need for high-quality science to take time to ponder, digest, and deliberate. Because of the precedential nature of legal decision-making, enshrining underdeveloped ideas has harmful path-dependent effects. Hence, peer review by the relevant scientific community, although far from perfect, is clearly necessary. For redistricting, technical scientific communities as well as the social scientific and legal communities are all relevant and central, with none taking over the role of another.

The relationship of technology with the goals of democracy must not be underappreciated—or overappreciated. Technological progress can never be stopped, but we must carefully manage its impact so that it leads to improved societal outcomes. The indispensable ingredient for success will be how humans design and oversee the processes we use for managing technological innovation. ■

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PERSPECTIVE

Campaigns influence election outcomes less than you think

Campaigns have small effects but are built to win close races

By **David W. Nickerson**[1] *and* **Todd Rogers**[2]

U.S. presidential campaigns spend hundreds of millions of dollars each election cycle to maximize their chance of electoral victory. Media coverage analyzes individual campaign advertisements, activities, and decisions as if they are hugely influential. Yet, whether an election is close or not is due to factors that are outside the control of electoral campaigns, such as wars and pandemics or even candidate characteristics. In fact, roughly two-thirds of the variance in U.S. presidential election outcomes—where both sides always run substantial campaigns and frame these fundamentals for voters—can be explained by simple models using just economic performance and whether the incumbent is running (*1*). Several strands of academic literature may support a perception that some small campaign decisions can make big differences in voter attitudes and behaviors [e.g., how arguments are framed (*2*) or where field offices are placed in battleground states (*3*)]. This work likely overstates the effect of campaigns in the field, though, because it isolates specific elements from the chaotic din of real-world politics and therefore either cannot control for the endogenous strategic decisions campaigns make or does not occur in environments when voters' partisan identities are fully activated. By pulling together disparate strands of research and situating presidential campaigns in their broader electoral, social, and media contexts, we argue that sizable persuasive effects from campaign activities seem very unlikely to be observed in real-world elections (*4*).

Partisanship is the most important determinant of vote choice and is an extremely stable trait. Strong partisans (roughly 40% of the population) are deeply committed to their political beliefs and preferences, which makes them extraordinarily nonresponsive to electoral persuasion from the other side but excellent candidates for mobilization. But even when targeting people with weaker partisan attachments (~50%), campaign communications have difficulty overcoming the psychology of partisanship. First, people prefer to consume messages consistent with their partisan identities, which makes contact difficult, even through paid advertising (*5*), a finding that holds true even in online outlets (*6*).

Second, even when campaigns reach their intended persuasion targets, partisan-motivated reasoning counteracts acceptance of the appeals. Affective polarization (i.e., the difference in how warmly people feel toward their own party and the opposing party) and negative partisanship (i.e., the extent to which people dislike the opposition) lead partisans to automatically dislike, distrust, and resist communications from members of the opposing party (*7*), to the point of dehumanizing the opposition (*8*). This leads partisans to reject counter-partisan messages, even when these messages align with their political values (*9*).

Finally, the roughly 10% of the population that lack attachment to a party—and the polarizing cognitive processes that come with such attachment—should make nonpartisans ideal targets for persuasion. However, these "true independents" are relatively less interested in politics and actively avoid political content in daily life. Thus, they are rarely exposed to campaign messages and often respond negatively to partisan outreach, not because of ideological reasons but because they tend to find politics generally objectionable (*10*). Whether these individuals are nonpartisan because they dislike politics or vice versa is an open question that can be addressed as long-term political panel surveys get more numerous and run longer.

Campaigns segment the electorate into groups to target for different purposes: convincing strong supporters to volunteer and donate; mobilizing less engaged supporters to vote; persuading nonsupporters. But the crowded communication environment moderates the effects of these efforts. Countermessaging by opponents can eliminate initial persuasive effects of political messaging and reduces a message's persuasive effects by casting doubt on the veracity of basic facts (*11*). Over the course of an election cycle, affective partisan polarization increases by 50 to 150% (*12*); this

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conflicting and constant partisan communication may be part of the cause.

Even messaging from allied groups can diminish the marginal effect of campaign communications. Organizations doing voter outreach all draw on the same databases and use similar techniques to model the electorate, so allied campaigns tend to talk to the same people (*13*). The net result of this microtargeting is that an individual voter may receive dozens of contacts from multiple groups all advocating for similar positions, which diminishes the marginal effect of every single contact, potentially completely.

The very ubiquity of campaign communication makes studying the aggregate effects of campaign efforts very difficult. Field experiments may be able to tell us the marginal effects of specific campaign communication tactics but cannot estimate the presence or absence of a campaign as whole or big picture messaging decisions. Nearly blanket coverage of targeted voters and strategic targeting by campaigns ensure that nontargeted voters are omitted purposefully and do not serve as a good baseline for estimating the effect of campaign targeting.

Whereas campaigns communicate their messages directly to voters through many channels (e.g., mail, phone calls, TV advertisements, online advertisements, and social media accounts), most voters experience elections through media that campaigns do not control (e.g., written news sources, TV programs, social media, etc.). Although experiments that allow subjects to select their exposure show that political programming has no measurable effect on viewers because people select shows that they enjoy and do not expose themselves to uncomfortable material, a recent experiment in which participants were randomly assigned to watch partisan media and later randomly assigned to discussion groups showed that exposure to partisan media polarized the opinion of discussion partners who were not exposed to the media (*14*). There are certainly patterns to what social media narratives are picked up by mainstream media outlets, but what messages are ultimately amplified by both social media and mainstream media is outside the campaign's direct control. How campaigns most effectively shape "the media narrative" is an area ripe for future research.

Campaigns for offices further "down the ballot" (and in other settings) are likely to see larger effects than seen in U.S. presidential campaigns because the offices are less polarized, the media give these races less attention, voters have less information about the candidates and fewer cues, and there are fewer outside groups devoting resources to the election, so communication channels are less crowded. The fact that U.S. presidential campaigns spend so much money and effort on activities with objectively small direct effects is a testament to the incredible value of wielding political power. The U.S. federal government has an annual budget of over $4 trillion and regulates nearly every facet of economic and social life in some manner. Given this fact, hundreds of millions of dollars, or even billions, spent to influence who controls the executive branch in the event that an election is close may seem justifiable to both donors and candidates, especially when the parties hold very different policy preferences. ■

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