

PART VII

PUBLICS AND MOVEMENTS

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CHAPTER 24

PUBLIC OPINION AND PARTICIPATION

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1 PUBLIC OPINION AND POLITICAL BEHAVIOR

IN political discourse and news coverage of climate change, nationally representative opinion surveys have come to dominate how we talk about the relationship between climate change and the public. The unfortunate tendency, however, is for survey research to be interpreted somewhat simplistically, with scant consideration for a respondent's social context or background and without regard to important communication behaviors and areas of knowledge. Instead, surveys are frequently referenced as if the public were comprised of relatively anonymous, geographically dispersed individuals who have very little or no shared interaction, common interests, or identity.

Across countries, this imagined public relative to climate change remains a source of ever growing anxiety among scientists and advocates for climate action. The focus typically is on how much the imagined public does not understand or know about climate change and the perceived 'gap' or 'divide' between aggregated survey results and expert views. To close this gap, communication is similarly imagined as a process of technical translation and popularization from experts to the mass public, with facts assumed to speak for themselves and to be interpreted by all individuals in similar ways. The difference between expert opinion and mass opinion is blamed on biases in news coverage, 'irrational' beliefs, the work of climate skeptics, or a combination of these three factors (Nisbet and Scheufele 2009).

Yet, instead of reducing public opinion formation to the aggregation of individual responses in nationally representative surveys, public opinion needs to be studied, understood, and discussed as a process that emerges from social context, interaction, and communication. It is this complex process that accounts for the difference between expert views and the subjective perceptions of a diversity of publics.

Examining the case of the United States, this chapter opens by describing the tail ends of public perspectives on climate change, examining the nature of an 'issue public' working to mobilize concern and a climate denial movement organized against policy action. These tail-end segments dominate popular discussion about public opinion, yet between these

proportionally small segments, research shows a socially diverse and mostly ambivalent public. Constituting unique ‘interpretative communities,’ these middle-range segments vary in their size and demographic attributes; their levels of news consumption, attention, and forms of knowledge; the mental frameworks, values, and influences that guide their judgments and behaviors; and the strength and direction of their preferences, opinions, and participation. Importantly, research is being used to identify and develop specifically tailored communication initiatives that empower and enable these publics to reach decisions and to participate in societal debates over climate change.

2 THE MEDIA, THE ‘ISSUE PUBLIC,’ AND WIDER MOBILIZATION

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In an era of digital and online media, the communication playing field has been leveled between expert institutions, traditional journalists as gatekeepers of information, and users of information. The balance of control has shifted in the direction of the people formerly known as the audience, with an engaged segment of media users participating as active contributors, collaborators, creators, disseminators, recommenders, and at times, critics in the climate change debate. These participatory individuals—empowered over the past decade by the many changes in the media system—are what communication researchers have traditionally defined and tracked as the ‘issue’ public (Krosnick et al. 2000; Kim 2009). Research on the connection between policy making and public opinion concludes that on most policy issues, decisions reflect the preferences of the small issue public surrounding a debate, since this segment is the most participatory and the voice that is heard loudest and most frequently among elected officials (Krosnick 1990; Manza and Cook 2002).

Studies find that the size of the issue public on climate change has increased over the past decade and is likely to continue to shift in marginal ways in reaction to focusing events, levels of news attention, and the efforts of advocates to intensify public concern and broaden involvement. Consider, for example, that in 1997 during the build-up to the Kyoto climate treaty meetings, the issue public on climate change grew from 9 to 11 percent over just a few months, an increase that translated into 5 million more Americans engaged and potentially involved on the issue (Krosnick et al. 2000).

Today, the issue public on climate change is estimated to be approximately 15 percent of Americans, a segment equal to the active public on issues such as abortion, gun control, and foreign policy. This proportion translates into approximately 35 million individuals—with more than 80 percent accepting the human-causes of climate change and supportive of policy action to reduce the threat (Krosnick 2010b). (As will be discussed later, other analyses depict the current proportion of Americans ‘alarmed’ and involved on the issue also at 15 percent (Leiserowitz et al. 2010). This figure also compares to the 15–20 percent of Americans who self-identify as ‘active’ environmentalists (Dunlap 2010)).

By working with others, members of the issue public have made climate change a major part of the agenda and criteria by which many organizations, companies, cities, and states reach decisions and interact across the government, business, and civic sectors. Through digital and face-to-face interactions, key members of the issue public are also serving as

informal opinion leaders. More than just attentive and individually active on climate change, these opinion leaders also serve as influential go-betweens, receiving and passing on to their peers information, news, resources, and requests to get involved. In this 'two-step flow of information,' opinion leaders do not necessarily hold formal positions of power or prestige, but rather serve as the connective communication tissue that alerts their peers to what matters among political events, social issues, and consumer choices (Leiserowitz et al. 2010; Nisbet and Kotcher 2009).

Yet despite local impacts and interpersonal influence, members of the issue public in the US have yet to be able to create the public opinion conditions necessary to pass national climate change legislation. Climate change is one of a handful of enduring social problems such as immigration, social security, or healthcare that require non-incremental policy formulation and adoption. Previous studies of factors that have led to non-incremental, systemic policy change in Congress, such as 1990s welfare reform, find that pressure from an issue public is not enough. Instead, these studies find that widespread and intense public concern is a key factor in the success or failure of legislation. Consider that when welfare reform was passed in 1996, 27 percent of Americans considered the issue to be the most important issue facing the country and more than 80 percent supported President Clinton signing the bill into law (Nisbet 2009; Soss and Schram 2007).

In the US these public opinion conditions have yet to be met on climate change. In polls, typically few, if any Americans name climate change as the country's most important problem and in a ranking of 21 national issues, climate change ranks among the lowest in perceived priority (Pew 2010). Symptomatic of the still missing opinion intensity, polling suggests that majorities of Americans accept the science of climate change and support curbing greenhouse gas emissions (Nisbet and Meyers 2007; Krosnick 2010b), but when policy proposals are presented in the context of costs, support diminishes (Nisbet and Meyers 2007). In short, while Americans are concerned by climate change, only a small proportion possess the type of opinion intensity that motivates direct participation and contacts to elected officials (Leiserowitz et al. 2010).

Absent an increase in opinion intensity and wider public mobilization, no matter the policy proposal, national elected officials will have little incentive to take on the political risks needed to pass major legislation. As Bill McKibben expressed in 2009 following the failure of environmental advocates to gain US Senate support for Cap and Trade: 'We weren't able to credibly promise political reward or punishment. The fact is, scientists have been saying for the past few years the world might come to an end. But clearly that's insufficient motivation. Clearly, we must communicate that their careers might come to an end. That's going to take a few years' (Samuelson 2010).

Though digital media serve as a major resource for the issue public on climate change, the same dimensions of the contemporary media system also present barriers to building the wider public will necessary to exert pressure on national elected officials. This reflects in part the problem of limited attention in an age of digital media: Via the Web, individuals have more quality sources of information and opportunities to participate on climate change than at any time in history, but the availability of information does not mean that the wider public will use it. In a media world of many choices, if an individual lacks a preference or need for climate change-related information, they can avoid such content almost altogether (Prior 2005). This tendency is magnified by the multi-tasking nature of contemporary media use. While opinion leaders on climate change can take advantage of

hand-held devices for news and social media influence (Nisbet and Kotcher 2009), as an average tendency, studies find that the multi-tasking facilitated by hand-held devices is negatively related to learning and recall, thereby amplifying the problem of choice in gaining the attention of the wider public (Ophir et al. 2009).

Yet when motivated—such as at times of a major relevant focusing event—otherwise inattentive or distracted individuals will turn to the news media and in particular Web sources for information (Pew 2006). A leading example is the Gulf oil spill. Through the spring and summer of 2010, the unfolding disaster had emerged as one of the top five issues covered across the news media with half of Americans saying that they were following news of the disaster ‘very closely’ (Pew 2010). Within this coverage, audiences have the potential to be exposed to discussion and news of the relevance of the oil spill to the climate change and energy debate. At other times, in the absence of a focusing event or direct personal need, wider audiences may simply ‘bump’ into climate change-related information while consuming entertainment or political media (Feldman et al. 2010). As will be discussed later, whether direct connections between a focusing event such as the oil spill and the relevance of climate change are effectively conveyed to the wider public, can be understood via past research on framing.

3 THE CLIMATE DENIAL MOVEMENT

Ambivalence on the part of the wider public—and intense opposition among a small segment of Americans—is also attributable to the organized activities of industry members, conservative think tanks, commentators, and elected officials. Applying a strategy first used to dispute the linkages between smoking and cancer; this ‘climate denial’ movement disputes the reality of man-made climate change and exaggerates the economic costs of action (Oreskes and Conway 2010). Studies have tracked the disproportionate number of appearances of a handful of contrarian scientists in Congressional hearings, in news reports, and as book authors, documenting the linkages with conservative think tanks and industry funders (Jacques et al. 2008; McCright and Dunlap 2003, 2010). The arguments of contrarians are echoed and magnified at conservative talk radio, cable news, and by conservative commentators, some who like syndicated columnist George Will contribute to traditional news outlets (Nisbet 2009). Other research has shown historically the tendency for even mainstream news reporters to falsely balance—i.e. portray as equivalent—the evidence for and against man-made climate change (Boykoff and Boykoff 2004).

There is little doubt that the climate denial movement has had an impact on policy debate, and these studies offer valuable details on the origins, strategies, and arguments of the movement. Yet in order to clearly understand the influence of the movement, the activities of climate deniers need to be placed within the context of the broader communication ecosystem surrounding the issue of climate change. In particular, few systematic studies and comparisons have turned the focus in the opposite direction, evaluating the communication resources, initiatives, strategies, successes, and failures of environmental groups, their funders, and political allies. Nor have the efforts of the denial movement been compared against the communication resources and activities of government agencies, universities, museums, popular science media, and scientific societies. To date, there exists

not a single comprehensive evaluation of the communication activities of the US environmental movement or scientific community (Akerlof and Maibach 2008).

Moreover, while conservative media continue to dispute the reality of man-made climate change, research shows that since 2005, mainstream reporting reflects the strength of scientific agreement on this question (Boykoff 2007). This mainstream coverage reached record levels of attention in 2007 with a heavy emphasis at the time on the views of Al Gore and the dire nature of environmental impacts (Boykoff and Mansfield 2008; Nisbet 2009). As will be discussed later, as past research would have predicted, even the most high-profile arguments of the denial movement—such as those surrounding the 2009 ‘Climategate’ event—were attended to and accepted by the small proportion of the public already deeply dismissive of climate change (Krosnick 2010b; Leiserowitz et al. 2010). In sum, the climate denier movement is only one—perhaps even a lesser—factor among several that make up the puzzle of lingering wider public ambivalence about climate change in the United States.

Separate from scholarly research, the focus in popular discussion on the climate denier movement also sometimes confuses the difference between political actors who reject the reality of the problem and others such as Bjorn Lomborg (2009) who accept the findings of climate science but who argue for different policy priorities or approaches. There is also an important difference between industry and think-tank coordinated efforts and the emerging online activities of a small segment of the issue public who are deeply dismissive of climate change and/or environmental problems generally.

At blogs and elsewhere online, this segment of the issue public are asking for greater transparency in climate science data and findings along with new participatory mechanisms of scientific review. To date, studies have yet to examine this specific group of online activists, but based on her personal involvement engaging the users of these blogs, Georgia Institute of Technology scientist Judith Curry (2010) makes the following observation:

So who are the climate auditors? They are technically educated people, mostly outside of academia. Several individuals have developed substantial expertise in aspects of climate science, although they mainly audit rather than produce original scientific research. They tend to be watchdogs rather than deniers; many of them classify themselves as ‘lukewarmers.’ They are independent of oil industry influence. They have found a collective voice in the blogosphere and their posts are often picked up by the mainstream media. They are demanding greater accountability and transparency of climate research and assessment reports.

4 FORMING JUDGMENTS AND MAKING DECISIONS ABOUT CLIMATE CHANGE

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Whether a member of the issue public or the inattentive public, an opinion leader, an elected official, a journalist, or even a scientist, it is impossible for any individual to be fully informed about climate change and it is rare that when faced with complexity, uncertainty, and limited time and attention, an individual will engage in active deliberation, weighing

and assessing many sides and sources of information. Instead, as an average tendency, individuals are ‘cognitive misers,’ relying on personal experience, values, social influences such as friends or colleagues, personal identity, and the most readily available information about climate change in the media to make sense of an issue and to form judgments (Downs 1957; Popkin 1991).

In this section, I describe several major areas of research findings relative to how individuals reach judgments and form opinions about climate change examining specifically the influence of schema, values, knowledge, and framing. I then discuss how these factors relate to the strong proportion of the US public who fall between the poles of the ‘issue public’ working to mobilize concern and a denial movement opposed to policy action. Understanding these basic mental and social processes should inform strategies for effectively engaging various publics and for shifting individuals out of a default ‘miserly’ mode into a more active processing and participatory mode on climate change.

4.1 Schema and mental models

Studies in social psychology and communication point in particular to the role of cognitive and affective ‘schema’ as mental organizers that shape public judgments. A schema is the metaphorical term for an inferred system of related ideas about a concept or issue. Once activated, schema provide short cuts for reaching an opinion about a complex topic, serve as a basis for inference, and operate as a mechanism for storing and retrieving information from memory (Price 1992). People have multiple schema relevant to climate change which can be triggered by conversations, personal observation, and direct experience, or by way of news or entertainment (Maibach et al. 2008; Moser 2009; Weber 2010).

Examples of relevant climate change schema identified in past research include perceptions of the weather; lay models of how the climate works (Leiserowitz 2004); perceived overlapping issues such as the ozone hole; direct experience with the impacts of climate change such as flooding or hurricanes (Whitmarsh 2008); and vivid, affective imagery often cultivated or reinforced through media presentations such as depictions of melting ice, floods, climate ‘alarmists’ or ‘naysayers’ (Leiserowitz 2006). Research across national contexts suggests that tailoring climate change communication to these mental models can improve the ability of individuals and groups to reach decisions and to take actions, especially when statistical information is paired with affective, personally relevant images such as disease-related scenarios and discussed among like-minded peers (Marx et al. 2007; Weber 2010).

4.2 Values

Similar in function to schema, values serve as standards for evaluating personal behavior, societal actions or governance, and proposed policies (Price 1992). These socialized predispositions provide guidance on making sense of a desired end state for a problem such as climate change and the proposed actions for dealing with the issue.

Commonly referenced value predispositions, especially in assessments of US public opinion, are partisanship and political ideology. Survey analyses find that climate change has joined gun control, taxes, and abortion as a form of social identity marker (Hart and Nisbet 2010), one of a few issues that have come to define what it means to be a partisan in

the United States (Nisbet 2009). Over the past decade the difference between self-identifying Democrats and Republicans' views on the reality of climate change has widened to a 30 to 50 percent gap depending on question wording (Dunlap and McCright 2008).

As discussed later in this section, these partisan differences can be explained in part by the framing strategies of political leaders, but partisanship and ideology also map onto deeper, more latent value predispositions that span national settings and cultures. In this research, individuals scoring high in terms of hierarchical and individualist values tend to reject the risks of climate change and proposed actions. Hierarchists view proposed climate policy solutions as threats to those they respect in power, to established order in society, and to status quo practices in the economy or their personal lives. Individualists, alternatively, view climate policy actions as unwise restrictions on markets, enterprise, and personal freedom. In contrast, for individuals scoring high in terms of egalitarian and communitarian values, arguments for action on climate change align easily with more generalized views about the need to manage markets and industry in favor of the collective good and to protect the most vulnerable (Leiserowitz 2006; Kahan et al. 2010). Of note, following from this research, a suggested communication strategy to engage individualists and hierarchists is to propose climate solutions that are market based and to promote those solutions using business leaders and national security experts as spokespeople (National Public Radio 2010).

4.3 Framing and news media portrayals

Framing—as a concept and an area of research—spans several social science disciplines. 'Frames' are the conceptual term for interpretative storylines that selectively emphasize specific dimensions of a complex issue over others, setting a train of thought in motion for audiences about who or what might be the cause of a problem, the relevance or importance of the issue, and what should be done in terms of policy or personal actions (Gamson and Modigliani 1989). Framing research as applied to the news media offers a rich explanation for how various actors, including experts, define issues in strategic ways, how journalists from various beats selectively cover these issues, and how diverse publics differentially perceive, understand, and participate on climate change (Scheufele 1999).

To make sense of climate change, individuals integrate frames provided by media presentations with their preexisting schema and values. As a consequence, a specific media frame is only influential if it is relevant—or applicable—to the audience's preexisting interpretations and schema (Scheufele and Tewksbury 2007). For example, in the US, climate change has historically been either narrowly defined in news coverage as a looming and impending environmental problem with disastrous consequences and/or as a matter of holding industry accountable. These interpretative packages likely resonate with egalitarians and communitarians (values held more strongly among Democrats and liberals), but are likely ignored by individualists and hierarchists (values held more strongly by Republicans and conservatives). Selective acceptance of these frames of reference is reinforced by the climate denial movement who have emphasized in the news media and in direct messaging opposing frames of scientific uncertainty and negative economic consequences from any greenhouse gas controls (McCright and Dunlap 2003; Nisbet 2009).

Framing research is currently being applied to inform effective communication initiatives about climate change. For example, to date the public health risks of climate change

have received limited attention in the US news media, mentioned in fewer than 5 percent of climate change-related stories (Nisbet et al. under review). Yet framing climate change in terms of public health not only reflects scientifically well-understood risks but also holds the potential to make climate change more personally relevant by drawing connections to already familiar problems such as asthma, allergies, and infectious disease. The emphasis also shifts the visualization of the issue away from remote arctic regions, peoples, and animals to more socially proximate neighbors and places such as suburbs and cities. In addition, the public health focus is also inclusive of the need for not just mitigation but also adaptation actions, while also bringing additional trusted communication partners into the fold on climate change, notably public health officials and leaders from minority and low-income communities who are the most at risk and the most vulnerable (Nisbet 2009).

Research involving in-depth interviews with representative segments of Americans finds that when climate change is introduced as a health problem with information then provided about specific mitigation-related policy actions that benefit health and well-being, this reframing of the issue is compelling and positively responded to by a broad cross-section of respondents even by segments otherwise skeptical of climate science (Maibach et al. 2010). Other frames of reference, such as an emphasis on national security or religious and moral teachings, may have similarly engaging influences across a diversity of publics (Nisbet 2009).

4.4 Knowledge

Given the central role of schema, values, and frames in guiding opinion formation, few studies have explored the relationship between knowledge and perceptions. Despite the popular assumption discussed at the opening of this chapter that the two are strongly linked, i.e. if the imagined mass public only understood the science better, they would see the urgency of climate change as most experts do, past studies find only a weak correlation between technical knowledge and perceptions (Achterberg et al. 2010; Allum et al. 2008).

Instead, opinion researchers view ‘procedural’ knowledge—understanding how to take actions or to get involved on an issue—as generally more important to decision making and behavior than ‘declarative’ knowledge, defined as a familiarity with the scientific and technical causes of a problem such as climate change (Kaiser and Fuhrer 2003; Roser-Renouf and Nisbet 2008). This finding parallels similar research on civic participation generally, with ‘mobilizing information’ on who are the key decision makers, where to vote, and how to get involved combining with perceived importance of the issue to be among the strongest predictors of political participation and activism (Eveland and Scheufele 2000; Goidel and Nisbet 2006).

Most survey research on climate change continues to assess general perceptions of expert agreement or awareness of the causes of climate change, yet survey measures should also explore respondent knowledge of the behavioral and policy changes needed to mitigate and adapt to climate change; the skills and resources needed to pursue these changes; the institutions, political actors, organizations, and decision makers involved in the debate; the skills to effectively engage with these decision makers and stakeholders; and how each of these dimensions of knowledge specifically apply to their local community (Maibach et al. 2008; Roser-Renouf and Nisbet 2008).

4.5 Interpretative Communities

As the discussion so far highlights, complexity of factors shapes opinion formation and personal decisions relative to climate change. Recent analyses in the US have started to map how these factors and processes vary over time across distinct ‘interpretative communities’ of individuals, improving our understanding of why different segments of the public accept or reject certain arguments, risks, and dimensions of the climate debate (Leiserowitz 2007).

An interpretative community is a group of individuals who share common risk perceptions about climate change, reflect shared schema, mental models, values, and hold a common sociodemographic background. Not only do these interpretative communities share a common identity and world-view, but the fragmented nature of the media system helps reinforce, define, and shape a common shared outlook relative to climate change. Different interpretative communities tend to prefer their own ideologically like-minded news and opinion media; or alternatively, members of some communities tend to avoid most news coverage and instead pay attention mostly to entertain and popular culture (Mutz 2006).

Analyzing nationally representative US survey data, this research has identified six distinct interpretative communities on climate change, profiling their demographic characteristics, risk perceptions, affective reactions, levels of trust, forms of knowledge, political and personal behaviors, and media use patterns (Leiserowitz et al. 2010; Leiserowitz et al. 2009). These six interpretative communities include the Alarmed (approx. 18 percent of the adult population), the Concerned (33 percent), the Cautious (19 percent), the Disengaged (12 percent), the Doubtful (11 percent), and the Dismissive (7 percent).

The audience segments range along a continuum of knowledge, attitudes, and behavior from the Alarmed who accept climate change as a problem, are concerned, and who are looking for opportunities to take personal and political action to the Dismissive who reject the reality of climate change and strongly oppose action. Individuals in the four middle interpretative communities are less certain in their views on climate change, more ambivalent about the risks and relative importance of the issue, and disengaged personally and politically. In terms of public engagement and communication, for individuals between the two poles of perspectives on climate change, the challenge is to identify which frames of reference best enable and help them accurately understand and perceive the relevance of climate change, the personal choices and policy options available, and the common interests they share with others (see Maibach et al. 2008).

5 STRUCTURING OPINION FORMATION VIA ORGANIZED DELIBERATION

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The tendency for many individuals to be either highly selective—or alternatively inattentive—to news and information about climate change, and to reach decisions quickly relying on preexisting schema and values, leads to an important question: If individuals from different interpretative communities came together to learn about, discuss, and deliberate climate change, what judgments, preferences, and conclusions would they collectively voice? How would participation in such an event shape their subsequent attitudes and behaviors?

Over the past decade, on science issues generally, this question has inspired a number of consensus conferences, deliberative forums, and town meetings, initiatives designed to motivate and enable individual members of the public to voice collective opinions. In these initiatives, recruited lay participants receive background materials in advance, provide input on the types of questions they would like addressed at the meeting, and then provide direct input or recommendations about what should be done in terms of policy. Each initiative, however, varies by how participants are asked for feedback, and how much their feedback matters (Einsiedel 2008; Nisbet and Scheufele 2009).

Evaluation of these initiatives finds that participants not only learn directly about the technical aspects of the science involved, but perhaps more importantly, they also learn about the social, ethical, and economic implications of the scientific topic. Participants also feel more confident and efficacious about their ability to participate in science decisions, perceive relevant institutions as more responsive to their concerns, and say that they are motivated to become active on the issue if provided a future opportunity to do so (Besley et al. 2008; Powell and Kleinmann 2008). Research also finds that if carefully organized, these types of initiatives can shape perceptions of sponsoring institutions such as universities or government agencies as open to feedback and respectful of public concerns, perceptions that predict eventual acceptance and satisfaction with a policy outcome, even if the decision is contrary to an individual's original preference (Besley and McComas 2005; Borchelt and Hudson 2008).

On climate change, these forms of public engagement initiatives have been identified as promising tools for risk communication. As a National Academies (2010: 116) report concludes:

What most risk researchers consider the ideal approach for communicating uncertainty and risk focuses on establishing an iterative dialogue between stakeholders and experts, where the experts can explain uncertainty and the ways it is likely to be misinterpreted; the stakeholders in turn can explain their decision-making criteria as well as their own local knowledge in the area of concern; and the various parties can work together to design a risk management strategy, answering each others' questions and concerns in an iterative fashion.

In 2009, leading up to the Copenhagen meetings, researchers and sponsoring organizations in more than thirty countries applied these principles to the design of deliberative forums on climate change. At each site, the initiative recruited 100 nationally or regionally representative citizens to spend a weekend discussing, deliberating, and voting on key policy issues related to climate change. The results of the meetings were aggregated by country and released via the project's website and at the Copenhagen meetings. Participants were provided informational materials and videos before the meetings, and had reference materials at their discussion tables.

Of note, the meetings did not feature climate change experts. Instead, careful planning was done in using a meeting facilitator and then trained discussion moderators at each table. The content of the meeting was the social interaction and discussion rather than an expert presentation or lecture. Across countries and meetings, following a weekend of discussion and reflection, when asked to vote on agreed concerns and preferences, widespread consensus was expressed, with strong majorities (80 to 90 percent) perceiving climate change as urgent and similar majorities favoring strong policy actions (World Wide Views on Global Warming 2010).

6 CONCLUSION

The studies reviewed in this chapter along with others from the growing literature in the area reveal a diversity of factors that shape individual perceptions and behavior relative to climate change. Major influences include media use, interpersonal discussion, schema, and values. Continued research in this area not only offers valuable insight into the dynamics that drive the trajectory of the climate debate in society but also can be applied to the design and implementation of public communication and engagement initiatives.

In particular, two key questions should be addressed in future research. First, more attention needs to be paid to putting into context the influence of the climate denial movement, comparing the movement to analyses of the resources and impacts of environmental organizations and their allies among think tanks, government agencies, scientific societies, science media organizations, and museums. Are advocates and institutions seeking to increase public engagement with climate science and policy solutions out-resourced and out-communicated by the climate denial movement? Conventional wisdom aside, what is the true relative impact of the climate denial movement on news coverage, public opinion, and societal decisions? Among the efforts of environmental community and their allies, what assumptions, practices, and strategies appear to be effective and which appear to be dead ends?

Second, to date, the diverse middle segments of the continuum of public opinion on climate change have been largely overlooked in political debate and in communication efforts. For these unique interpretative communities, who remain relatively ambivalent about the reality and urgency of the problem but are open to learning more, how can an understanding of the schema, values, and trusted information sources among members of these interpretative communities inform initiatives that empower these publics to reach personal decisions and participate in societal debate?

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