# Resisting Political Fragmentation on the Internet

## R. Kelly Garrett & Paul Resnick

*Abstract: Must the Internet promote political fragmentation? Although this is a possible outcome of personalized online news, we argue that other futures are possible and that thoughtful design could promote more socially desirable behavior. Research has shown that individuals crave opinion reinforcement more than they avoid exposure to diverse viewpoints and that, in many situations, hearing the other side is desirable. We suggest that, equipped with this knowledge, software designers ought to create tools that encourage and facilitate consumption of diverse news streams, making users, and society, better off. We propose several techniques to help achieve this goal. One approach focuses on making useful or intriguing opinion-challenges more accessible. The other centers on nudging people toward diversity by creating environments that accentuate its benefits. Advancing research in this area is critical in the face of increasingly partisan news media, and we believe these strategies can help.*

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It is fashionable to decry a growing fragmentation of political discourse in America.[1] Gone are the days when Americans of all political stripes relied on a common set of media institutions; liberals and conservatives no longer read the same books or watch the same cable TV talk shows. But the best evidence so far, based on actual reader behavior, suggests that ideological segregation on the Internet is limited. Those who read conservative websites such as RushLimbaugh.com are more likely than the average Internet user to visit *The New York Times* online as well; similarly, visitors to liberal websites such as MoveOn.org are more likely than the average Internet user to visit the Fox News website, too.[2] This phenomenon suggests, perhaps surprisingly, that for now online news consumption is less homogeneous than political dialogue within family or friend networks.

What will happen next? Legal scholar Cass Sunstein, among others, argues that the Internet will inevitably make fragmentation worse over time, as

ever-narrower, more personalized channels allow people to see only the news and opinion stories they want to see.[3] For example, readers can look to the online magazine *Newsmax* for a conservative slant on the news of the day, or to *Slate* for a liberal one. Even narrower channels could increase homogeneity still further. At the extreme, the news aggregator Digg.com, which has long selected front-page articles based on readers' votes, now offers a personalized stream of only the articles a reader's designated friends have voted for. The concern is that if readers choose to follow only like-minded friends, they may never see articles that challenge their preexisting opinions. In this essay, however, we turn the "personalization leads to fragmentation" claim on its head by arguing that personalization could instead be a crucial tool for *resisting* fragmentation.

Individual exposure to opposing viewpoints has several societal benefits. First, it increases tolerance for attitudes and beliefs that differ from one's own. Second, there is a natural tendency for people, particularly those in the minority, to think that their views are shared more broadly than they actually are.[4] Given a better assessment of the true popularity of an opinion, individuals may accept the legitimacy of disagreeable outcomes in the political sphere rather than concoct conspiracy theories to explain how their own will, which they presumed to be in the majority, was thwarted. Third, broader experience with diverse views may prevent polarization. A long history of experiments has shown that deliberation on an issue with like-minded people leads to polarization: that is, everyone tends to end up with more extreme views than they started with.[5] According to one explanation for this finding, people in like-minded groups are exposed to arguments on only one side of the issue.[6]

Thus, selective exposure to exclusively attitude-reinforcing news and opinion articles might also lead to opinion shifts to more extreme positions, which may make it harder for society to find political consensus on important issues.

In the past, people could not tailor news according to their individual preferences. Mass-audience broadcast channels offered a mix of information that was not perfectly aligned with any one person's views. According to Sunstein, the social benefit of exposing everyone to some challenging opinions is now at risk in an era of narrowcasting and personalization. In other words, as the Internet increasingly allows people to limit their news consumption to that which reaffirms their own views, the underlying conflict between what is good for society and what individuals will naturally choose becomes apparent.

The risks associated with narrow channels and personalization are undeniable. Even without automated news filtering, millions of Americans have already begun to sort themselves into partisan audiences via their use of cable news networks and ideologically oriented websites. It is a mistake, however, to presume that personalization services make further news market fragmentation inevitable. The technology and how people use it are still malleable; subtle architectural changes could have far-reaching implications for future news consumption patterns.

Our claim is not that technology will miraculously transform people, converting closed-minded ideologues into open-minded deliberators; rather, we argue that it can nudge individuals slightly in the direction of exposure to challenging viewpoints and that most people will prefer news services that provide those nudges to ones that do not. For example, news services could prime norms that promote balanced exposure or could

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make readers aware of how popular other viewpoints are. Such strategies could prompt modest increases in people's preferences for exposure to challenging information. Moreover, in many cases technology need not alter people's preferences; instead, it may be sufficient to better serve their existing preferences. As we discuss below, considerable evidence suggests that people gravitate toward confirmation without systematically avoiding challenge. In choosing which news items to view, factors such as informativeness and quality often trump viewpoint. Further, some people prefer to see a mix of perspectives, especially when they anticipate the need to defend their positions. News services that present the right challenging items to the right people and in the right contexts have the potential to be very successful.

Creating automated, diversity-enhancing news services that people want to use, however, will require effort and creativity. Without thoughtful intervention, personalized news aggregation services may not evolve to produce the kind of heterogeneous information streams that people would prefer over homogeneity. For example, researchers have made inroads toward automatically identifying the political slant of news content.[7] If these identification systems were used naively to tailor news consumers' information environments, mechanically screening out political information with which they might disagree, then technology would directly curtail exposure to counterattitudinal information. Thus, considerable research and development may be necessary. There is good reason to be hopeful, though, that such R&D efforts will yield services that win in the marketplace.

In 1944, Columbia University sociologist Paul Lazarsfeld and his colleagues at the Bureau for Social Research published *The*

*People's Choice*, a landmark work based on research conducted in Erie County, Pennsylvania, examining voters' activities and attitudes in the lead-up to a presidential election. In the book, which helped lay the foundations of modern political communication scholarship, the authors observe that "people select their exposure along the line of their political predisposition."[8] This simple claim set the stage for a robust debate that continues to this day.

Selective exposure is premised on what social psychologist Leon Festinger termed *cognitive dissonance*, the negative arousal that individuals experience when they encounter anything suggesting that a prior decision has undesirable implications.[9] For example, voters might experience dissonance upon learning that their preferred candidate in an election has behaved unethically because this knowledge raises questions about their judgment. Given that dissonance is unpleasant, individuals tend to avoid it or mitigate its effects. One strategy for doing so is to discriminate among different types of information based on one's attitudes or opinions, seeking information that confirms prior decisions (confirmation bias) or avoiding disconfirming information (defensive avoidance).

A half-century of research predating the widespread adoption of the Internet, however, suggests that selective exposure has only a modest influence on individuals' political information diet.[10] Political attitudes are only one of many factors that influence news consumption, and that influence is relatively modest. General political interest, issue relevance, and information utility often play bigger roles in shaping media exposure. Furthermore, although individuals frequently exhibit a preference for proattitudinal information, there is very little evidence that they avoid counterattitudinal information.[11] These results suggest that selec-

tive exposure is actually the product of two distinct preferences: an attraction to proattitudinal information paired with a much weaker aversion to counterattitudinal information. This is the context in which concerns about Internet-induced political fragmentation emerged.

Cass Sunstein was among the first to decry the threat the Internet poses to democracy. In *Republic.com*, he presents a compelling vision of how people might use their newfound ability to filter political information online, arguing that fragmentation is the most likely result. To support his claim, Sunstein points to a tendency among political websites to link almost exclusively to other websites that share their political orientation, and he examines the consequence of this behavior through the lens of group polarization. In contrast to prior scholarship on the topic of selective exposure, however, he asserts that, given the opportunity, people *will* systematically screen out information and opinions with which they disagree. In the same year that Sunstein's book was published, political scientists Diana Mutz and Paul Martin released an article offering a similar conclusion.[12] Using cross-national survey data and exploiting exogenous variation in the available news sources in different media markets, the authors demonstrate that the more choice people have in their information environments, the more likely they are to be exposed to proattitudinal instead of counterattitudinal information. Observing that choice abounds online, the authors warn that increasing reliance on the medium could pose a threat to healthy political deliberation.

These claims inspired a new generation of selective exposure research. Network scientists Lada Adamic and Natalie Glance provide a thorough analysis of claims Sunstein made about blog-linking patterns, confirming that bloggers dis-

proportionately link to posts and websites that support their viewpoints.[13] Survey data collected during the 2004 election demonstrate that conservative Republicans and liberal Democrats differ in their media preferences.[14] Conservatives are more likely than liberals to use conservative outlets across a variety of media, including newspapers, radio, television, and the Web. Likewise, liberals show a stronger preference than conservatives for liberal outlets. Experiments confirm that when faced with a choice between proattitudinal and counterattitudinal messages, most individuals choose the former.[15] The results of this recent wave of research can have one of two meanings for selective exposure in the Internet era. One possibility is that changes in the media landscape precipitated by new technology have altered the mechanisms underlying the phenomenon, thereby promoting both confirmation bias and defensive avoidance. Political scientists Lance Bennett and Shanto Iyengar make an argument along these lines, suggesting that changes in the media are producing information "stratamentation," in which politically disinterested individuals simply tune out while the politically involved grow more isolated. As a consequence, the authors predict, few people will ever engage with counterattitudinal information.[16] The alternative explanation, which we advance here, is that the results are driven primarily by confirmation bias.

When individuals choose between proattitudinal and counterattitudinal content, as they have in the studies described above, we cannot know whether they are motivated by confirmation bias, defensive avoidance, or both. Although it seems reasonable to assume that people will avoid content they consider to be dangerous or offensive, recent empirical work indicates that people tend to look

for proattitudinal information *without* systematically screening out other perspectives. Following the work of Sunstein and Adamic and Glance, communications scholar Eszter Hargittai and her colleagues offer a nuanced assessment of cross-ideological discussion on political blogs.[17] Consistent with prior research, they observe that both conservative and liberal bloggers are more likely to link to other like-minded blogs. But they also find that links to blogs of the opposing ideology are pervasive. Survey data collected during the 2004 U.S. presidential election show that greater reliance on online news sources promotes familiarity with proattitudinal information without a corresponding decline in counterattitudinal information.[18] A 2005 study examining consumers' perceptions and use of online political content finds that the more proattitudinal information a news story contains, the more likely the individual is to view it; however, the presence of counterattitudinal information does not have a statistically significant influence on selection.[19]

Perhaps most relevant to the objective of promoting exposure to diverse views is the insight that people differ in their preferences for homogeneous versus diverse streams of news. For example, about one-quarter of participants in an online experiment volunteered, without being asked directly, their preference for ideological heterogeneity in the news; consistent with that claim, when an automated news recommendation system presented them with various combinations of liberal and conservative news items on different days, they reported higher satisfaction with more diverse sets.[20] National survey data reveal that about one-third of partisan online news consumers (those who use political blogs or explicitly ideological news outlets) rely on both supporting and opposing partisan outlets.[21]

Precisely which factors contribute to these preferences remains an open question. Other studies show that when forced to choose between pro- and counterattitudinal information, increasing attitude accessibility, attitude importance, and political interest promote counterattitudinal information exposure.[22] Attitude certainty and defensive confidence – that is, certainty in one's ability to justify and maintain a set of beliefs in the face of counterargument – also increase individuals' willingness to engage with counterattitudinal information.[23] A growing body of research suggests that an individual's ideology may play a role as well. Data from experiments indicate that conservatives tend to explore the information environment less thoroughly than individuals holding other ideologies because they more quickly learn to avoid harmful or costly encounters.[24] Similarly, several studies suggest that conservatives tend to be less tolerant of ambiguity or uncertainty and have a higher need for closure than liberals.[25] This is not to say that all conservatives will engage in strategies of avoidance or that all liberals will seek other perspectives; the results merely show that, on average, those inclinations tend to fall along ideological lines.

Furthermore, exposure preferences are highly contingent on social context. Indeed, several factors promote attention to other perspectives. Notably, decision anxiety can make counterattitudinal information especially desirable when it is expected to be useful, as when one must defend a position.[26] Yet individual anxiety, or threat, can produce the opposite effect within some groups. Individuals holding more authoritarian views have a greater aversion to counterattitudinal information the more threatened they feel.[27] Information scarcity also promotes selective exposure: that is, indi-

viduals are more likely to prioritize pro-attitudinal over counterattitudinal information when their opportunities to gather information are limited; but proattitudinal preference weakens when information is more abundant.[28]

In sum, several decades of research have shed considerable light on the selective exposure phenomenon. People's attitudes certainly influence their exposure to political information, which has implications for how they use the high levels of choice afforded by the Internet. Political viewpoint, however, is only one of a number of factors that shape exposure decisions, and its influence is modest. Furthermore, it is an error to assert that people consistently prefer homogeneous news streams. Strong evidence shows that confirmation bias is the dominant form of selective exposure; defensive avoidance has relatively little effect despite changes in the media environment. In other words, people have a psychological preference for proattitudinal information without a corresponding aversion to counterattitudinal information. Most important, there are numerous individual and contextual factors that lead people to favor counterattitudinal information in particular settings.

The above discussion brings us back to the question of personalization. If people had access to the news streams they most desire, those streams often would include some information that challenges their preexisting opinions. However, an ideologically segmented news environment – exemplified by the cable TV news market today – encourages consumers to construct relatively homogeneous news streams.[29] In a world of many narrow partisan channels, people must choose between sources offering *either* proattitudinal *or* counterattitudinal information because a source offering both is not an option. Faced with this choice, most will choose the proattitudinal source. Although some individuals will make this choice because they deem the alternatives to be offensive or dangerous, it is more often an unintended consequence of confirmation bias in an environment with limited options. That is, in most cases people exclude opposition channels not out of aversion to other opinions but because they offer less benefit than proattitudinal channels. This choice environment comes at a price for the individuals, who would find certain diverse news streams to be more satisfying, and for society at large, which benefits from a well-informed and tolerant public.

In principle, personalized news aggregators should resolve this problem. Automated personalization services track stories that individuals liked in the past and use that information to identify and recommend "similar" items going forward. People can explicitly mark the items they like, or a program can make automated inferences based on which items they choose to view and for how long. If people truly prefer some challenging articles mixed in with proattitudinal information, the system should "learn" that preference.

Personalization technologies that produce desirably diverse news streams may not emerge naturally. The problem is that unsophisticated interpretations of what constitutes similarity can lead to homogeneous collections. For example, if similarity means that two items cover the same topic, then someone who initially reads a few stories about football might end up with all stories about football and miss the excitement of the Tour de France. If it means that items are "liked" by people whose ratings tend to match one's own, as in the recommender systems of Netflix or Amazon, then liberals might only see stories liked by other liberals. More sophisticated notions of sim-

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ilarity are required. For example, if someone reads and likes an article that presents new evidence and argues logically in favor of a particular position, similar articles might include those that present new evidence on any topic, those that are argued logically, those that take a particular position, or any combination thereof. In addition, people may favor collections of items that cannot be reduced to their preferences for individual items. A challenging article may be desirable only if accompanied by a supporting one on the same topic. A reader might find a single challenging item interesting and informative but be annoyed to encounter more than one.

There are three ways that personalized information services could be designed to give people challenging information they would like to have access to but might not otherwise get. One is to provide only high-quality challenging items. A second is to provide challenging information only in the context of specific topics of interest. The third is to reduce the cognitive dissonance associated with challenging information by making it easy for people to access counterarguments that support their views whenever they are exposed to these challenges.[30]

Making intriguing counterattitudinal information more accessible could significantly enhance the level of diversity in people's media exposure choices. Suppose, for example, that an individual's rating of an item depended on two elements: a reinforcement score measuring how well the item matched his or her pre-existing opinions and a quality score measuring other attributes such as good writing, humor, and novelty. A reader who generally favors reinforcement may prefer a high-quality, non-reinforcing item to a reinforcing item of much lower quality. Imagine reading the user-contributed comments accompanying a newspaper op-ed. Individuals might enjoy reading the sloganeering responses they agree with as well as the thoughtful ones. If forced to read the sloganeering responses from commenters they disagree with, however, they might be turned off sufficiently to stop reading the comments altogether. But what if they could read only the thoughtful opposing comments? For many people, challenging yet insightful remarks would merit some attention, and might even be more attractive than the less-thoughtful agreeable responses.

This scenario is not as far-fetched as it might seem. The website Slashdot.org already allows users to tag comments as "insightful" or "humorous," for example. Readers can convert those tags into scores and hide comments with scores below certain thresholds. Similarly, Digg.com posts user ratings of individual comments. News services that tracked users' political positions, whether self-identified or automatically estimated based on responses to previous items, might be able to determine whether a particular user would agree or disagree with various comments, setting a higher score threshold for disagreeable comments than agreeable ones. The net effect would be to show each person more agreeable than challenging comments, but to expose everyone to some challenging comments nonetheless. It is at least plausible to assume that individuals would prefer this combination to either a service with only agreeable comments or one with the same quality threshold for agreeable and disagreeable comments. The technique might also be used to filter other types of political content, such as op-ed pages or news analyses.

Determining which challenging items most interest individuals will require considerable experimentation. Selection based on attitude-independent quality metrics, as suggested above, is just one

possibility. In other contexts, it may be interesting to track items that are most popular among the opposition. Yet another intriguing option would be to highlight items that have attracted "strange bedfellows," those that are liked by two clusters of people who do not usually agree with each other. As we develop technologies to select news and opinion items as well as reader comments based on these and similar criteria, the most agreeable method of selecting disagreeable items may become clear.

A second approach is to provide access to challenging information only when people are most curious about and open to it. Research has shown that interest and personal relevance trump ideology in the search for political information. Imagine a service that tracks a user's reading behavior over time. When it detects interest in a topic (for example, reading a news article to completion rather than just scanning the first paragraph), especially a topic the user has not explored recently, the service might suggest topically relevant items representing alternative viewpoints. The technology to cluster news articles by topic already exists. (Google News, for example, offers a single headline and summary story, then lists others sources with more in-depth articles on the same topic.) Various experimental techniques have been developed for automatically clustering items based on political viewpoints. In one intriguing study, Korean researchers found that grouping articles on the same topic into separate opinion clusters led readers to explore more diverse viewpoints.[31]

A third approach is to provide challenging information along with supporting information. Cognitive dissonance theory, the basis for predictions of selective exposure, tells us that viewing counterattitudinal information can produce negative emotions if the exposure leads the viewer to feel badly about a prior decision. The more confident people are in the reasonableness of their opinions, the less threatening counterarguments will appear. To boost reader confidence, information services could make it easier to find proattitudinal information following counterattitudinal exposure. If users could easily navigate from articles containing challenging information to opinion-reinforcing items – ideally, items that respond directly to the arguments in the challenging piece – these reminders of the evidence supporting a prior decision may reassure individuals of their correctness when confronted with counterarguments. Alternatively, it may serve as a face-saving opportunity for individuals who are moved to reconsider their position by demonstrating that they are not alone in their beliefs. Admitting to an error is easier when others have made the same mistake. Either way, this feature would reduce the cognitive dissonance of challenging information so that people feel safer exploring. As described above, another approach would augment a stream of like-minded news items with the periodic inclusion of the "best" of the other side, giving individuals both greater opportunity and fewer disincentives to explore challenges to their opinion. Remembering the justification for one's position creates attitude certainty, which increases people's willingness to engage counterattitudinal information without precluding the possibility of attitude change.

In addition to helping people find the challenging information they want on the occasions they want it, innovative technologies can also provide subtle nudges that encourage people to *seek out* more challenging information. Experimental research has consistently demonstrated that exposure to other viewpoints

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is highest when individuals have the most to gain from it. When individuals are warned that they will need to defend or justify their positions, they are more likely to seek out counterattitudinal information, a tendency that becomes more pronounced as decision anxiety increases. The higher the cost of being wrong or uninformed, the more effort people put into verifying the accuracy of their positions (so long as they still have the opportunity to act on the new information). Thus, one way to make other perspectives more attractive to news consumers is to provide information about the prevalence of different opinions on an issue. The realization that one's opinion is not widely shared can increase the value of exploring alternatives because it creates awareness of the need to defend that opinion to others in discussion or to justify it to oneself. This approach could be an effective motivator among those whose views are in the majority as well. Realizing that one's opinion is shared by many should reduce the costs of exploring alternatives: as noted above, attitude certainty makes exposure to counterattitudinal information feel safer. Although it is not clear exactly how a news and opinion aggregation service could integrate polling and reader feedback information into its displays of news articles, this is an area that seems ripe for experimentation.

Another way to nudge people toward consuming challenging information is to accentuate the benefits to self-image that accrue from engaging in counterattitudinal exposure. Most people believe that exposure to a range of political opinions is a good thing. People tune in to political debates and talk shows that highlight opposing perspectives.[32] Individuals at both ends of the political spectrum are unhappy with news media that they perceive to be partisan, and a majority of

Americans say they prefer political news sources that do not advocate a particular point of view.[33] Diversity has even been shown to influence perceptions of credibility in some contexts. For example, when people assess the quality of an unfamiliar online information source, they typically rely on cognitive heuristics, mental shortcuts that allow them to decide whether to trust the content. One important heuristic concerns the diversity of views included. A source that offers only one point of view – that is, one whose contributors are all in agreement – is considered less credible, meaning that readers are less likely to trust it.[34] By extension, this finding suggests that political sources explicitly advocating one position without considering others, and without allowing room for dissent, are likely to be viewed skeptically by many.

Normative expectations about diverse exposure apply to consumers as well as producers. In his commencement address at the University of Michigan in 2010, President Obama asked graduates, "How will you keep our democracy going?" Part of the answer, he said, was to "actively seek out information that challenges our assumptions and our beliefs." A quick perusal of online comments from conservative readers of *USA Today* and *Wall Street Journal* articles about the speech confirms the normative status of the message (even though many commentators argued that the messenger was hypocritical for delivering it).

For those who accept that attention to other perspectives is normative, user interfaces can be developed to prime individuals to think about this expectation when they approach the news. For example, we are launching an experiment that adds a simple feedback mechanism to a news aggregator, providing feedback on how many red (conservative) and blue (liberal) articles the user has read recent-

ly.[35] Called "Balance," the tool is designed to encourage exposure to challenging viewpoints: it features a cartoon figure walking a tightrope; if a user's recent reading history is out of balance, the tightrope walker leans precariously to one side.

More research is needed to fully understand how best to prime normative expectations for diverse news gathering, but other intriguing possibilities have been identified. For example, scholars have observed that ideology influences individuals' responses to persuasive messages. Whereas a "benefits" frame effectively motivates liberals, a "loss" frame is more successful among conservatives. Thus, stating that "balance will produce better decisions and is good for society" might move liberals to act, while "if you don't know what the other side is saying, you won't be able to refute their arguments" may be a more effective nudge for conservatives.[36]

Social comparisons can further leverage the desire to conform to the norm of balance. For example, informing people when their viewing histories are less balanced than other users' may trigger a desire to catch up. For some subset of the population, the tracking idea can be taken further and turned into a game in which users compete to accumulate points. Just as Internet-based diet and exercise trackers have turned self-improvement into a competitive game and the mobile application Foursquare has had the same effect on regular attendance at favorite bars and restaurants, a "challenge yourself" application could allow people to earn points for reading challenging information or talking about politics with people they do not know.

We disagree with critics who argue that the Internet inevitably threatens diverse exposure and that society will suffer as a consequence. This outcome is just one of many possibilities. Indeed, we think that these technologies could expose people to a combination of news and opinion pieces that, if selected and presented well, would expand the diversity of the information they receive. The danger will come not from an inherent human desire to filter out other viewpoints; confirmatory information is attractive, but not to the exclusion of everything else. Instead, the threat will come from narrow channels and crude personalization techniques that fail to meet people's true preferences.

We have articulated a number of promising directions for research and development of more sophisticated personalization techniques that could potentially increase the benefits of diverse exposure and help people assemble and access challenging information they will be interested in and receptive to. These strategies include presenting challenging information only if it exceeds a high bar on criteria such as quality and relevance; offering challenging information alongside confirmatory information; providing an opposing view only when people are most open to it; informing people about the prevalence of challenging opinions; and reinforcing the norm of balanced exposure. More sophisticated personalization services based on these approaches could promote more diverse exposure despite the (re)emergence of partisan news media.

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ENDNOTES

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29 The prospect of a partisan press is not altogether new. To the contrary, sociologist Michael Schudson notes that the norm of journalistic objectivity is a relatively recent invention, dating back to the early twentieth century. The intervening years may be the exception, making a return to more propagandistic journalism likely. See Michael Schudson, "The Objectivity Norm in American Journalism," *Journalism* 2 (2001).

30 These strategies are focused on media exposure and do not address fragmentation due to homophilous interpersonal networks. Although there may be analogous ways of addressing homophily, they will not be identical because the underlying motivations are distinct. Most notably, many people *do* have a strong aversion to interpersonal disagreement.

31 Souneil Park, Seungwoo Kang, Sangyoung Chung, and Junehwa Song, *Proceedings of the 27th International Conference on Human Factors in Computing Systems*, Boston, Massachusetts, 2009.

32 Michael X. Delli Carpini, Fay Lomax Cook, and Lawrence R. Jacobs, "Public Deliberation, Discursive Participation, and Citizen Engagement: A Review of the Empirical Literature," *Annual Review of Political Science* 7 (2004).

33 Andrew Kohut, Carroll Doherty, Michael Dimock, and Scott Keeter, *Ideological News Sources: Who Watches and Why* (Washington, D.C.: The Pew Research Center for the People & the Press, 2010).

34 Miriam J. Metzger, Andrew J. Flanagin, and Ryan B. Medders, "Social and Heuristic Approaches to Credibility Evaluation Online," *Journal of Communication* 60 (2010).

35 Items are automatically classified based on the political leanings of the people who voted to promote the article to the website's front page.

36 Howard Lavine et al., "Threat, Authoritarianism, and Voting: An Investigation of Personality and Persuasion," *Personality and Social Psychology Bulletin* 25 (1999).