POLICY FORUM

MEDIA AND SOCIETY

Small media, big impact

Randomizing news stories reveals broad public impacts

By **Matthew Gentzkow**

A robust and informative media has long been viewed as critical to the functioning of democracy (*1–3*). Much popular discussion suggests that media are becoming less able to fulfill this role. Traditional news organizations seem weakened and battered, shedding staff an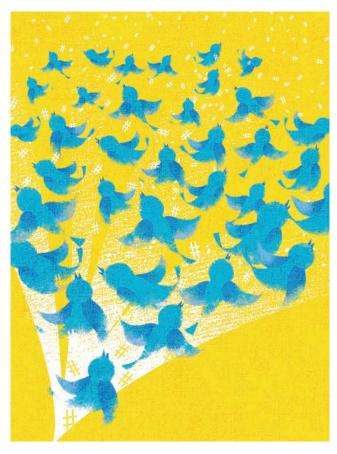d influence even as social media introduces a tide of new threats. Polarization seems to have cut countries in two, with each side hearing news and information only from its own partisan sources. Many look back with nostalgia at a time when the nightly TV news set a common agenda for the vast majority of citizens. The landmark study by King *et al.* (*4*) on page 776 of this issue offers an important counterpoint. Drawing on the first experimental study in which the content of media outlets has been randomized on a large scale, it suggests that mainstream U.S. journalism remains more relevant, more influential, and more connected to a broad cross-section of people than many might have thought possible.

The argument that media plays a critical role in democracy has been central to legal doctrine and regulation of media in the United States and around the world (*5, 6*). The U.S. Supreme Court has written: "The First Amendment [of the U.S. Constitution]…rests on the assumption that the widest possible dissemination of information from diverse and antagonistic sources is essential to the welfare of the public, that a free press is a condition of a free society" (*7*). The results of King *et al.* provide a valuable input as we consider how such policies should evolve.

CUTTING ACROSS POLITICAL LINES

To probe the contemporary uptake and impact of media, King *et al.* employ a simple basic design. Groups of two to five mostly small online U.S. media outlets wrote stories on broad subjects chosen by the experimenters, such as immigration, climate, and education policy (coordinating on a single specific focus within the broad area). Each cluster of stories was designated to run on these outlets in one of two consecutive weeks. Which of the 2 weeks it ran in was determined by a coin flip. The authors assess the influence of the stories by comparing outcomes in the "treatment" week in which the cluster of stories ran to the "control" week in which it could have run but did not.

As a primary outcome, the authors focus on discussion of the chosen subject on Twitter. This includes discussion both inside and outside the United States. The authors measure the volume of posts both about the narrow topic of the story cluster itself (e.g., the experience of Iraqi immigrants in a particular town) and about the broader issue of which it is a part (e.g., immigration in general). They separately identify posts by different groups of users—including those who lean left versus right politically—and also distinguish posts that are supportive versus critical of the point of view taken in the original articles. The results suggest that the average cluster of stories in the study (i.e., a group of stories from two to five outlets) generated more than 13,000 additional Twitter posts by more than 7000 unique authors in the week following its publication. This represents an increase of 10% relative to the typical weekly volume of posts on these topics on Twitter as a whole.

These posts were not just commentary on the original stories or discussion of the specific issues they raised—according to the authors' categorization, the overwhelming majority were discussion of the broad policy issue without reference to the specific subject of the stories. Most posts were not by news organizations or journalists—the authors find that a large majority were produced by individual users. Perhaps most surprisingly, although many of the participating outlets mainly cater to left-leaning audiences, the conversation they produced on Twitter cut across political and demographic lines, with similar proportional effects on posts by left-leaning and right-leaning users, as well as by users of different genders, geographic regions, and intensities of Twitter usage. A small number of stories on a set of relatively small news outlets were thus able to influence public discussion in a broad and measurable way.

A few details of the study are important to consider in order to put the results in perspective. The first is the identity of the 48 outlets involved in the experiment. One would think very differently about a study showing that *The Washington Post* or *Fox News* could generate thousands of posts on Twitter than a study showing the same for a small local newspaper or obscure political blog. The participating outlets are overall much closer to the obscure end of the spectrum. The full list consists mainly of small news outlets and political advocacy sites (e.g., *Cascadia*

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Times, Defending Dissent, News Taco, Big Education Ape). There are a few mid-sized mainstream outlets (*The Nation, Ms. Magazine, Public Radio International*), and one large national outlet [*Huffington Post*, the 11th largest news site in the world by traffic according to *Alexa* (*8*)]. The authors cannot disclose separate results by outlet for confidentiality reasons, but they show supporting evidence suggesting that no single outlet individually drives the results.

That relatively obscure outlets could produce such large effects is surprising, and it suggests that these results may capture just a tiny piece of the influence wielded by media outlets as a whole. One interesting piece of observational data supports this view. The authors examine some examples of stories produced by *The New York Times* on previously little-discussed topics, such as a story about fracking affecting the quality of drinking water published at a time when there was little discussion of this issue. They find resulting spikes in Twitter traffic an order of magnitude larger than their experimental estimates.

The second important detail is the nature of the outcomes. As the authors are careful to point out, posts on Twitter are far from a representative slice of the "national conversation." Three-quarters of Americans do not use Twitter, and only 10% use it on a daily basis (*9*). Those who do are more educated and have higher incomes than the average American (*9*). This means that the impact this study measures could in some ways be especially important, as Twitter includes a particularly large share of elite influencers with the potential to translate their views into policy. That the impacts are similar for posts by heavy and light Twitter users also suggests that the effects may reach beyond the elites. Nevertheless, it remains unclear whether this kind of journalism reaches the conversations of the broad mass of American voters.

In addition, the main focus of the study is on the volume of discussion about different topics on Twitter, not the quality or downstream impact of this discussion. It is possible, for example, that users with different political leanings or genders differed in the depth of their engagement with the topics or in the impact their comments had on broader outcomes.

SETTING THE AGENDA

The results of King *et al.* speak to a long body of work on the channels by which media exert influence. Early media studies, motivated in part by the seemingly limitless power of propaganda during the World Wars, looked for simple persuasive effects: for example, exposure to a conservative message should make a recipient more conservative. The results were mostly negative, leading scholars to question the power of media and look for other channels of influence (*10–12*). One of these was agenda setting: the idea that media might affect what issues the public and policy-makers focus on, even if media could not change how they thought about these issues (*13, 14*).

It turns out that the early failures to find persuasive effects were due more to limitations of the research designs than to limits on the power of media. Teasing out the causal effect of media content from observational data is difficult, and biases in simple correlational studies can be extreme. More recent studies have used carefully constructed natural experiments to show large persuasive effects of media in many contexts [e.g., (*15*)]. However, the original insight that agenda setting provides a separate, important channel of influence remains valid. King *et al.*'s study provides one of the most rigorous and convincing data points to date on the agenda-setting power of media.

More broadly, these results echo a number of points from prior literature that push back against the prevailing narrative about trends in media and politics. We know that the polarization of voters has in some ways been overstated. Views on individual policy issues, for example, have remained fairly stable over time with most Americans holding moderate views (*16–18*). The claim that American voters have increasingly self-segregated geographically has been largely debunked (*19, 20*). We know that the extent of ideological segregation in news consumption—i.e., the extent to which the sources and conversations conservatives are exposed to are disjoint from those that liberals are exposed to—has at least until recently been substantially lower than much of the popular discussion would suggest (*21, 22*). Demographic patterns suggest that to the extent we see evidence of rising polarization, it is concentrated among the groups least exposed to online news and information (*23*), suggesting that the polarizing effect of new media may be more limited than often assumed.

Although King *et al.* build upon such prior literature, several features make their study stand out. The basic design of randomizing media content has never been tried before at this scale, and implementing this design was by all accounts a formidable effort. Studying impacts on social media discussions distinguishes their study from others estimating causal effects of media content, most of which look at other outcomes like voting [e.g., (*15*)]. The analysis combines a sophisticated approach to sta-tistical inference with cutting-edge text analysis techniques.

The methodology of the study by King *et al.* may open up new avenues for research. The same experimental design could in principle be extended to look at how the media influence discussion in forums beyond Twitter; how they affect downstream outcomes such as individuals' information, beliefs, or votes; and the extent to which timely release of accurate information can neutralize misinformation or biased beliefs.

Taken as a whole, the results of King *et al.* provide a timely reminder that there are positive as well as negative aspects of new technology. At the current moment, it is easy to forget that a predominant concern for most of American history has been that media power would be concentrated in a few hands, and that only a few outlets would have the ability to shape the nation's agenda. Although social media gives a platform to many objectionable voices, it also makes it possible for journalists at innumerable small outlets to participate in the conversation as well. The results of King *et al.* suggest that when they speak, many are listening. ∎

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