands of uncounted ballots had been dumped by the county and workers had tried to cover it up.

In fact, according to Sonoma county officals, the photos showed empty envelopes from the 2018 election that had been gathered for recycling. Ballots for this year's general election had not yet been mailed. Even so, within a single day, more than 25,000 Twitter users had shared a version of the false ballot-dumping story, including Donald Trump Jr., who has 5.7 million followers.

This election season, understanding how misinformation—and intentionally propagated *dis*information—spreads has become a major goal of some social scientists. They are using a variety of approaches, including ethnographic research and quantitative analyses of internet-based social networks, to investigate where election disinformation originates, who spreads it, and how many people see it. Some are helping media firms figure out ways to block it, while others are probing how it might influence voting patterns.

The stakes are high, researchers say. "This narrative that you're not going to be able to trust the election results is really problematic," says Kate Starbird, a crisis informatics researcher at the University of Washington's Center for an Informed Public. "If you can't trust your elections, then I'm not sure democracy can work."

In 2016, Russian operatives played a major role in spreading disinformation on social media in an attempt to sow discord and influence the U.S. presidential election. Foreign actors continue to interfere. But researchers say the bulk of disinformation about this year's election has originated with right-wing domestic groups, attempting to create doubt about the integrity of the election in general, and about mail-in voting in particular. An analysis by the Election Integrity Partnership (EIP), a multi-institution collaboration, showed that the false story about the Sonoma ballots was spread largely by U.S.-based websites and individuals with large, densely interconnected social media networks. "They're just sort of wired to spread these misleading narratives," says Starbird, who is an EIP collaborator.

Much of the election disinformation EIP has tracked so far originates in conspiratorial corners of the right-wing media ecosystem. "What we're seeing right now are essentially seeds being planted, dozens of seeds each day, of false stories," says Emerson Brooking, a resident fellow at the Atlantic Council's Digital Forensic Research Lab, which is part of EIP. "They're all being planted such that they could be cited and reactivated … after the election" by groups attempting to delegitimize the result by claiming the vote was unfair or manipulated.

So far, most of the disinformation EIP has documented focuses on election integrity. But as Election Day draws near, Starbird and Brooking expect to see more attempts to create confusion about voting procedures and attempts to suppress turnout—by raising fears about violence at polling places, for example.

Election deception can take various forms on social media. Joan Donovan, research director of Harvard University's Shorenstein Center on Media, Politics and Public Policy, has been doing digital detective work on Facebook groups targeting Latinos with pro–President Donald Trump messages that appear to be run by non-Latinos who have assumed fake identities. These groups coordinate their campaigns and recruit participants on public message boards or chat apps, allowing researchers to observe their operations; the postings also provide clues the researchers can follow to investigate who the members are and what motivates them.

Purveyors of disinformation have become expert at exploiting the dynamic between social and mainstream media, researchers say. Right-wing conspiracy groups like QAnon—which promotes a false narrative that a cabal of cannibalistic, Satan-worshiping pedophiles are trying to bring down Trump—have learned how to create content and "trade up the chain" of social media users and hyperpartisan websites with increasingly large followings, Donovan says. When the falsehoods start to get traction, mainstream media outlets often feel compelled to debunk them, which can end up further extending the story's reach. Several stories that had been circulating in QAnon networks got mainstream coverage around the time of the first presidential debate, for example, including unfounded claims that former Vice President Joe Biden might take performance-enhancing drugs or cheat by wearing an earpiece during the debate. "What we're seeing is that the ways in which news media traditionally operate is now being turned into a vulnerability," Donovan says.

Not all election disinformation is coming from the bottom up, however. Yochai Benkler, co-director of the Berkman Klein Center for Internet and Society at Harvard, and colleagues recently examined how claims of potential fraud associated with mail-in ballots entered public discourse. The researchers analyzed more than 55,000 online news stories, 5 million tweets, and 75,000 posts on public Facebook pages between March and August. They found that most spikes in media coverage and social media activity on the topic were driven by Trump himself—either through his own hyperactive Twitter account, press briefings, or appearances on the Fox TV network. "Donald Trump has perfected the art of harnessing mass media to disseminate and reinforce his disinformation campaign," the researchers write in a preprint posted earlier this month.

EIP is working with social media companies to help them refine and clarify their policies so they can react more quickly to disinformation. Several companies have taken recent steps to flag or remove content, or make it harder to share—steps experts say are welcome, if long overdue. (Some platforms are also trying to nudge users toward better habits, as with Twitter's recent experiment with prompts that appear when someone tries to share a link to an article they haven't opened, encouraging them to read it first before sharing.)

The impact of disinformation on the election won't be easy to measure. Some clues, however, might come from a research collaboration with Facebook aimed at studying the platform's impact on this year's election. The company has given 17 academic researchers access to data on the Facebook activity of a large number of users who've consented to be involved. (Facebook expects between 200,000 and 400,000 users to volunteer.) Participants agree to answer surveys and, in some cases, go off Facebook for a period of time before the election to help researchers investigate the effects Facebook use on political attitudes and behavior.

Among other things, the Facebook users will be asked at different times to rate their confidence in government, the police, large corporations, and the scientific community. "We're able to look at things like changes in attitudes and whether people participated in the election and link it to their experiences on Facebook and Instagram," including exposure to election disinformation, says Joshua Tucker, one of the project's coordinators and a professor of politics and co-director of New York University's Center for Social Media and Politics.

Some evidence suggests the impacts might not be as great as feared, says Deen Freelon, a political communication researcher at the University of North Carolina, Chapel Hill. There's a long history of research, for example, showing that political ads only have marginal influence on voters. And more recent studies have suggested misinformation did not have a major effect on the 2016 election. A study published in *Science* in 2019 found that 80% of exposure to fake news was concentrated within just 1% of Twitter users. A survey study reported in the *Proceedings of the National Academy of Sciences* (*PNAS*) found no evidence that that people who engaged with Russian troll accounts on Twitter exhibited any substantial changes in political attitudes or behavior.

Freelon, who was a co-author on the *PNAS* paper and is also a member of the Facebook collaboration, says he's more worried about "second order effects" of disinformation on our culture, such as the general sense of paranoia and distrust it creates. "When people look at social media and can't figure out what's true and what's not, it degrades the overall informational quality of our political conversations," he says. "It inserts doubt into a process that really shouldn't have any."

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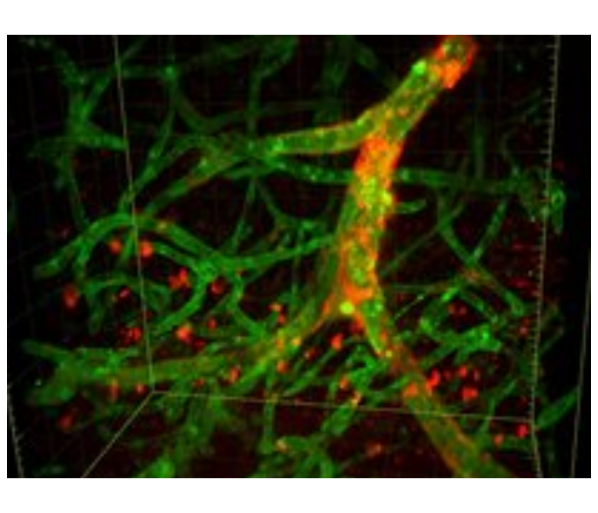

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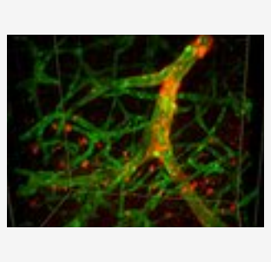

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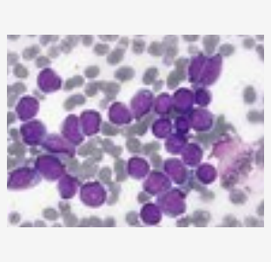

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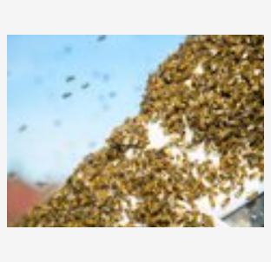

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# AVOIDING THE ECHO CHAMBER ABOUT ECHO CHAMBERS:

## Why selective exposure to like-minded political news is less prevalent than you think

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# CONTENTS

Is the expansion of media choice good for democracy? Not according to critics who decry “echo chambers,” “filter bubbles,” and “information cocoons” — the highly polarized, ideologically homogeneous forms of news and media consumption that are facilitated by technology. However, these claims overstate the prevalence and severity of these patterns, which at most capture the experience of a minority of the public.

In this review essay, we summarize the most important findings of the academic literature about where and how Americans get news and information. We focus particular attention on how much consumers engage in selective exposure to media content that is consistent with their political beliefs and the extent to which this pattern is exacerbated by technology. As we show, the data frequently contradict or at least complicate the “echo chambers” narrative, which has ironically been amplified and distorted in a kind of echo chamber effect.

We instead emphasize three fundamental features of preferences for news about politics. First, there is diversity in the sources and media outlets to which people pay attention. In particular, only a subset of Americans are devoted to a particular outlet or set of outlets; others have more diverse information diets. Second, though some people have high levels of motivation to follow the latest political news, many only pay attention to politics at critical moments, or hardly at all. Finally, the context in which we encounter information matters. Endorsements from friends on social media and algorithmic rankings can influence the information people consume, but these effects are more modest and contingent than many assume. Strikingly, our vulnerability to echo chambers may instead be greatest in offline social networks, where exposure to diverse views is often more rare.

# THE ECHO CHAMBERS CRITIQUE

News consumers now have innumerable options across media formats. To deal with this glut of information, consumers have to make choices about what they consume. Worries that this process will lead to increasingly one-sided media diets center on three related concepts: selective exposure, echo chambers, and filter bubbles.

Selective exposure refers to “systematic bias in audience composition” (Sears and Freedman 1967) stemming from a tendency for individuals to select information that is congruent with prior attitudes (Klapper 1960) or that comes from like-minded sources (Iyengar and Hahn 2009). Academic research refers to such preferences, whether for attitude-confirming information or for friendly sources, as “congeniality bias” (Hart et al., 2009). Selective exposure to congenial political information is sometimes analyzed as partisan selective exposure (Stroud 2008). In the current environment, the stereotypical news consumers engaging in selective exposure would be conservative Republicans who only watch Fox News or liberal Democrats who are dedicated to MSNBC. (The tendency toward selective exposure is real but also more complex than this caricature suggests, as we discuss below.)

Critiques of “echo chambers” or “information cocoons” go further, however, in suggesting not only that people overwhelmingly select into media and information flows that confirm their pre-existing biases but that these habits can reinforce people’s views, exacerbating extremism. Sunstein, for instance, argues that the opportunity for personalization online — the “Daily Me” (Negroponte 1995) — has reduced exposure to competing views and accelerated the polarization of news consumers’ political attitudes (2001; 2009; 2017). This pessimistic view has grown only more prevalent as media options have proliferated. Concerns about ideological self-segregation have accompanied the expansion of cable television (Prior 2007; Jamieson and Cappella 2008), widespread adoption of broadband internet (Garrett 2009a; Hindman 2008), and most recently the rise of social media (Bakshy, Messing, and Adamic 2015; Flaxman, Goel, and Rao 2016). Research on echo chambers examines whether these technological advances enhance the tendency to selectively expose oneself to voices that please and comfort and whether they have further fragmented the electorate.

A variant of this argument focuses on online intermediaries such as Google and Facebook that seek to tailor individual users’ experiences based on their personal characteristics, location, browsing histories, or social networks (Bozdag 2013). These personalization features generate search results and news feeds that differ in ways that are invisible to the user (Zuiderveen Borgesius et al. 2016). Although these features may be aimed at increasing the relevance of information to which individuals are exposed, they may also create "filter bubbles" that reduce encounters with challenging information (Pariser 2011). Over time, critics argue, algorithmic personalization may result in increasingly idiosyncratic perceptions of the world around us, amplifying confirmation bias and undermining our aspirations to consume a broad range of information.

While academic research has identified how selective exposure, echo chambers, and filter bubbles could pose a problem to democracy, commentators and other public figures have gone further, often oversimplifying these phenomena and describing sweeping effects that are not supported by the data. For instance, an editorial at The Independent declared after the 2016 election that "Social media echo chambers gifted Donald Trump the presidency," while a Wired article claimed "Your Filter Bubble is Destroying Democracy" (Hooton 2016; El-Bermawy 2016). Similarly, Scientific American reflected on "A Nation Divided by Social Media" following Trump's inauguration (D'Costa 2017). Even President Obama repeatedly bemoaned "balkanized" media, echo chambers, and the alternative realities liberals and conservatives now supposedly inhabit (e.g., Johnson 2010; Nakamura 2016; Hatmaker 2017).

As we will show, however, the evidence for "echo chambers" is more equivocal than the alarmist tone of popular discussion suggests. It is true that people tend to prefer congenial political content in studies when given the choice, but these findings are more limited and contingent than people realize. For instance, these tendencies are asymmetric; people tend to prefer pro-attitudinal information to a greater extent than they avoid counter-attitudinal information. Selective exposure can also be overridden by other factors such as social cues. In addition, behavioral data shows that tendencies toward selective exposure do not translate into real-world outcomes as often as public discussion would suggest. Commentators often neglect how little political news most people consume — much of the public is not attentive to politics and thus unlikely to be in an echo chamber of any sort. Moreover, among those who do consume more than a negligible amount of political news, most do not get all or even most of it from congenial media outlets.

# SELECTIVE EXPOSURE: A MORE COMPLEX STORY

In the lab, people do consistently exhibit a preference for congenial information over uncongenial information — a tendency that is especially prevalent in the domain of politics (see Hart et al. 2009 for a recent meta-analysis). For instance, individuals can select like-minded news based on source cues, as when conservatives display preference for information from Fox News regardless of its content (Iyengar and Hahn 2009). Some may instead rely on cues about the slant of the content itself or its relevance to their interests, using those to select media in line with their attitudes (Knobloch-Westerwick and Meng 2009) or pertaining to their preferred party or candidate (Iyengar et al. 2008; Iversen and Knudsen N.d.). Studies exploiting longitudinal survey designs — repeatedly interviewing the same subjects over time — further suggest that patterns of congenial media exposure can at least potentially result in increased polarization (Stroud 2010). Researchers working within the reinforcing spirals framework (Slater 2007) have addressed this causal ordering in greater detail. Over time, surveys focused on beliefs about global warming find an ongoing cycle in which partisan media exposure strengthens beliefs, these beliefs influence subsequent media use, and this use again reinforces selection (Feldman et al. 2014).

However, the ways in which these tendencies operate are more subtle than many people assume. First, the tendency toward selective exposure does not appear to be the result of people seeking to minimize the cognitive dissonance that results from encounters with unwelcome information (Festinger 1957). Perhaps surprisingly, this popular theory has received little direct support in the academic literature (Freedman and Sears 1965; Sears and Freedman 1967; Metzger, Hartsell, and Flanagin 2015). One compelling alternative explanation is that people view attitude-consistent or balanced information as more credible than counter-attitudinal information and make choices based on those credibility judgments (Fischer, Greitemeyer, and Frey 2008; Kahan et al. 2010; Lord, Ross, and Lepper 1979). Studies show, for instance, that expected informational quality (Fischer, Greitemeyer, and Frey 2008) and credibility perceptions (Metzger, Hartsell, and Flanagin 2015) better account for selective exposure than the dissonance people experience (see also Hart et al. 2009).

Another complicating factor is that selective exposure tends to be asymmetric — studies find more evidence of a preference for pro-attitudinal information than avoidance of counter-attitudinal information (Garrett 2009b; Garrett and Stroud 2014; Knobloch-Westerwick and Meng 2009; Winter, Metzger, and Flanagin 2016). Although the tendencies to prefer congenial information and to avoid uncongenial information are often treated as theoretically inseparable, there are several reasons why avoidance tendencies might be weaker (Garrett and Stroud 2014). While consonant information almost always offers psychological rewards, dissonant information is not always undesirable; some people find engaging with it to be gratifying or enjoy seeking out counter-attitudinal information when preparing to defend their views to others (Valentino et al. 2009). In some cases, a successful defense of one's views can even elicit pleasure (Westen et al. 2006).

Accordingly, then, people report considerable exposure to pro-attitudinal media in their day-to-day lives (e.g., Johnson, Bichard, and Zhang 2009; Mitchell et al. 2014; Stroud 2008), but not to the exclusion of opposing sources. In a representative sample of U.S. news consumers, for example, 64 percent of conservative Republicans, but also 26 percent of liberal Democrats, reported that they consistently rely on at least one conservative source (Stroud 2008). Conversely, 76 percent of liberal Democrats and 43 percent of conservative Republicans said they rely on at least one liberal news source. The preference for attitude-consistent sources often outweighs any tendency to avoid hearing the other side, even among strong partisans; in surveys, for instance, exposure to pro-attitudinal news is actually associated with increased exposure to counter-attitudinal news (Garrett, Carnahan, and Lynch 2011).

Finally, explicitly partisan or ideological source information competes with other cues as news consumers choose among a broad range of options (Knudsen, Johannesson, and Arnesen N.d.; Mummolo 2016). Given a realistic set of options, individuals may select out of politics altogether, choosing to consume entertainment or soft news instead (Prior 2007). Other cues, such as an article's social media endorsements (Messing and Westwood 2014; Winter, Metzger, and Flanagin 2016), may cause people to select information even if its source or content are potentially disagreeable. For example, individuals' preference for personally relevant news will sometimes outweigh their preference for like-minded sources (Mummolo 2016).

# MYTHS ABOUT POLITICAL INFORMATION CONSUMPTION

If the echo chambers critique were true, we would expect to observe Americans frequently consuming political news that is disproportionately congenial to their point of view. As we will show, however, the data do not support this conjecture. To explain why, it is helpful to consider both how often people consume pro-attitudinal news as well as how much information they consume about politics in total. Both of these aspects of selective exposure — and the contribution that technology makes to them — are often exaggerated or misunderstood.

At the aggregate level, data suggest that the extent of politically congenial news consumption is smaller than many people believe. Media outlets with a significant partisan or ideological slant simply do not reach most of the U.S. population. More than 325 million people currently live in the United States. Audiences for Fox News and MSNBC average 1 million to 2 million viewers and peak at 2 million to 3 million for well-known shows by hosts like Rachel Maddow and Sean Hannity in prime time (Otterson 2017). By comparison, about 24 million Americans tune into nightly network news broadcasts on NBC, ABC, and CBS and over 10 million viewers watch these networks' Sunday morning political talk shows (Smith 2017). These audiences are in turn dwarfed by those for entertainment, where programs like The Big Bang Theory, The Walking Dead and Sunday Night Football attract as many as 20 million viewers (Petski 2016; Mitovich 2017). The number of Americans who follow partisan outlets closely, in other words, is quite limited.

Online news audience data tells a similar story. For instance, about 10 million people visited the far-right Breitbart website in April 2017, making it only the 281st most trafficked site in the United States (Nguyen 2017). By comparison, The Washington Post and The New York Times ranked in the top 40 sites by traffic and draw 70 million to 100 million unique visitors per month (Nguyen 2017), though these mainstream news sites are again outranked by sites dedicated to entertainment and shopping (Gray 2017).

Others may point to social media as facilitating echo chambers, but the proportion of the public that gets news on these platforms is also frequently overstated. In total, 67 percent of all U.S. adults report getting news from social media, but only about 20 percent say they do so regularly (Shearer and Gottfried 2017). As a portion of all U.S. adults, just under half of Americans say they get news on Facebook, which is by far the leading platform. By contrast, only 15 percent of adults use Twitter and only 11 percent say they get news there (Shearer and Gottfried 2017).

These aggregate-level observations are confirmed by individual-level online behavioral data that allows us to directly observe web consumption and browsing behavior. For example, we observe limited ideological segregation in online news visits in the United States (Gentzkow and Shapiro 2011). Nielsen data that combines television and online tracking data similarly reveal a surprisingly high degree of audience "duplication" — significant overlap in media use across groups of users — rather than fragmentation (Fletcher and Nielsen 2017; Webster and Ksiazek 2012). Audience data suggests that most news is consumed from large mainstream sites and that even the audiences for niche partisan media are ideologically mixed (Nelson and Webster 2017).

Individual-level data indicate that these patterns reflect divergent news consumption habits (Guess 2016). Most people have largely centrist information diets or simply do not care about politics or follow it closely. Moreover, more active news consumers, particularly heavy users, tend to visit multiple sites. These omnivorous habits result in exposure to centrist outlets and ideologically discrepant information even when using technological platforms thought to worsen selective exposure. For example, an examination of frequent news consumers' browsing histories finds that while news discovered through social networks and search engines is associated with greater ideological segregation, the use of these sources also increases exposure to counter-attitudinal information (Flaxman, Goel, and Rao 2016). We only observe heavily skewed patterns of information consumption based on political affiliation among a minority of Americans (Guess 2016). However, their frequent consumption of attitude-consistent news drives much of the traffic to ideological and partisan websites, producing a stark partisan divide in website visits that is not otherwise observed among the public.

The differences between these real-world behavioral findings and the lab studies of selective exposure that we describe above reflect an important methodological issue. Experiments and surveys tend to find substantial evidence of partisan selectivity, while behavioral data reveals significant centrism and omnivorousness. There are a few potential reasons for this disconnect. For respondents, experimental investigations of media choice are one-time exercises conducted in highly artificial environments that may affect their motives and behavior. Researchers especially struggle to capture the sheer number of available sources and the rich variety of contextual cues encountered in day-to-day life. As a result, participants may make different choices about which news to consume in a controlled experiment than they would in everyday life.

Findings derived from self-reported media exposure are also problematic (Prior 2013a). A number of studies have documented systematic error in this type of measurement, including self-reported exposure to television news (Prior 2009b, 2009a, 2013b), online news (Guess 2015), and even presidential debates (Prior 2012). One reason for inaccuracy is expressive responding: Republicans may falsely report watching Fox News as a signal of partisanship, while Democrats who watch Fox may avoid admitting it for the same reason. For this reason, studies that passively monitor media use are likely to be more accurate (Prior 2013a).

# LIMITS ON THE OBSERVED EFFECTS OF TECHNOLOGY

Technology can in some cases facilitate or worsen echo chambers, but the findings are more subtle than many popular accounts imply. One frequently cited culprit is Twitter, which is often used as a proxy for social media due to the ease of studying it compared to Facebook (where posts are largely private). For instance, an analysis of the Twitter conversation about the 2010 U.S. congressional midterm elections found that retweet networks were highly segregated by ideology (Conover et al. 2011). In general, Americans with extreme views are more likely to be embedded in homogeneous Twitter networks (Boutyline and Willer 2017) and may tend to dominate online conversations (Barberá and Rivero 2014). However, only a small fraction of the population is on Twitter, as noted above, and Twitter users are exposed to cross-cutting content that they are unlikely to re-broadcast, but to which they may respond (Conover et al. 2011; see also Karlsen et al. 2017). This exposure to cross-cutting content often occurs via “weak ties” revealed by social media (Granovetter 1973). In this way, Twitter and other social media platforms embed most users in ideologically diverse networks which could even reduce mass polarization over time (Barberá N.d.). In addition, other work shows that public conversations on Twitter about political events, such as elections, are likely to resemble echo chambers among ideologically similar users, but those concerning other current events are more inclusive (Barberá et al. 2015).

Similar caveats apply to algorithmic personalization and the extent to which it creates filter bubbles (a difficult topic to study because data from search and social media platforms and the algorithms themselves are largely proprietary). The most notable study comes from researchers at Facebook who estimated the effects of the platform’s News Feed algorithm on exposure to “ideologically diverse” news articles among the subset of users who self-identify as liberal or conservative (Bakshy, Messing, and Adamic 2015). Within this sample, the News Feed algorithm reduced exposure to cross-cutting material by 8 percent for self-identified liberals and 5 percent for conservatives. However, these individuals reduced diverse content exposure in their own choices of which articles to click on by 6 percent among liberals and 17 percent among conservatives. The generalizability of these small effects is limited, however. Only about 4 percent of users include their political preferences in their profile and log in regularly, and they may react to ideologically challenging information in fundamentally different ways than other people.

Some initial attempts to quantify filter bubbles stemming from web search have observed substantial personalization of search results, particularly for political topics. These effects seem to be driven primarily by location (Hannak et al. 2013), but other studies suggest minor effects on content diversity (Hoang et al. 2015; Haim, Graefe, and Brosius 2017; Puschmann 2017). More work is needed in this area (Lazer 2015; Zuiderveen Borgesius et al. 2016), especially given that the algorithms in question are proprietary and frequently change over time.

In short, while digital media offer greater opportunity to construct echo chambers for a motivated few, the majority appears to continue to experience a largely mixed and centrist media environment. Even those who seek out and consume more ideologically extreme information sources seem to encounter cross-cutting content along the way. Similarly, we lack convincing evidence of algorithmic filter bubbles in politics.

# THE IMPORTANCE OF SOCIAL CONTEXT

The final potential mechanism for echo chambers that we consider is social context. Importantly, the evidence may be strongest for the echo chambers hypothesis in offline social interactions. One of the classic models of political communication is the “two-step flow” in which information travels from opinion leaders, who pay attention to mass media, to their less-attentive peers (Lazarsfeld, Berelson, and Gaudet 1948). Information directly consumed by a small number of people can reach a much wider audience in this way. A recent experiment shows that those who do not consume partisan media themselves, but instead discuss it with those who do, form opinions comparable to direct consumers (Druckman, Levendusky, and McLain 2017). This indirect effect can even be larger than the direct effect of media exposure for those situated in homogeneous discussion groups, which combine information reinforcement and social pressure.

As the prior study illustrates, the larger information environment individuals find themselves in must be considered. Doing so can help explain pervasive polarization in the absence of widespread, strictly partisan media habits. Beyond mass media and social media, interpersonal networks serve a large role in exposing individuals to political information and augmenting what they take away from it (Eveland Jr 2001; Huckfeldt, Johnson, and Sprague 2004). As with media exposure, the amount of “cross-cutting” talk is a central concern (Eveland and Hively 2009; Huckfeldt, Johnson, and Sprague 2004; Mutz 2006; Nir 2011; Klofstad, Sokhey, and McClurg 2013; Wells et al. 2017).

Research suggests that similarity of attitudes drives selection of discussion partners as individuals construct their networks from a larger set of potential contacts (McPherson, Smith-Lovin, and Cook 2001). Like-minded discussion networks are therefore common (Mutz 2006). However, political discussion often takes place among people in close daily proximity regardless of their political similarity (Small 2013). It is likely that individuals prefer to discuss politics with like-minded individuals if available, but will discuss it with others in their absence (Song and Boomgaarden 2017).

How does the relative like-mindedness of discussion networks compare with individuals’ media selection habits? Previous research finds that individuals encounter greater diversity of views in their media consumption than in their interpersonal discussion (Mutz and Martin 2001), but this finding comes from an era of lower media choice and polarization. More recent research, using internet traffic data, finds instead that the online news audience is less segregated ideologically than in-person interactions with family, friends, co-workers, and political discussants (Gentzkow and Shapiro 2011).

Beyond their direct effects, media content and discussion can also interact.

This concept, which has been referred to as the “filter hypothesis,” suggests that homogeneous networks strengthen the effects of consonant media messages (Southwell and Yzer 2007) and diminish the effects of dissonant messages (Song and Boomgaarden 2017). Politically mixed networks may also cause individuals to be less resistant to dissonant messages (Neiheisel and Niebler 2015).

Taken together, this research suggests that the conversation about information polarization places far too much emphasis on social media and other technological changes. In the process, we have lost sight of the fact that our offline social networks are often more politically homogeneous than those we interact with online.

# CONCLUSION

Concerns continue to grow that citizens are trapped in media echo chambers that shield them from counter-attitudinal information, further polarizing an already divided America. According to critics, the prevalence of selective exposure, echo chambers, and filter bubbles are fueling growing polarization between the parties and divergent views about basic facts, further weakening the state of our democracy.

In this review, we show that many of these concerns are overstated. While people do prefer ideologically congenial content, the evidence that they actively avoid uncongenial content is much weaker. Similarly, though some partisan and ideological media outlets have audiences of millions of people, consumption of news from these sources represents only a small fraction of the total amount of news encountered, which is in turn vastly smaller than the non-news content people consume. Contrary to findings from surveys, behavioral data indicates that only a subset of Americans have news diets that are highly concentrated ideologically. In reality, most news diets are more diverse and centrist. Similarly, though technology platforms could help to balkanize news consumption into competing ideological camps, the empirical evidence indicates that fears currently outpace reality. Evidence for echo chambers is actually strongest in offline social networks, which can increase exposure to like-minded views and information and amplify partisan messages.

Why, then, does the narrative of technology-fueled echo chambers continue to hold sway among journalists, commentators, and the public? We would propose three possible explanations. First, while polarized media consumption may not be the norm for most people, it is much more common among an important segment of the public — the most politically active, knowledgeable, and engaged. These individuals are disproportionately visible both to the public and to observers of political trends. They may also come to mind easily when people imagine others engaged in political debate or consuming political news, creating a feedback loop in which the narrative and anecdotes and examples that seem to confirm it repeat endlessly. As a result, public debate about news consumption has become trapped in an echo chamber about echo chambers that resists corrections from more rigorous evidence.

A second reason the echo chambers narrative persists is that people default to the prevailing consensus in the face of apparent disagreements in the scientific literature. As we discuss above, evidence differs depending on the approach that is used; lab and survey-based studies tend to find stronger evidence for selective exposure than those using behavioral data from the field. Even more confusingly, some of the earliest and best-known studies cited in support of echo chambers focus on Twitter retweet networks (Conover et al. 2011) and blog links (Adamic and Glance 2005).

But it is important to remember that the motivations behind public acts like retweeting and linking may differ from those that drive news consumption.

Finally, we return to the fact that several studies have found evidence for offline echo chambers that are as strong or stronger than those documented online. While this conclusion may strike many as surprising, it merely restates a commonly understood fact — people associate and spend time with those similar to them. In realms where this is not always possible like the workplace, social norms have typically kept politics and religion out of the conversation to minimize conflict — a social practice that is not all that different from filtering and curating one's online feeds (or from having it done automatically). But because norms against discussing politics at work are not associated with emerging technological developments, they usually go unnoticed.

Of course, we would not claim that all is well with American media. Though the phenomena of selective exposure and echo chambers are less widespread than feared, the potential for a balkanized future remains. Moreover, the content of the media that people consume still matters. Even if echo chambers are not widespread, partisan media can still spread misinformation and increase animosity toward the other party among a highly visible and influential subset of the population. In this sense, the danger is not that all of us are living in echo chambers but that a subset of the most politically engaged and vocal among us are.

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