Elite influence on public attitudes about climate policy

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Public attitudes about climate policy are shaped by social identities, norms, and other sociocultural factors. Recent research demonstrates the impact of cues from policy makers and other political elites on support for climate policies, and the processes by which elite cues perpetuate political polarization. Elite cues convey information about social norms that influence people's attitudes about climate policy. This can lead to people supporting or opposing climate policy beyond effects of ideology and climate concern. Elites also shape emotional tones of political issues, which can promote affective polarization and can motivate intergroup conflict. Despite emerging norms that climate change is an urgent issue requiring immediate action, the influence of political elites may polarize and pose barriers to climate action. As public concern about climate change increases, the public may look away from polarized elites and towards alternative emerging leaders who can reduce polarized public attitudes about climate change.

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Public opinion attitudes about climate policy and climate change are constructed within sociocultural contexts. For many years, the 'information deficit model' suggested that public attitudes reflect the accumulation and integration of scientific evidence [1]. On this view, climate scientists communicate information about climate change, and to the extent the public acquires and evaluates it positively, the deficit will be overcome, and public opinion will be moved towards supporting climate action [2]. Consistent with the information deficit model, across the world, level of education is a strong predictor of climate change awareness, possibly suggesting that those with sufficient information are more aware of climate change [3]. Yet accumulating evidence demonstrates the information deficit model is incomplete, if not incorrect [2,4•]. Instead, sociocultural factors beyond integration of scientific information shape public attitudes about climate change and climate policy [4•,5,6]. It's not that people have a deficit of scientific information; it's that people respond to sociocultural information. The present review considers recent evidence that political elites guide the construction of public attitudes about climate policy by communicating sociocultural cues.

Beyond ideology

Public opinion about climate change is often interpreted through the lens of ideology, which predicts support for climate policy [7,8]. For example, ideology and related individual difference measures are used to segment the United States population in to 'Six Americas': Alarmed, Concerned, Cautious, Disengaged, Doubtful, and Dismissive [9]. These differences might reflect divergent views about the roles of government, business, and markets in addressing climate change [10,11]. Ideological differences are consistent with an information deficit model in that people's stances toward climate policy reflect a response to accumulated evidence shaped by underlying beliefs and values [12]. However, closer inspection suggests that ideological differences do not simply reflect progressive or conservative ideological philosophies. Environmental policy, including climate policy, has not always been a source of ideological division within the U.S. [13]. Over time, political differences have been exacerbated by outside influences like the fossil fuel industry and its financial support of politicians who oppose climate policy [14]. Once established as a wedge issue in the U.S., much like abortion and gun control, Democrats and Republicans followed a host of recursive social psychological processes that exacerbated and reinforced political polarization [5,15]. Divisions between Democrats and Republicans on climate change are largely manufactured by processes beyond ideology.

Furthermore, in considering political polarization on climate change, it's easy to overlook the fact that although Democrats are more likely to believe in climate change and to support climate policies, Republicans, on average, also accept the reality of climate change and support climate policies [16]. In studies with large and diverse U.S. samples in 2014 and 2016, the majority of Republicans—just like most Democrats and independents—agreed that climate change is happening, threatens humans, is caused by human activity, and that reducing carbon emissions would mitigate climate change [5]. Consistent with a Pew poll showing that of 26 nations surveyed around the world, most people in most countries

see climate change as a major threat [17], the majority of Democrats and Republicans believe in climate change. This cross-party agreement is especially high when survey questions include descriptions from the Environmental Protection Agency rather than simply using the terms 'climate change' and 'global warming' [18]. Without clear explanations about the scientific understanding of 'climate change', differences between Democratic and Republican attitudes about climate change and climate policy may largely reflect identity signaling [19].

Other evidence suggests that populist ideology operates differently for Democrats and Republicans, further bolstering the view that ideology is itself insufficient to explain polarized public attitudes about climate change. One study examined the relations between people's concern about climate change and their prioritization of climate policy among those who espouse anti-elitist attitudes and populist values like emphasizing the will of the people [20]. Among Democrats, populist values were associated with greater climate concern and prioritization; among Republicans, in contrast, populist values were associated with less concern and policy prioritization. Taken together, these results suggest that liberal, conservative, and populist ideologies offer only a partial lens to understand public attitudes about climate change and climate policy.

Elites influence public opinion about climate policy

Central to the information deficit and related models is that public opinion should be based on unbiased integration of available scientific evidence. Yet recent findings demonstrate that, in the absence of probative information, signals from politicians, thought leaders, and other political elites can strongly influence public attitudes about climate policy [5,21,22]. Ordinary people weight the stances of political elites to such an extent that they sometimes place 'party over policy' [23].

Across experiments with multiple samples and policies, Democratic respondents have been more supportive of climate policies when they were proposed by Democratic politicians whereas Republican respondents have been more supportive when policies were proposed by Republican politicians [5,24]. This elite influence occurred both for cap-and-trade climate policies, which have historically been favored by progressives because of the cap on emissions, and for revenue-neutral carbon tax policies, which have historically been favored by conservatives because they raise the cost of emissions without placing an emissions cap or increasing the size of government.

One experiment centered on an actual carbon tax policy of a Washington state carbon tax initiative in the lead-up to the 2016 election [24]. This initiative received both support and opposition from both liberal and conservative elites, which enabled partisan framing manipulations using veridical supporters and opponents. Democrats supported the climate policy more than Republicans, but this difference was larger when participants were randomly assigned to view Democratic support (and Republican opposition) than when they viewed Republican support (and Democratic opposition).

Other evidence documents the emergence of polarization over time even without focused experimental manipulation of partisan cues. Consider a naturalistic longitudinal study conducted from 2018 to 2019 on public attitudes toward the Green New Deal [25•]. There was initial bipartisan support for the policy components. Over time, as more prominent Democrats such as Representative Alexandria Ocasio-Cortez and Senator Edward Markey voiced support, Republican opposition increased, with Republicans who consumed Fox News showing the most pronounced decline. This pattern implies that partisans' attitudes toward climate policy reflect *who* those policies represent and what they convey about sociopolitical identities—perhaps even more so than specific policy content.

Similarly polarizing influence of political elites occurs outside the United States. In an experiment conducted in Australia, voters identifying with the Green party versus those identifying with a conservative collation, became more polarized in their support for aggressive renewable energy targets after learning that Conservative political leaders had proposed reducing the targets [26]. In the same Australian study, Green and Conservative party voters became less polarized in their support for an emissions trading plan when they learned that both Labor and Liberal political leaders supported the policy, signaling broad bipartisan support. In a study in European Union member states, public opinion more strongly recognized the threat of climate change when political elites were unified in their stances toward environmental issues than when elites were divided in their stances on environmental issues [27].

These findings demonstrate that elite cues shape public opinion about climate policy as much as, if not more than, partisan ideology and policy content. One might argue that these effects occur because elites are seen as more informed about the problem of climate change and the process to implement potential solutions [28]. That is, elites may exert their influence on public opinion because they are seen as reliable sources of information that the public rationally integrates to preexisting beliefs [29]. Such arguments would be broadly consistent with an information deficit model. However, such an explanation is not easily reconciled with evidence that people who are more informed about climate policy are more (not less) influenced by partisan cues [24] and that the more citizens (and policy advisors) know about politics, energy,

and science, the more polarized they are on climate change [30]. We suggest a different explanation: Elites signal social norms.

Elite influence rests on social norms

Sociocultural models hold that public opinion about climate policy is shaped by perceptions of the attitudes, beliefs, behaviors, and values of relevant social groups and cultural contexts—not strictly by probative information about the policy. Social norms powerfully predict a range of environmental attitudes and behaviors [31,32], especially when they characterize proximate others [33]. For example, people's second order beliefs—that is, their beliefs about the strength of their neighbors' beliefs about how energy conservation helps the environment—were stronger predictors of household energy saving than their personal beliefs about energy conservation [34•]. People who perceive that a greater percentage of friends and family are concerned about climate change [8] and who discuss climate change with friends and family [35] are more likely themselves to be concerned about climate change. These social network effects may occur, in part, because people believe that they personally understand climate change when others in their social networks understand climate change and climate policy [36–38]. Such understanding may be illusory, however. The fact that one knows people who could explain how carbon pricing would reduce emissions does not mean that one genuinely understands such policies any more than knowing an airline pilot would mean that one could fly an airplane.

Emerging evidence suggests a different explanation, that elites influence public opinion about climate policy because elites signal social norms. This possibility implies two predictions—that ordinary people use political elite cues to infer social norms, and that inferred social norms explain the influence of elites. Evidence for the first prediction comes from the experiments described earlier that manipulated partisan framing of Democratic or Republican partisan cues regarding cap-and-trade and carbon tax climate policies [5,24]. In those studies, respondents also estimated how much the average Democrat and average Republican would support the same climate policy with the same partisan framing that respondents had considered. The two predictions noted above were confirmed. People overestimated both Democratic opposition to Republican policies and Republican opposition to Democratic policies; that is, people exaggerated polarization between the stances of ordinary Democrats and Republicans, much as they exaggerate polarization on other issues [5,39]. And these perceived social norms of partisan opposition explained people's own support for climate policy, over and above the experimentally manipulated cues from political elites. In fact, the effect of partisan elites' stances was no longer significant after accounting for social norms. Of course, these studies rely on correlational evidence about the explanatory power of perceived social norms, so their causal conclusions are necessarily tentative. It will be important for future research to directly and orthogonally manipulate cues from political elites and cues about social norms.

If elites exert their influence by signaling social norms, are ordinary people swayed by stances of their ingroup, outgroup, or both? Research on social influence suggests that social norms may influence public opinion about climate policy because people assimilate to their ingroup [40,41], differentiate from their outgroup [42], or both [43]. In the absence of contravening information, people assume that liberals' and conservatives' opinions oppose each other [5,39]. When liberal Democratic elites support climate policy, people infer that conservative Republican elites oppose climate policy—even if they have been given no information about Republican elites—which can lead to conservative opposition to such policies [44,45].

In the studies described earlier, perceived ingroup stances were stronger predictors of personal policy support compared with perceived outgroup stances [5,24]. Among Democratic respondents, perceived Democratic support for climate policy more strongly predicted personal policy support than perceived Republican support for climate policy; the reverse was true among Republican respondents. Future reseearch should seek to separate the effects of ingroup and outgroup social norms. This is a particularly important question because it speaks to the plausibility of bipartisanship. To the extent people react negatively to the outgroup, bipartisan climate policies may enjoy little support as people are reluctant to cooperate with the opposing side.

Elites, anger, and affective polarization

The research reviewed thus far suggests that political elite communications influence public attitudes about climate change by signaling social norms. Although norms are often operationalized as statistical descriptions of groups, the social psychological experience of norms is multifaceted, often connected to observations of specific, high profile individuals [46]. One especially potent aspect of social norms, as conveyed by individual political elites, are the emotional appraisals on topics like climate change [47]. Beyond signaling thoughts and behaviors of political ingroups, elite communication can influence emotions—emotions that can exacerbate political polarization.

In the 2020 election, Presidents Joe Biden and Donald Trump adopted sharply different emotional rhetoric. Aided and abetted by a highly polarized media [48,49], Trump stoked anger and divisiveness about the COVID-19 pandemic, the economy, and the election itself. Biden, in contrast, emphasized collective sadness and the need for unity regarding the same politicized topics. Elite

incivility provokes mass anger, which is inherently polarizing [50].

These elite emotional appraisals matter because anger is associated with intergroup conflict [51,52], and can encourage aggressive actions toward opposing political groups [53]. The experience of anger increases both politically polarized attitudes as well as perceived polarization between Democrats and Republicans [54,55]. Sadness, in contrast, does not increase polarization, and may even reduce it.

That political elites sometimes encourage intergroup anger suggests another reason why elite cues polarize attitudes toward policy: People dislike and distrust their political outgroup [56,57]. This 'affective polarization' means that climate policy proposals from an opposed political group are associated with disliked and distrusted others. 'Political sectarianism' [56] has increased in recent decades, owing partly to increasingly charged rhetoric from political leaders, which, as described earlier, define and sustain partisan social norms. Elite cues that evoke anger foment norms of partisan conflict on contentious issues like climate change.

Conclusion

This review provides evidence for an emerging sociocultural approach to understanding elite influence on climate policy. The approach encompasses cognitive and emotional components while specifying the distinctive roles of ideology, identity, and social norms. The research provides further evidence that the information deficit model is not a comprehensive explanation public opinion on climate change. In contrasting these various models, it should be acknowledged that information deficit is plausible for some types of attitudes more than others. Based on available information, there should be little doubt in the reality of climate change. This may be less true of climate policy where the best available information is less clear about specific policies and priorities. Information deficit may be more relevant to public opinion about climate policy. Increasing the amount and clarity of climate policy information remains an essential component of developing broad support.

Yet how this information is received depends on from whom this information is communicated and the sociocultural identities among recipients of the communication. The present review demonstrates that ordinary people support climate policies because they are proposed and supported by political elites from their own political party rather than by political elites from opposing parties. Elite influence can be understood as signaling social norms about the political ingroup and setting polarizing emotional tones.

These findings have implications for better understanding how communicators might bolster public support for climate policy. The stances of political elites on climate policy can be ambiguous, if not intentionally evasive, as politicians navigate different stakeholders' conflicting interests [5,22,27]. Yet, the studies reviewed show that people infer social norms from the stances of political elites. This inference is problematic because elite cues may not represent social norms. There can be a large disconnect between the views of elected officials and the people they represent [58]. In recent years, Republican politicians have widely opposed climate policies, even though ordinary Republicans, when directly asked, are generally supportive of climate policy. Inferring ordinary stances from elite cues thus contributes to pluralistic ignorance in the perception of social support for climate policy [59,60].

Emerging research also demonstrates that dynamic norms can influence people even when norms characterize minority attitudes and behaviors [61–63]. When a small but growing minority engage in sustainable behavior such as reduced meat consumption, people are inclined to endorse and behave in ways that adhere to the dynamic norm. The effectiveness of dynamic norms in prompting larger scale public support for climate policy is an important question for future work. Indeed, communicating dynamic norms about support for climate policy is one strategy by which citizen activists lobby politicians [64•].

It is similarly worth noting that political elites are heterogeneous in their impact and that impactful elites need not be political. As the impacts of climate change proliferate, the public may look away from polarized elites who have become fossilized in their views, and towards alternatives 'elites' such as youth activists like Greta Thunberg [65], religious leaders such as Pope Francis [66], or military service members [67] who can create new and impactful norms to influence climate policy attitudes and behaviors. The salient stances of a few can influence the attitudes of many—but only insofar as people expect that many will be influenced.

Author contribution

LVB and DKS both conceptualized, drafted, wrote, and revised the manuscript.

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Leaf Van Boven: Conceptualization, Investigation, Writing - original draft, Writing - review & editing, Funding acquisition. **David K. Sherman:** Conceptualization, Investigation, Writing - original draft, Writing - review & editing, Funding acquisition.

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