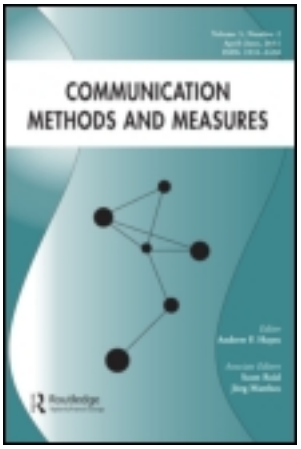

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Selective Exposure: New Methods and New Directions

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Selective Exposure: New Methods and New Directions

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This special issue of *Communication Methods and Measures* tackles difficult questions relating to the empirical study of politically motivated selective exposure. In this brief response, I reflect on the state of the research area and attempt to bring these articles into conversation with one another and with the larger field. My essay is organized in terms of four broad themes: the debate over selective avoidance, the value of big data, the changing technological landscape, and the emphasis on boundary conditions. Collectively, the works in this issue raise important methodological questions and provide theoretical and empirical guidance for how scholars might answer them going forward. Coupled with innovative theorizing, these insights promise to advance our field in important ways.

The publication of this special issue of *Communication Methods and Measures* is one indication of the increasing prominence of politically motivated selective exposure in the field of communication. The idea that individuals purposefully craft an information diet that reflects their partisan predispositions has a tumultuous 70-year history. Despite widespread initial acceptance, the idea that exposure differences were intentional and politically motivated was all but dismissed by the 1970s (Sears & Freedman, 1967) and continued to be criticized into the 21st century (Chaffee, Saphir, Graf, Sandvig, & Hahn, 2001). The rapid growth of cable news and the Internet brought renewed interest in the topic, however, and the past decade has been uniquely fruitful, both in terms of the amount of research produced and the diversity of evidence for the phenomenon (e.g., Hart et al., 2009; Stroud, 2011). Today, the central question is no longer whether or not attitudes influence media exposure decisions—there is little question that they do. Instead, scholars are most concerned with the conditions under which selectivity occurs (e.g., Valentino, Banks, Hutchings, & Davis, 2009), the forms it takes (e.g., Garrett, 2009), who engages in it (e.g., Prior, 2013), and its consequences (e.g., Knobloch-Westerwick & Meng, 2011; Stroud, 2010).

In this essay, I reflect on the direction in which the field is evolving, noting both opportunities and risks, and I explore the ways in which the articles that appear in this issue contribute to this broader conversation. I consider four broad themes: the debate over selective avoidance and the meaning of "echo chambers," the search for objective measures via big data, the changing technological landscape, and the emphasis on boundary conditions.

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ECHO CHAMBERS

The idea that we live in an era of political echo chambers, in which news consumers seek out likeminded partisans while systematically shielding themselves from other viewpoints, is both prevalent and wrong. The concept has evolved over time, and some of the more nuanced versions are accurate. But far too often, claims about the extent of selectivity are exaggerated, distorting our understanding of the phenomenon and its consequences. Cass Sunstein first alluded to this concept in *Republic.com* (2001), asserting that in a media environment characterized by numerous partisan outlets, "all too many people are now exposed largely to louder echoes of their own voices" (p. 74). Jamieson and Cappella's *Echo Chamber* (2008) elaborated on how partisan media outlets can provide validation and reinforcement by repeating, and sometimes amplifying, the same message. To their credit, the authors were careful to acknowledge that this bias is not tantamount to total isolation, observing that "the disposition to listen to Limbaugh, watch Fox, and read the *[Wall Street] Journal* does not suggest that these audiences are locked exclusively in the fortress of any of these media, that those who consume one necessarily turn to the others, or that the conservative audience for politics has been seduced into a hermetically sealed conservative cocoon" (Jamieson & Cappella, p. 241).

The echo-chamber metaphor has taken on a life of its own, however, and too frequently it is used in ways that caricature the political news audience. The problem is that scholars and pundits alike exaggerate the degree to which individuals' news exposure is influenced by their political views, especially when it comes to avoiding other viewpoints (e.g., Bennett & Iyengar, 2008; Lawrence, Sides, & Farrell, 2010; Sunstein, 2001). Empirical evidence indicates that despite the steadily growing opportunities for news personalization, a large and stable majority of Americans maintain a diverse news diet, relying heavily on the relatively less partisan mainstream media and consuming smaller amounts of both pro- and counter-attitudinal partisan sources (Garrett, Carnahan, & Lynch, 2013; Gentzkow & Shapiro, 2011; LaCour, 2012). Furthermore, a variety of factors can motivate individuals to seek out counter-attitudinal political information, including anxiety (Valentino et al., 2009), expected utility (Knobloch-Westerwick & Kleinman, 2011), and social-media endorsements (Messing & Westwood, in press).

Despite opposing evidence, the presumption that Americans exist in ideologically pure cocoons, a more extreme version of Jamieson and Cappella's echo chambers, is the basis of numerous claims about the current state of politics in the United States. It has been suggested, for example, that Americans' are immune to media-based political persuasion because "attitudes are endogenous to messages received," implying that message exposure is whole determined by prior political dispositions (Bennett & Iyengar, 2010, p. 38). Insular patterns of political communication are also credited with driving ideological polarization (Sunstein, 2009a) and promoting the spread of political rumors and misperceptions (e.g., Hindman, 2009; Stroud, 2008; Sunstein, 2009b). Inaccurate predictions are not the only consequence of presuming that selective avoidance of counter-attitudinal information is prevalent; the belief can also suggest counter-productive interventions. Sunstein has advocated for regulations that require cross-linking political content (2001) and has suggested the use of "cognitive infiltration" in which government agents slip into enclaves of conspiracy theorists in order to introduce empirical evidence and reasoned arguments (Sunstein & Vermeule, 2008, p. 21). Such strategies are only

sensible if echo chambers in their most insular form are to blame for political polarization and misperceptions. If not, such strategies might backfire, inducing polarization and paranoia.[1]

The temptation to accept this extreme form of echo chambers is easy to understand. It provides an intuitively appealing way of fitting together otherwise puzzling observations, promising to link the fact that conservatives and liberals trust different sources (Public Policy Polling, 2012) and that they believe different things (Berinsky, 2012; PublicMind Poll, 2012). But the appeal of such an explanation does not make it right; instead, we must find other ways to explain troubling outcomes such as this. Perhaps because of its face validity, belief in echo chambers has proven to be difficult to unseat, and some scholars defend it vigorously. For instance, Bennett and Iyengar describe the possibility that citizens might engage those with whom they disagree as "startling" (2010, p. 36).

To be clear, individuals' tolerance toward (and occasional appetite for) counter-attitudinal political news should not be confused with dispassionate deliberation. There is little evidence that partisans are driven to form balanced opinions; instead, they seek information in order to better defend their position or ridicule others (Albarracín & Mitchell, 2004; Hargittai, Gallo, & Kane, 2008). But if we want to understand how media choice influences political attitudes and behavior, and particularly if we seek to advance normative social goods, such as stemming the flow of misperceptions or limiting polarization, we must avoid distortions of the selective exposure phenomenon. Although not their focus, this is a crucially important contribution of Himelboim, Smith, and Shneiderman's article in this issue (2013). The authors provide a more nuanced way of characterizing echo chambers. They are less concerned with whether users fall into ideologically pure camps, only exchanging messages with likeminded others and viewing likeminded outlets, than with how users are positioned relative to one another.

In their network-centric approach, which focuses on relationships among political news consumers instead of characterizing individual-level exposure, the more often individuals mention or follow one another's Tweets, the "closer" they are, and closely knit groups of users form clusters. The results of Himelboim et al.'s analyses suggest that clusters are ideologically distinct and that groups are often dominated by individuals who identify with a common party or ideology. At the same time, though, these are porous networks, as their network maps (especially Figures 4–6) vividly illustrate. Clusters are highly interconnected despite their distinctiveness. On Twitter at least, partisans disproportionately talk with likeminded others without systematically ignoring those with whom they disagree. This is consistent with results based on other news media (e.g., newspapers, television, and other online sources) and other types of data (e.g., via surveys and experiments, a point which I elaborate on more below). Perhaps network-centric approaches to examining selective exposure such as this will ultimately help to unseat the popular, but inaccurate vision of perfect ideological insularity.

BIG DATA

The field is abuzz with talk of computerized tracking data, commonly referred to as big data, and computational social science (see Lazer et al., 2009), and these techniques are beginning to appear in selective exposure scholarship. Datasets of this sort typically represent vast numbers of

[1]Thanks to Magdalena Wojcieszak for raising this important point.

discreet exposure decisions made by large groups of individuals. Online behavioral data are collected via software installed on participants' computers (e.g., Gentzkow & Shapiro, 2011) utilize data collected by marketing firm ComScore), while more comprehensive offline-media exposure tracking typically requires additional hardware (e.g., LaCour, 2012) uses data from Integrated Media Measurement Incorporated (IMMI), which provided participants with smartphones running specialized software that regularly stored information about ambient audio). There is no question that these data promise to shed new light on important social phenomena, but we must remain aware of their limitations. Ultimately, it is the thoughtful combination of novel empirical work and innovative theorizing that allows the field to move forward.

As the authors in this issue note, big data approaches have important strengths and weaknesses (Clay, Barber, & Shook, 2013; Himelboim, Gleave, & Smith, 2009). By capturing behaviors instead of relying on self-reports, these data sidestep many of the biases that plague self-reported exposure measures. This is not to say that the data perfectly reflect reality: study participants may use devices that are not logged, or encounter media that go unrecognized. But such omissions are less likely to be systematically biased by participants' political interest or ideology than self-reported media exposure (Prior, 2013, p. 117). However, the accuracy of the approach comes at a cost: comprehensive behavioral data are difficult to collect and raise important ethical questions about privacy and surveillance. In practical terms, this means that data are often incomplete, based on self-selected groups of participants whose adherence to data collection protocols is not fully understood. Furthermore, *free* public data, such as the data provided via the open Twitter Application Programming Interface (API) utilized by Himelboim and colleagues, may be constrained in nonobvious ways. For instance, Twitter explains that the tool it provides for searching the messages sent over the network, called Tweets, "is not meant to be an exhaustive source of Tweets. Not all Tweets will be indexed or made available via the search interface" (Twitter, 2013), which raises questions about the representativeness of the sample. In this case, there are troubling indications that the free data stream differs from a random sample of the full collection of messages in substantively important ways (Morstatter, Pfeffer, Liu, & Carley, 2013). Understanding these limitations may require technical sophistication coupled with careful review of programming documentation. In short, these data provide a valuable complementary lens for understanding selective exposure; they are not a replacement for data collected via other methods.

To date, there has been considerable consistency across the results generated by surveys, experiments, and tracking data. When differences arise, as they almost certainly will, it is important that we do not simply reject results from one method in favor of another. It would be a mistake to try to resolve such inconsistencies in exclusively methodological terms; instead, we must use theory. Inconsistencies are opportunities to enhance our understanding. Support for selective exposure research has swung between extremes since the 1940s, and these wild oscillations have hindered our ability to advance scholarship in the area. Renewing the debate over whether or not selective exposure occurs is less productive than making sense of the survival of diverse exposure despite the well-documented individual-level propensity to engage in partisan selective exposure. In some instances, addressing differences may require researchers to add new layers of complexity to their designs, as suggested by Feldman, Stroud, Bimber, and Wojcieszak (2013) when they examined the influence of entertainment media on selective exposure (and see Arceneaux, Johnson, & Murphy, 2012).

Computationally intensive techniques are not limited to data collection. Murphy and Westbury (2013) work in this issue illustrates another opportunity afforded by automation. Developing

rigorous and reproducible methods to identify partisan slant is invaluable, and this family of approaches (also see Holtzman, Schott, Jones, Balota, & Yarkoni, 2011) is compelling, but claims of "objectivity" should be made with caution. We must pay attention to the complex ways in which researchers' decisions impinge on these techniques. Murphy and Westbury analyze word co-occurrence in a corpus of texts, in this case, Wikipedia as of 2010 (900 million words) and UseNet messages posted between 2005 and 2010 (29 billion words). Given the immense size of these collections, it may be tempting to think of them as unbiased or complete, although size and representativeness are conceptually independent. This would be a profound mistake.

Consider the case of identifying the partisan slant of an unknown source. Messages from the source being assessed will often exhibit different co-occurrence patterns than messages composed by others about the same source. What we learn from (hypothetically) knowing that "CNN" tends to be found in closer proximity to the word "liberal" than the word "conservative" depends greatly on the corpus. If this pattern characterizes Wikipedia, we have learned something about attitudes of Wikipedia editors—a diverse group, but by no means representative of American citizens—toward the outlet. Interesting as this may be, it would be a mistake to claim that this is objective evidence of outlet bias. The interpretation would likely be quite different if this were the result of an analysis of CNN transcripts, in which case we might conclude that the network explicitly seeks to align itself with one ideology over another. Suppose further that the analyses were based on Fox News transcripts: then our conclusions would have to reflect the fact that this was one network's characterization of another, competing network. In other words, when the corpus used to count co-occurrences includes messages from the outlet being assessed, it captures an aspect of self-presentation; when it includes messages about the target(s) it is more closely related to others' perceptions. These distinctions matter greatly.

There is another important question when conducting automated bias detection: Which co-occurrence patterns denote bias? If the goal of the study is to understand how an outlet is perceived, then it may be appropriate to use partisan labels (e.g., Democrat, Republican) as anchors. If, however, outlets are classified based on their own words, the situation becomes considerably more complex. Unless a news source explicitly adopts a partisan stance, party-label anchors are unlikely to be effective. Fox News and MSNBC thus far have both resisted partisan labels. An alternative suggested by Murphy and Westbury (2013) is to analyze how outlets discuss important political topics. Although the approach is consistent with Clay and colleagues (2013) recommendation that scholars focus on issue-level selectivity (but see Feldman et al., 2013, who show that this distinction may not always be useful), it also raises questions. Is it, for example, sufficient to show that "women" are more closely associated with "home" than with "work" at a particular outlet to conclude that an outlet exhibits an issue-level bias, as the authors suggest? Or perhaps we should be more concerned with relative differences. It may be that contrasts within a single source or outlet are less informative than the differences evident among sources. For example, perhaps what matters most is whether the association observed is closer in magnitude to association evident in speeches by conservative elites than by liberal elites. However you answer this question, it is clear that the anchor terms and comparison groups fundamentally shape the nature of what this technique reveals about political biases among sources of political information.

This critique is not intended to discourage work advancing this approach. To the contrary, I hope this will be understood as a call for more research. We must strive to validate word co-occurrence as a method of identifying ideological bias among media outlets, news programs,

journalists, and pundits. Murphy and Westbury (2013) have demonstrated that their technique classifies politicians in a way that is comparable to DW-NOMINATE, a method frequently employed by political scientists to estimate the ideological orientation of members of Congress, but messages about these individuals may well differ from messages about the news media. We need scholarship that tests for such differences, and that more clearly illustrates the influence of the corpus of text and the anchors used on results. This will allow us to move beyond speculation about the significance of such associations, laying a foundation for advancing our understanding selective exposure, its causes, and its consequences.

CHANGING TECHNOLOGIES

A third characteristic of the evolving field concerns the influence of technological change, a premise alluded to by all the authors in this issue. As the tools that citizens use to find and select (political) content evolve, so too will their choices (Neuman, 1991). Computer systems designed to help us sift through the vast stores of online information are beginning to classify content by party. While some developers use this capacity to promote diverse exposure (Munson & Resnick, 2010; Park, Kang, Chung, & Song, 2009, 2012), others, notably Microsoft, have created systems that seem more likely to promote insularity (Schwartz, 2012). There are efforts to change how system designers think about recommendation systems, highlighting the value of diverse exposure and identifying strategies for promoting it (Garrett & Resnick, 2011). For example, a recommender service might utilize different strategies for recommending pro- and counter-attitudinal content or might create incentives for users to consume news broadly. It remains to be seen how such recommendations will be received by the design community.

News consumers are also increasingly reliant on the browsing behavior and recommendations of friends and acquaintances who belong to their digital social networks. Recommendations have a powerful influence on exposure decisions (Knobloch-Westerwick, Sharma, Hansen, & Alter, 2005), and to the extent that users' social networks comprise like-minded others (Himelboim et al., 2013), there is considerable risk that technology will promote selective exposure (Mutz & Young, 2011). Even if network opinion leaders are not ideologically biased in their consumption, their recommendations may be. Sharing is a form of endorsement, and endorsements appear more likely than exposure to reflect predispositions. I may *read* a story that I disagree with deeply, but the chances that I will click a button indicating that I "like" it are considerably smaller. If my friends are influenced by my endorsements, they will become increasingly isolated from counter-attitudinal information, regardless of the breadth of my exposure.

There is, however, room for optimism. Recent experimental research conducted on Facebook has shown that although individuals are most likely to click on links shared by those with whom they have the closest relationships (and therefore most resemble), weaker relationships generate many more novel recommendations and are cumulatively responsible for the vast majority of clicks (Bakshy, Rosenn, Marlow, & Adamic, 2012). Furthermore, since personal recommendations typically trump partisan biases (Messing & Westwood, in press) and since the online social networks from which people receive these recommendations are often more diverse than users realize (Goel, Mason, & Watts, 2010), it is possible that this mode of information discovery could actually broaden users' worldview.

BOUNDARY CONDITIONS

The final theme I consider here concerns understanding how selective exposure operates for different people and in different contexts. In this issue, for instance, Feldman and colleagues (2013) focus on individual traits that promote selective exposure. They offer evidence that strong political views and political activity stimulate selectivity and suggest that moderates, who by definition lack strong partisan leanings, are uniquely open to diverse content. Other scholarship in this vein asks whether there might be differences based on party affiliation or ideology (Garrett & Stroud, 2012; Jost & Amodio, 2012).

A question unaddressed in this issue, but which merits considerable attention, concerns the dynamic and contextual nature of selective exposure. Selective approach and selective avoidance are theoretically grounded in individual motivations, which are variable. Information seekers are sometimes driven by directional goals, while at other times accuracy or completeness are the desired outcomes (Carnahan, 2013; Hart et al., 2009; Matthes & Valenzuela, 2012). The political environment may help to shape which strategy news consumers adopt. For example, individuals may seek counter-attitudinal information when their candidate is facing an electoral defeat (Knobloch-Westerwick & Kleinman, 2011), especially if that information might be useful in reducing anxiety (Valentino et al., 2009). The conditions under which selectivity effects occur have implications when estimating the prevalence of the phenomenon and for our understanding of its consequences.

CONCLUSION

The articles in this special issue promise to advance selective exposure research by highlighting methodological limitations evident in the field today and by providing theoretical and empirical guidance for how scholars might address these limitations. These insights are fundamental to the research endeavor, and when coupled with innovative theorizing they promise to advance the field in substantively important ways. Collectively, the works here also paint a picture of important emerging trends in this research area. We are at a critical junction, facing fundamental questions about the meaning of selective exposure and its implications for society. We have at our disposal new types of data and new tools, both derived from massive computational resources, that could generate dramatic new insights about the phenomenon. The changing technological landscape also means that selective exposure is a moving target: the paths by which consumers find their news are evolving rapidly. The underlying psychological mechanisms may not change, but how these decisions play out in the real world will. As a community of scholars, we should heed the call for methodological rigor made by authors in this issue as we continue to grapple with these important questions.

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