Social Movement Theory and the Prospects for Climate Change Activism in the United States

Doug McAdam

Department of Sociology, Stanford University, Stanford, California 94305; email: mcadam@stanford.edu

Annu. Rev. Polit. Sci. 2017. 20:189–208

The *Annual Review of Political Science* is online at polisci.annualreviews.org

https://doi.org/10.1146/annurev-polisci-052615-025801

Keywords

American politics, social movements, climate change, political process theory, framing, mobilizing structures

Abstract

The issue of climate change poses something of a puzzle. For all the attention accorded the issue, climate change/global warming has spawned surprisingly little grassroots activism in the contemporary United States. Drawing on social movement theory, the author seeks to explain this puzzle. The prevailing consensus among movement scholars is that the prospect for movement emergence is facilitated by the confluence of three factors: the expansion of political opportunities, the availability of mobilizing structures, and cognitive and affective mobilization through framing processes. The author then applies each of these factors to the case of climate change, arguing that (*a*) awareness of the issue developed during an especially inopportune period in American politics, (*b*) the organizations that arose to address the issue were ill suited to the kind of grassroots mobilization characteristic of successful movements, and (*c*) the amorphous nature of the issue played havoc with efforts at strategic framing.

INTRODUCTION

The social science literature on climate change and global warming has grown exponentially in recent years and is now far too large and varied to permit meaningful review in a single article (Dryzek et al. 2011, Dunlap & Brulle 2015, Hackmann & St. Clair 2012, ISSC 2013, Zehr 2014). Even the scholarship that pertains only to the political/policy dimensions of the issue is beyond the scope of the *Annual Review* format. Accordingly, my focus in this article is much narrower. I mean to bring 40 years of research and theory on social movements to bear on our understanding of the present lack of, and future prospects for, grassroots mobilization on climate change in the United States.[1]

POLICY IMPLICATIONS OF THE CURRENT SITUATION

One especially important strand of work undertaken by international relations scholars over the past four to five decades has focused on describing and explaining variation in patterns of institutionalized policy cooperation among states in the international system. These scholars have termed the most elaborated and consensual of these cooperative systems "policy regimes." Perhaps no one has done more to help us understand the origins and workings of policy regimes than Keohane (1984, Keohane & Nye 1977). In the early 1990s, he turned his attention to environmental issues and concluded that the general model of policy regimes he had developed in his earlier work applied quite well to the prevailing patterns of international cooperation on these issues (Keohane et al. 1993). The failure of the Kyoto process to achieve any meaningful international accord on climate change/global warming, however, changed the situation dramatically. Victor (2001) has provided a detailed account and analysis of the failed Kyoto process and the dynamics and conflicting interests that undermined it. More recently, Keohane & Victor (2011) have adapted and applied the concept of "the regime complex" to describe the hodge-podge of loosely connected, decentralized institutional arrangements scattered around the globe that have emerged in the absence of any unified, binding environmental policy regime.

As interesting and promising as some emergent lines of policy cooperation within this complex are, a stark question still looms. Given current climate assessments and future projections, is it likely that the current piecemeal policy response embodied in the regime complex will be enough to forestall devastating environmental impacts? This review is motivated by the conviction that the answer to this question is no, and that unless the international community can mobilize a more aggressive, unified policy response to the problem, the consequences will be so severe and accelerated as to quickly outstrip the capacity of that community to respond effectively to the ensuing crisis.

This is not to devalue or discourage the innovative efforts embodied in the current climate complex. In the absence of effective multilateral state action, these piecemeal efforts by state and non-state actors represent the only meaningful progress currently being made on the issue. That said, there is no reason to suggest that the choice between "regime" and "complex" needs to be either/or. Although Keohane & Victor (2011) make a persuasive case for "making the best of the [current] situation rather than pursuing the elusive goal of a comprehensive, integrated regime" (p. 19), they are the first to acknowledge, consistent with my earlier assessment, that

[1] Obviously, movements to counteract climate change/global warming are not confined to the United States; however, space constraints oblige me to limit my analysis to this country. The following represent a selective sampling of published works on climate change activism outside the United States: Dietz & Garrelts (2014), Doyle & MacGregor (2013), Fisher (2004), Poloni-Staudinger (2009), Roberts & Parks (2007), Rootes et al. (2012), and Walström et al. (2013).

"there is little reason for optimism that the climate regime complex that is emerging will lead to reductions in emissions rapid enough" to forestall devastating environmental and attendant social consequences (p. 7). If that is the case, we have little choice but to revisit the issue of international cooperation, with the goal of realistically assessing the chances of altering the dynamics that have so far subverted effective multilateral action.

ACCOUNTING FOR THE FAILURE OF THE KYOTO PROCESS

Why has an integrated climate regime proven so elusive? More generally, how are we to understand the amenability of any given policy area to unified multilateral cooperation? Keohane & Victor (2011) stress the importance of three factors in determining where a policy system falls along the continuum from fully integrated to totally fragmented. These factors are: linkages, uncertainty, and interests. By linkages, Keohane & Victor refer to additional benefits that can be extended to parties to an agreement as a way of encouraging integration. The second factor, uncertainty, refers to the fact that some issues lend themselves to fairly precise projections regarding the long-term gains and losses that are likely to come from cooperation; other issues, however, are so complicated or fraught with uncertainty as to discourage cooperation among typically risk-averse policy makers. The third and final factor, which is both separate from and implicated in the other two, are the interests of the potential parties to any agreement. Keohane & Victor (2011, p. 8; emphasis added) elaborate: "[W]e expect comprehensive regimes when the interests of all *crucial powerful actors* . . . are sufficiently similar, across a broad issue area, that they 'demand' a singular international institution as the best way to gain the benefits of cooperation."

I have highlighted the phrase "crucial powerful actors" to underscore another important truth about the failure of the Kyoto process. Blame for the failure of the Kyoto process should not be attributed equally among all participating countries. With the focus in Kyoto squarely on the world's developed countries and most advanced economies, no one contributed more to this failure than the United States, which is the biggest producer of CO_2 emissions but was also arguably the biggest obstacle to any binding unified agreement. The factors identified by Keohane & Victor help us understand why the United States was so reluctant to sign on to the Kyoto accord, and no factor is more important in this regard than that of conflicting interests. As the biggest emitter, the United States feared not only that it would be compelled to bear much of the cost of any agreement, but also that the accords would introduce serious strains into an economy heavily dependent on fossil fuels. Domestic politics further complicated the calculation of interests. Not only did the active period of ratification of the Kyoto accords overlap substantially with the administration of former Texas oilman, George W. Bush, but the formidable political and financial influence wielded by fossil fuel producers in the United States also continues to act as a serious constraint on energy and environmental policy, regardless of which party is nominally in power. Still, for all the constraining force of interests on US climate change policy to date, this is probably the only factor of the three identified by Keohane & Victor that might prove susceptible to popular pressure. The American public can do nothing about the complexity and uncertainties inherent in the issue and little to affect linkages in this policy area, but it is at least possible to imagine a sustained grassroots climate change movement geared to compelling federal policy change on the issue, thereby transforming the United States from a significant impediment into a committed advocate of a binding international accord.[2] Do I think this is likely? No, but given the stakes

[2] Urpelainen (2013) and Fisher (2013) offer somewhat similar and certainly compatible accounts of how expanding grassroots activism on climate change could eventually scale up to a full-fledged federal commitment to remedial action on the issue.

involved and the conviction that the United States' intransigence on the issue remains among the key obstacles to meaningful international action, it is worth undertaking a systematic review of the social movement literature to both explain the current absence of popular mobilization and assess the prospects for change.

POSING THE CLIMATE CHANGE PUZZLE

For all the attention accorded the topic of climate change/global warming and all the dire warnings of the calamitous social and environmental consequences that will follow from inaction on the matter, there is remarkably little grassroots activism on the issue in the United States. This is the puzzle of climate change. But to say that there is little grassroots activism does not mean that there is no demand for remedial action on the issue. The puzzle becomes deeper when we review scholarship on attitudes toward climate change and on top-down institutional efforts to encourage action on the issue.

Popular Demand for Action on Climate Change

The largest single body of social science research on climate change focuses on individual-level beliefs, attitudes, and policy preferences regarding climate change. Studies consider the relationship between individual climate change attitudes and beliefs and demographic and political characteristics (Hamilton 2011, Krosnick et al. 2006, McCright & Dunlap 2011, O'Connor et al. 2002, Wood & Vedlitz 2007); risk perceptions (Leiserowitz 2005, 2006; O'Connor et al. 1999); cultural identities, values, and worldviews (Bord et al. 1998, Kahan et al. 2012); and knowledge (Brechin 2003, Kellstedt et al. 2008, Malka et al. 2009). One important finding to emerge from this research is the increasing partisan polarization in attitudes about climate change in the United States (McCright & Dunlap 2011). A parallel literature examines similar factors at the aggregate level and finds that mass public attitudes on climate change are influenced by elite-level cues, media framing, and economic conditions (Brulle et al. 2012, Kahn & Kotchen 2011, Scruggs & Benegal 2012).

A more recent line of scholarship focuses on the effects of personal experience on climate change beliefs, and particularly on the relationship between long-run and short-run exposure to temperature anomalies and extreme weather events, such as flooding, droughts, and hurricanes (Akerlof et al. 2013, Capstick & Pidgeon 2014, Egan & Mullin 2012, Hamilton & Keim 2009, Lang 2014, Rudman et al. 2013). This is an important direction of research given the scientific consensus about the intensifying weather-related effects of climate change. Evidence is mixed but generally finds that personal experiences have, if anything, a short-term effect on concern for climate change.[3]

Motivated in large part by the puzzle alluded to above, an emergent literature considers whether and how issue framing affects climate change attitudes. This is a critically important direction of research, given that many of the common frames employed by the media in their coverage of climate change reinforce the public's "perceptual divide" on the issue (Nisbet 2009). Studies of issue framing range from investigations of the label itself—global warming versus climate change (Schuldt et al. 2011, Villar & Krosnick 2011, Whitmarsh 2008)—to studies of specific frames such as public health (Maibach et al. 2010, Myers et al. 2012), national security (Myers et al. 2012), and

[3]The scholarship reviewed in this section grew out of an earlier collaborative paper I coauthored with David Konisky and Johannes Urpelainen for a Social Science Research Council working group on climate change.

morality and ethics (Feinberg & Willer 2013, Markowitz & Shariff 2012). This work is closely related to a growing literature that focuses on potentially effective communication strategies (Lupia 2013, Moser 2010, Nisbet 2009), including how to reach audiences with diverse perceptions of the issue (Myers et al. 2012).

A final area of attitudinal research that bears mention focuses on policy preferences among the American public. Researchers have increasingly turned to understanding not only what people believe and think about climate change but also what policies they will support to address the problem. Although some policies garner more support than others, in the aggregate, survey respondents in the United States (Ansolabehere & Konisky 2014, Leiserowitz 2006, Shwom et al. 2010, Smith & Leiserowitz 2014) tend to express support for government policies to mitigate climate change.

Top-Down Efforts to Address Climate Change

In view of the broad aggregate support for government efforts to mitigate the problem, the lack of sustained popular mobilization around the issue of climate change is striking. In making this claim, however, we need to differentiate between top-down, formal organizational attention to the issue and sustained grassroots activity.

What might be thought of as the institutionalized US climate change movement has developed over the past three decades from a marginal concern among the country's environmental groups to a broad national effort at all levels of government (Caniglia et al. 2015). The movement took shape and grew significantly in the wake of Dr. James Hansen's dramatic testimony before Congress in the summer of 1988. In stark contrast to the caution exercised by climate scientists previously, Hansen announced that global warming had begun and that it was 99% certain that humans were responsible for the warming. Another significant spur to movement growth has been the United Nations Framework Convention on Climate Change (UNFCCC), with its myriad meetings and activities from the Rio Earth Summit in 1992 to Kyoto in 1997 and finally Copenhagen in 2010. As of 2010, Brulle (2014) identified 467 unique organizations as comprising the national climate change movement. It is almost certain that that number has grown since then. In striking contrast to this fairly substantial top-down institutional structure, however, is the seeming paucity of sustained grassroots mobilization in the United States. This is the puzzle that motivates the balance of the article. More specifically, I use insights gleaned from some 40 years of social movement scholarship to address the question: What can social movement theory tell us about the current lack of popular mobilization on the issue and the future prospects for catalyzing such action?

SOCIAL MOVEMENT THEORY AND THE CLIMATE CHANGE PUZZLE

To begin to answer the question, I briefly summarize the prevailing consensus among social movement scholars regarding the key factors that are thought to shape the likelihood of popular mobilization on a given issue. A great deal of research over the past 30 years has stressed the role of three broad sets of factors in shaping the emergence, development, and impact of grassroots social movements. These three factors are: (*a*) the political opportunities and constraints confronting any would-be movement; (*b*) the organizational vehicles available to embryonic movements as sites for mobilization; and (*c*) the collective processes of interpretation, attribution, and social construction that mediate between opportunity and action. Below, I refer to these three factors by their conventional shorthand designations: political opportunities, mobilizing structures, and framing processes.

Political Opportunities and Constraints

Under ordinary circumstances, would-be movements or challengers face enormous obstacles in their efforts to advance collective interests. Lacking standing in institutional politics, their bargaining position relative to established polity members is weak. However, the particular set of power relations that define the political environment at any point in time does not constitute an immutable structure of political life. Instead, the opportunities for a challenger to engage in successful collective action vary over time. It is these variations that help shape the ebb and flow of movement activity.

What accounts for these shifts in political opportunity? A finite list of specific causes would be impossible to compile. Any process that significantly changes the calculations and assumptions on which the political establishment is structured has the potential to expand or contract the opportunities for successful collective action. Among the events and processes especially likely to disrupt the political status quo are wars, economic crises, regime changes, major demographic shifts, or significant political realignments at either the domestic or international level.

Mobilizing Structures

If destabilizing changes in institutional politics condition the prospects for successful collective action, their influence is largely dependent on the mobilizing structures through which emergent movements seek to organize and press their claims. By mobilizing structures I mean the collective vehicles through which people initially mobilize and begin to engage in sustained collective action. The shared assumption is that destabilizing changes or "openings" in a system of institutionalized politics merely afford a potential challenger the opportunity for successful collective action. It is the organizational vehicles available to the group at the time the opportunity presents itself that condition the challenger's ability to exploit the opening.

Framing and Other Interpretive Processes

In the absence of one final factor, political opportunities and mobilizing structures remain insufficient to catalyze collective action. Mediating between opportunity, organization, and action are the shared meanings and cultural understandings that people bring to any instance of potential mobilization. At a minimum, people need to feel both aggrieved about (or threatened by) some aspect of their lives and optimistic that by acting collectively they can begin to redress the problem. The affective and cognitive dimensions come together to shape these two perceptions. The relevant mobilizing emotions are anger at a perceived injustice, or fear at a perceived threat, and hope that the injustice or threat can be redressed through collective action. Lacking either of these two mobilizing perceptions (or the strong constituent emotions needed to make them actionable), it is highly unlikely that a movement will develop. Conditioning the presence or absence of these perceptions are those social psychological dynamics—collective attribution, social construction, etc.—that are referred to as framing processes. When the cognitive/affective byproducts of these social/psychological processes are combined with opportunities and organization, the likelihood of emergent collective action is high.

EXPLAINING THE LACK OF GRASSROOTS ACTION ON CLIMATE CHANGE: IMPLICATIONS OF SOCIAL MOVEMENT THEORY

When viewed through the lens of social movement theory, the climate change puzzle may not be such a puzzle after all. Looking back on the period since James Hansen's watershed testimony

before Congress in the summer of 1988, I argue that the three factors touched on above have been aligned in such a way as to make sustained grassroots activism on climate change very difficult.

Political Opportunities

Given the general lack of awareness of climate change and global warming prior to Dr. Hansen's congressional testimony, we can only really speak of the potential for such a movement over the last quarter century or so. From a political opportunity perspective, then, the relevant question is: Did the partisan structure of institutionalized politics in the United States during this period facilitate or impede the emergence of grassroots activism on the issue of climate change?

Before I offer an answer, an important theoretical and empirical digression is in order. How are we to understand the relationship between institutional politics and social movements? It might be that movement emergence is more likely when the lion's share of institutional power is in the hands of those hostile to the interest and aims of the movement. But one can just as readily imagine the reverse: that grassroots forces might be encouraged to mobilize when dominant institutional actors are sympathetic to the movement's aims. What does the empirical scholarship on movement emergence suggest about this relationship? At least in the United States in the modern period, the weight of empirical evidence is more consistent with the latter dynamic. Movements tend to emerge and have a better chance of sustaining themselves and exerting influence when the configuration of institutional power is broadly receptive to their interests. So, for example, we associate important progressive movements—labor, civil rights, anti–Vietnam War, women's, etc.—with the period of extended Democratic dominance in federal policy making between 1932 and 1968. Conversely, sustained right-wing mobilization is conspicuous by its absence during these years. With the rightward shift and growing influence of the Republican Party after 1980, however, the movement landscape looks very different, with relatively few left-wing movements of note but a string of conservative movements—pro-life, the tax revolt of the late 1970s and early 1980s, the Christian right, the Tea Party, etc.—growing in prominence and influence.

Given the institutional structure of US politics in the quarter century following James Hansen's 1988 appearance before Congress, the prospects for a movement addressing the issue of climate change were not encouraging. Three features of US politics during this period are worth describing in some detail.

Rise of an increasingly dominant and conservative Republican Party. Hansen's testimony before Congress took place in the midst of a consequential shift in the partisan balance of power in Washington. Although we tend to view Ronald Reagan's election in 1980 as marking the crucial shift from Democratic to Republican dominance in federal policy making, in fact Democrats retained effective control of Congress until the mid-term elections of 1994. Between 1933, when Franklin Roosevelt first took office, and 1995, the Republicans controlled the Senate, the House, or both in only 5 of the 31 Congresses convened. This changed with the Republican breakthrough in the 1994 mid-term elections. In the 11 congressional sessions held since then, Republicans have controlled one or both houses of Congress 9 times, or 4 more than they did in the preceding 64-year period.

This, however, is only half of the story. In policy terms, the partisan shift in Congress would have mattered little had the Republican Party remained the moderate, centrist party it was from roughly 1940 to 1980. In a recent book, *Deeply Divided*, Kloos and I document the striking convergence in policy preferences between the two major parties in the postwar period (McAdam & Kloos 2014, pp. 38–47). Set in motion by what we have termed the "shifting racial geography of American politics," the Republican Party began to move to the right as early as the mid-1960s, but much more

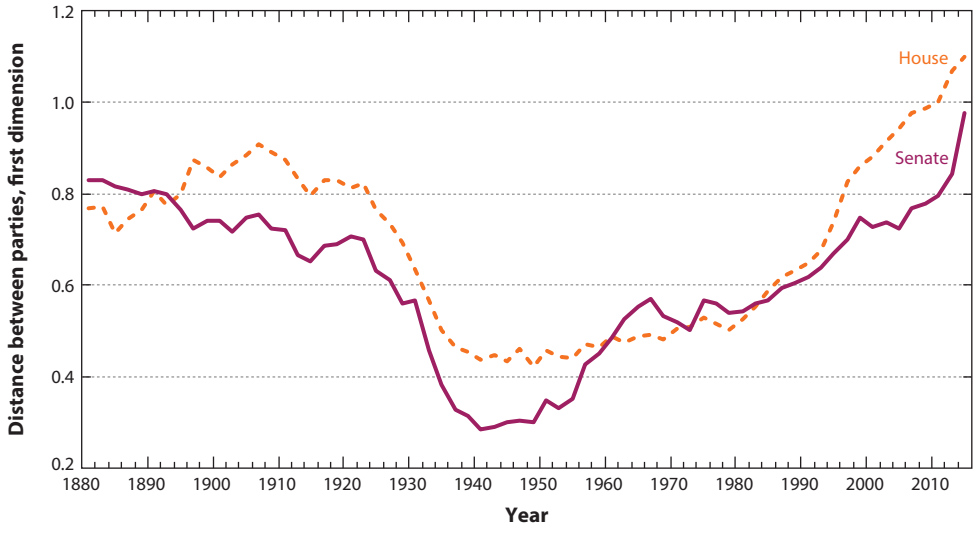

Figure 1

Political polarization in the US Congress, 1879–2014. From McAdam & Kloos (2014) with permission.

markedly so from the 1980s on. The combination of increasing Republican control of Congress and the extreme conservatism that came to characterize the party's policy preferences during this period made for an especially hostile political environment for proponents of action on climate change, just as an awareness of the issue was first surfacing to public consciousness.

Partisan polarization and gridlock. The practical effect of the growing Republican conservatism can be seen in **Figure 1**, which uses Poole & Rosenthal's (1997) spatial modeling of congressional voting to measure the degree of political polarization in the House and Senate.

Both houses of Congress, but especially the House of Representatives, are more divided today than at any time since 1879. More relevant for our purposes, however, is the sharp rise in polarization at the time when climate change was coming to public consciousness. In **Figure 1**, right around the time of Hansen's testimony, the upward slope of the line—especially for the House of Representatives—becomes steeper. The practical effect of the increasing polarization was to make bipartisan cooperation and legislative compromise more difficult.

The number of enactments passed during a congressional session represents one very general way of measuring the degree to which the two parties are able to cooperate to get things done. If we assume that the need or demand for legislative action is roughly equal across all Congresses, then the more enactments approved in a session, the higher the level of cooperation and legislative functioning. It is not hard to imagine what effect increasing polarization has had on the rate of congressional action in recent years. **Figure 2** tells the sorry story.

With just 284 and 297 bills passed, the last two congressional sessions (the 112th and 113th) have earned the dubious distinction of having enacted the fewest pieces of legislation since Roosevelt took office in 1933. By contrast, the ten sessions of Congress that convened during the bipartisan postwar era from 1948 to 1968 averaged close to 1,400 enactments per session. Although the numbers for the last two congressional sessions have been particularly anemic, the more relevant point for our purpose is that they have been declining steadily throughout the period of climate change awareness. For any movement hoping to pursue its aims through legislative means, the

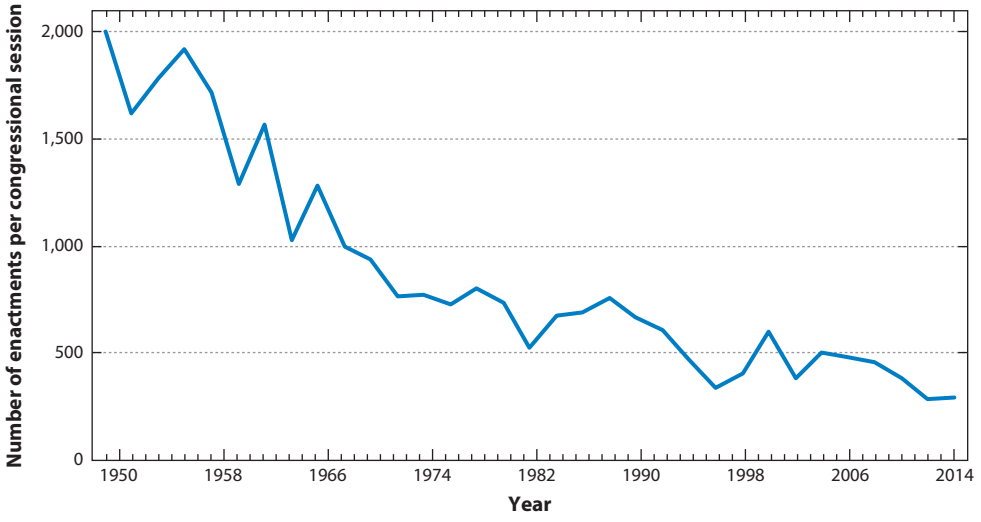

Figure 2

Number of bills passed by each Congress (81st–113th), 1949–2014. From McAdam & Kloos (2014) with permission.

dysfunction and gridlock in Congress in recent years have served as a powerful disincentive to mobilization.

Big Oil and the rise of the fund-raising Congress. Money plays an enormously complicated and multifaceted role in our political system. Money in politics has spawned a literature all its own, including a number of recent books devoted exclusively to the topic (Birnbaum 2000, Clawson et al. 1998, Kaiser 2009, Lessig 2011). The focus of much of this literature is on the various threats to our democratic ideals and practices posed by the unprecedented flood of money into the political system. Lessig (2011) offers an especially detailed indictment of the contemporary political economy of congressional politics, documenting in convincing detail three corrosive effects of the growing dependence of Congress on external funding. The first is simply the distraction to members of having to spend 30% to 70% of their time and energy, by Lessig's estimate, on fund-raising activities. The second effect is corrosion of the public's general regard for, and trust in, Congress. In a poll conducted soon after the *Citizens United v. FEC* decision was announced, 74% of respondents agreed that "special interests" exert too much influence on Congress. An even larger number, 79%, agreed that members of Congress are "controlled" by those who finance their campaign (as reported in Huffington 2010).

It is, however, the third effect identified by Lessig—distortion—that poses the biggest threat to democratic ideals and is perhaps most relevant to the climate change story. If the financial demands of the current system merely distracted members of Congress, we could live with that, but an increasing body of evidence strongly suggests that with distraction comes the distortion of legislative priorities. As members of Congress devote more time to fund-raising and to cultivating relationships with the lobbyists who lubricate the system, they inevitably attend more closely to the interests of lobbyists and donors and less to those of the general public. This is consistent with the stark policy "disconnect" that Baumgartner et al. (2009) found when they systematically compared the public's view of the "most important problems facing the country today" with data "reflecting the concerns of the Washington lobbying community." In their own words, "the bad news is

that the wealthy seem to set the agenda . . . [resulting in] little overall correspondence between the congressional agenda and the public's agenda" (Baumgartner et al. 2009, pp. 257–58).

This brief description of the evolving financial realities that now so powerfully shape American politics fills in an important missing piece of the general political puzzle that has confronted would-be climate change activists over the past few decades. Although it is exceedingly difficult to systematically track politically motivated spending by the fossil fuel industry, it is clear that industry groups and specific oil and gas companies are among the biggest players in the political economy of American politics. A sense of the total amount of industry spending is conveyed by Brulle (2014), who uses Internal Revenue Service data from 2003 to 2010 on 91 "climate change counter-movement" groups and puts the total annual budgets of these organizations at just over $900 million. Given the increasing use of donor directed philanthropies (and other forms of dark money) to conceal the source of funds, it is impossible to know how much of this funding comes from the fossil fuel industry, but there can be little doubt that the amount is substantial.

Although it is, by design, impossible to precisely track political spending by industry groups and specific oil and gas corporations, the uses of the funds and the overall aims of the funding effort are clear. The money is used to fund four types of activities: lobbying by groups associated with the industry, campaign contributions to members of Congress, public relations campaigns on behalf of the industry, and support for the activities of think tanks denying the problem of climate change. The first two activities—lobbying and campaign contributions—are designed to encourage members of Congress to attend to the interests of the oil and gas industry, thereby fostering the kind of dependence on the fossil fuel lobby that Lessig laments in his book. The aim of the other two activities—public relations efforts and support of think tanks—is to sow doubt and confusion among the general public regarding the otherwise clear scientific consensus regarding climate change. In *Merchants of Doubt*, Oreskes & Conway (2010) offer a stark portrait of this "denial countermovement" in action. These activities may be especially important in understanding the lack of significant popular mobilization on the issue. Whereas the cozy relationship between Congress and the oil and gas industry in the recent period may have discouraged climate change action at the institutional level, the industry's bigger effect may have come from subverting grassroots action through its effective funding of the denial countermovement (Dunlap & McCright 2015).

Mobilizing Structures

Some 40 years of social movement scholarship has consistently confirmed the importance of established social entities or mobilizing structures for the emergence (McAdam 1999), sustenance (Rupp & Taylor 1987), and impact of social movements (Andrews 1997, 2004). This stress on the importance of mobilizing structures, however, makes the lack of significant popular mobilization in the United States on the issue of climate change puzzling. Doesn't the collection of formal organizations that comprise the institutionalized climate change movement constitute exactly the kind of mobilizing structure stressed by movement scholars? For many social movement scholars, the perhaps surprising answer to this question is no.

In stressing the importance of mobilizing structures to the emergence and long-term success of social movements, many movement scholars would restrict the term to those grassroots organizations and informal networks that are essentially free from elite control: free spaces within which truly oppositional movements can develop. This positive stress on the facilitative effects of free spaces is coupled with a decidedly negative view of the coopting effects of top-down formal organizations on the fate of movements. Distinguished critics from Weber (2009) and Michels [1959 (1915)] to Piven & Cloward (1979) have embraced versions of this cautionary perspective on

the relationship between movements and formal, bureaucratic organizations. As a form of politics, social movements typically derive their effectiveness from their willingness to disrupt established institutional routines. No matter how progressive their goals, formal social movement organizations (SMOs), including nonprofits and nongovernmental organizations (NGOs), depend for their legitimacy and financial survival on their embeddedness in the established organizational structure of society. As such, they are typically loath to jeopardize their standing in this structure by engaging in the forms of sustained disruptive action that are the hallmark of successful grassroots struggles.

Arrayed against these critics are proponents of resource mobilization theory, who argue that to survive and achieve their goals, social movements, like any other form of instrumental collective action, require resources and sustained organization. As an empirical matter, resource mobilization adherents also point to the extraordinary proliferation of SMOs, NGOs, and other change-oriented nonprofits to support their claim that, like it or not, in the contemporary world, movements are increasingly synonymous with these formal, bureaucratic forms of organization.

When it comes to the specific matter of climate change activism in the United States, both parties to the debate seem to be partially right. In a descriptive sense, resource mobilization certainly captures the bureaucratic reality of most climate change action in this country. On the other hand, the critics seem to be right in accounting for the exceedingly modest effects of these top-down efforts. But how do we know that these top-down institutional efforts have had little effect? For starters, the failure to achieve any significant legislative or policy breakthroughs on the issue at the federal level has to be seen as a stark rebuke to the institutionalized movement. The empirical portrait of the institutionalized movement that emerges from research is also consistent with the above judgment. For example, Caniglia et al. (2015) paint a rather depressing picture of the institutionalized climate change network. The movement is dominated by the most moderate of reform organizations, and even these nonthreatening groups struggle to gain access to either media or congressional forums, whereas lobbyists for the fossil fuel industry enjoy substantial entrée to both.

Framing Processes

The lack of grassroots mobilization cannot be blamed primarily on the coopting presence of the institutionalized climate change movement or the current polarized and generally inhospitable political environment. In general, the reason grassroots movements are rare has more to do with subjective impediments to mobilization than with objective opportunities or the presence/absence of mobilizing structures. Human beings are creatures of habit, deeply invested in the taken-for-granted routines, behavioral norms, and established worldviews that structure our lives. Emergent collective action almost always requires people to depart from those routines, violate those norms, and begin to act in accordance with new conceptions of ourselves and the world. As any seasoned organizer knows, getting people to do this is very hard. We tend to resist doing so even when the issue at stake is in our objective interest. Therefore, when accounting for the absence of significant grassroots activism on climate change, we would do well to focus on the multiple subjective challenges involved in mobilization around the issue. I see at least four subjective impediments that have limited the extent of popular collective action to this point.

No clear identity ownership of the issue. Long ago, Converse (1964) called attention to a serious flaw in public opinion research when he noted that, for many survey respondents, the issues about which they were queried had little or no salience. Although they had checked a box on a questionnaire, those respondents were not comparable to those for whom the issue was

important. The same logic applies in the case of social movements. How a movement researcher records the objective relevance of an issue for a given individual counts for little if that person feels no subjective identification with it. Conditioning this identification are, among other factors, the identities that are most salient to the individual and the linkage, if any, that he or she perceives between those identities and the issue in question (McAdam & Paulsen 1993, Nepstad & Smith 1999, Snow & McAdam 2000). In some cases, the connection between a particular issue and a highly salient collective identity is obvious. For example, given the importance that most African-Americans attach to their shared racial identity, we should not be surprised by how quickly protests developed in the wake of the highly publicized shooting death of Michael Brown in Ferguson, Missouri, in the summer of 2014. And once the general link between police violence and race had been so powerfully articulated by Black Lives Matter activists, mobilizing collective action in the aftermath of similar incidents, such as the killings of Freddie Gray in Baltimore and Laquan McDonald in Chicago, has become fairly predictable.

For most people, the problem of climate change is not linked to a salient collective identity. In fact, if our concern is the prospect of climate change activism, the situation may be worse than that: According to recent work by McCright & Dunlap (2011) and Kahan (2015), the only segment of the American public for whom climate change is highly salient is extreme conservatives, whose views on the issue are central to their political and ideological commitments. For everyone else, the salience of the issue is highly variable, shifting over time in relation to a host of influences, including the state of the economy, weather patterns, and media coverage. But, one might reasonably ask, what are we to make of attitudinal data showing broad support by large numbers of Americans for a host of environmental issues? Doesn't that mean that a substantial number of us identify as environmentalists? At some low level of salience, yes, but except for the most die-hard environmentalists, few would count this identity among the most important or salient in their lives. Even for those with consistently strong environmental views, a host of other identities routinely trump their self-concept as environmentalists. As a result, no substantial self-conscious group really "owns" the issue of climate change—save perhaps for extreme conservatives—in the way that most African-Americans "own" Black Lives Matter.

This does not, of course, make collective action impossible. It does, however, mean that for a movement to develop, organizers must be able to establish a clear, compelling connection between the issue and one or more highly salient identities, thereby conferring ownership of the issue to those groups. To date, climate change activists have had little success at creative identity framing in the United States. This is true even in those institutional settings that have traditionally served as the breeding ground for protest movements. Although fossil fuel divestment campaigns have developed on some college campuses, the overall level of student activism on climate change remains surprisingly low. Because of the perceived conflict between bread-and-butter economics and all manner of environmental issues—including climate change—union-driven or other work-based mobilization on the issue has been negligible. Church and other religious groups have been more active on the issue (Brulle 2000, Caniglia et al. 2015, Kearns 1996), but faith-based support of the denial countermovement is almost as common as faith-based calls for remedial action against climate change.

Extended time horizon. Historically, organized labor has been generally antagonistic toward any form of environmental action that would seem to threaten jobs or economic growth more generally. Underlying this specific tension is a general feature of climate change that tends to mute concern for the issue: its longer-term time horizon compared to other issues. Whereas economic concerns tend to be experienced as highly visible and immediately pressing, climate change is still

seen, even by many who profess concern for the problem, as more gradual and much less salient in the here and now.

This contrast in the perceived time horizons of climate change and economic issues helps make sense of consistent findings showing a strong relationship between economic fluctuations and concern for climate change (Brulle et al. 2012, Kahn & Kotchen 2011, Scruggs & Benegal 2012). For example, Kahn & Kotchen (2011) show a clear "chilling effect" of the great recession of 2007–2008 on concern for climate change. The impact of the downturn is also evident in time series data on public willingness to accept modest reductions in economic growth in exchange for remedial action on climate change. The perception that climate change is a gradual process whose most damaging effects are yet to come and therefore still amenable to amelioration is, of course, illusory. The effects of global warming are already apparent and destined to get much worse even if we could significantly reduce, or even eliminate, fossil fuel emissions tomorrow. But as long as the general public perceives climate change as less immediately salient than other more pressing issues, mobilizing broad-based collective action to remedy the problem will be difficult.

Emotions and collective action. As a number of critics have noted, the major theoretical perspectives that have shaped the study of social movements and collective action betray a certain rationalist bias (Aminzade & McAdam 2001, Goodwin & Jasper 2004, Goodwin et al. 2001, Gould 2009). This is explicit in rational choice accounts of collective action (Olson 1965), but it is also strongly implied in both the political process (McAdam 1999, Tarrow 1989, Tilly 1978) and resource mobilization theories of social movements (McCarthy & Zald 1977). In short, the early proponents of these perspectives failed to assign any explanatory importance to emotions. Increasingly, however, movement analysts have come to view heightened emotions not simply as a characteristic feature of emergent collective action, but as a necessary causal component of any explanatory theory.

Concern over climate change has not been accompanied by the mobilization of either of the two strong emotions, fear or anger, normally associated with movement emergence. Two factors I have mentioned above—lack of identity ownership and extended time horizon—help us understand why this is the case. First, relative to other issues, few of us feel a strong identification with the issue of climate change, and strong emotion requires just this kind of identification. It is the salience of racial identity and the deeply felt connection to the African-American community that trigger such widespread anger among blacks at each instance of police violence.

The extended time horizon that people associate with climate change also has affective implications. As long as we can persuade ourselves that the worst effects of climate change lie in some relatively distant future and that we still have time to minimize their damage, our fear of climate change is more likely to be of a dispassionate, intellectual nature than the more visceral fear that catalyzes action. Whatever the precise mix of factors accounting for the general absence of strong emotion in relation to climate change, that absence is among the reasons why a sustained movement on the issue has yet to develop in the United States.

The puzzle of extreme weather events. The three factors discussed above are all the more puzzling in light of the increasing frequency of extreme weather events linked to climate change/global warming. Why haven't these extreme weather events:

- Increased public identification with, and the perceived salience of, the issue?
- Shattered the temporal illusion that climate change is more a future threat than a present reality?
- Deepened popular fears of the potentially catastrophic impact of climate change?

Or, phrased in the language of social movement studies, why haven't these extreme weather events functioned as the kind of "suddenly imposed grievances" (Walsh & Warland 1983, p. 764) or NIMBY-style shock that so often serves as the catalyst for emergent collective action? The concept of suddenly imposed grievance was first introduced to help explain the significant upsurge in antinuclear activism in the wake of the 1979 accident at the Three Mile Island nuclear power plant near Harrisburg, Pennsylvania (Walsh & Warland 1983). By powerfully and concretely dramatizing the dangers of nuclear power, the accident heightened public awareness and fear of the technology, greatly accelerating the pace of antinuclear mobilization in the process.

Why didn't such extreme weather events as Hurricane Katrina and Hurricane Sandy have the same catalyzing effect on climate change activism that Three Mile Island had in the case of the antinuclear movement? I don't know the answer. It is clear, however, that such events fail to transform or even challenge the subjective understanding of the issue for those who live through them. Two bodies of work are relevant here. The first is survey research designed to assess the impact of exposure to extreme weather events (Akerlof et al. 2013, Capstick & Pidgeon 2014, Egan & Mullin 2012, Hamilton & Keim 2009, Lang 2014, Rudman et al. 2013). Konisky et al. (2016, p. 535) summarize the results of these studies by noting that "evidence is mixed, but generally finds that personal experiences have, if anything, a short-term effect on climate concern."

The second body of evidence comes from a single comparative case analysis of a dozen US communities that experienced extreme weather events in 2013 or 2014, which Hilary Boudet and I are currently conducting. Of the six impacted communities studied to date, in only one—Boulder, Colorado—was the event linked in subsequent public discourse to climate change, but not in such a way as to measurably increase local climate change activism.

IS INACTION INEVITABLE? LOOKING TO THE FUTURE

Based on this rather depressing theoretically informed litany of movement-suppressing factors, should we simply give up on prospects for meaningful climate change activism? Without underestimating the multiple impediments to popular mobilization on the issue, the answer is no, if only because the gravity of the issue compels us to try to imagine a way forward. What would it take to reverse the present inertia? Which of the three broad explanatory factors reviewed above offers the best hope for setting in motion sustained grassroots action?

Thirty-five years ago, in my initial articulation of political process theory, I offered an assessment of the relative explanatory force of the three key causal factors central to the perspective. I wrote that organization and opportunity "only offer insurgents a certain objective 'structural potential' for collective political action. Mediating between opportunity and action are people and the *subjective* meanings they attach to their situation" (McAdam 1999, p. 48; emphasis added). None of my empirical research on social movements in the intervening years has dissuaded me from this view. As important as political opportunities and sustaining organizations are to the fate of movements, emergent collective action is almost always triggered by a significant shift in popular awareness and subjective understanding of the issue in question. To encourage this shift in consciousness, those working to build a grassroots movement will need to find ways to promote broad identification with, and ownership of, the issue of climate change; to dramatically foreshorten the prevailing temporal lens through which the issue is viewed; and above all to engender widespread fear and anger about it.

Promoting Ownership of the Issue

Given the lack of popular identification with, or ownership of, the issue, how do climate change activists go about increasing the salience of the threat? The initial impulse might be to mount a

general education campaign—à la Al Gore's *Inconvenient Truth*—that targets everyone. Experienced organizers, however, would almost certainly reject this in favor of a more precisely targeted approach. In devising such a plan, they would ask two questions: Which groups of people are especially vulnerable to the effects of climate change? And what rhetorical strategies would be most effective in communicating this vulnerability? In point of fact, despite the universal nature of the issue, everyone is not equally vulnerable to the threat of global warming or receptive to appeals related to it. We know, for example, that attitudes toward climate change have grown more polarized in recent years, reflecting the widening partisan divide in the United States (McCright & Dunlap 2011). Given this trend, it makes little sense to appeal to conservatives who are very likely to be hostile to the issue.

But let's set receptivity aside for the moment and focus on vulnerability alone. All other things equal, vulnerability to a threat is very likely to increase one's identification with the issue and willingness to take action to forestall the threat. Which brings us to the key question: Which groups in the United States are most vulnerable to the effects of climate change? Although a complete answer is beyond the scope of this article, I use two groups to illustrate the organizing strategy I am advocating. The first is college students. Indeed, it would be hard to identify a more ideal target for climate change appeals. As young people expecting to live another 50–60 years, they are especially vulnerable to the longer-term, increasingly catastrophic effects of climate change. But it is not only their vulnerability, and therefore presumed receptivity to the issue, that recommends them to would-be organizers. With some 20 million individuals currently attending college, students represent a very large and nationwide target population (**https://nces.ed.gov/fastfacts/**). Second, by concentrating large numbers of young people in relatively small areas, residential campuses are ideally suited, ecologically, to the dynamics of mobilization and action (Zhao 1998). Third, generally free from constraining adult responsibilities (i.e., full-time employment, parenting), students are, as movement scholars have long recognized, uniquely "biographically available" for activism (McAdam 1986, Passy & Giugni 2000, Wiltfang & McAdam 1991).

If college students are often overrepresented in the ranks of progressive movements, our second vulnerable population is definitely not. Although the sizeable literature on environmental racism has conditioned us to expect traditionally disadvantaged groups to bear the disproportionate burden of exposure to environmental threats, the race and class effects of climate change may not be so clear. The housing patterns in various parts of the country make it clear that many of the richest and otherwise most advantaged households may be uniquely vulnerable to certain effects of climate change. In general, the longstanding appeal of ocean-front property to the wealthy means that a substantial number of America's elite are in harm's way when sea level rises. It is possible that a targeted effort to promote greater awareness of these effects might enlist the aid of at least a small segment of the elite to address the general threat of climate change.

Shrinking the Time Horizon

To undermine the erroneous and dangerous temporal understanding of global warming as something we will have to contend with in the future, rather than as a set of processes already unfolding, climate change activists must do a better job of educating the public about the present-day manifestations of climate change and the dangers they already pose.

This could be done in a number of ways, but extreme weather events seem to represent an especially powerful vehicle for communicating the immediacy of the issue and the stark dangers posed by climate change. Such an effort would have two principal components. The first would be to take advantage of the media attention generated by any extreme weather event to hammer home the link between such events and climate change. But the most important component of the effort

would need to take place in the community or communities affected by the event. The goal would be to dispatch small groups of dedicated activists to these communities. Besides participating in the relief effort, such groups would seek to promote awareness of the link between climate change and extreme weather and to encourage local organizing and action to counter the threat. I mentioned above a study that Boudet and I are currently conducting in 12 cities that have experienced extreme weather events. One of our expectations going into the project was that such events would likely increase awareness of climate change as a possible contributing factor and, as such, encourage more local action on the issue. We also expected to see local environmental groups mobilizing in the wake of the events to promote such community awareness and action. In the six cases we have analyzed to date, we have seen virtually none of this kind of purposive action by environmental, or any other, groups. For those hoping to stimulate sustained popular mobilization on the issue, this represents a serious missed opportunity.

Fear, Anger, and Hope

Nothing accounts more for the general absence of climate change activism in the United States than the absence of strong emotions regarding the issue. Large numbers of Americans are concerned about the issue but not deeply afraid of what lies ahead. Many are distrustful of the oil and gas companies but not viscerally angry at their efforts to buy the votes of elected officials and to sew confusion by promulgating the pseudoscientific "findings" of climate change denial groups. If a grassroots climate change movement is to emerge in the United States, it will require widespread fear and anger to motivate people to act. The mobilization of fear has been very much on our minds in the previous two sections. Quite simply, if activists were able to deepen the identification of specific groups (i.e., college students, wealthy coastal dwellers) with the issue and/or convince large numbers of people of its immediate urgency, the emotional payoff would, in fact, be fear.

Fear is a tricky emotion. It can paralyze as well as mobilize. Accordingly, climate change activists would be wise not to rely on fear alone to motivate popular concern and action on the issue. The combination of anger and hope has proven to be a powerful motivator in many successful movements. In general, rights movements have traditionally relied on this potent mix of emotions. And though not expressly framed as an effort to address climate change, there has emerged in recent years a powerful, if loose, collection of anti–fossil fuel movements that are helping to generate this emotional mix. It may be that the best hope for popular mobilization rests not with a broad effort to catalyze action on the rather amorphous issue of climate change, but rather with more narrowly focused movements aimed at demonizing and weakening the industries principally responsible for global warming. At present, these discrete but overlapping efforts include the anti-fracking movement, fossil fuel divestment campaigns on college campuses, and collective action to combat the environmental effects of coal, as well as the ultimately successful effort to block construction of the Keystone XL pipeline. In their important new book, Cheon & Urpelainen (2016) document the growing, if variable, strength of these movements and their accomplishments to date.

Rather than fear, these various movements are motivated primarily by anger at the environmental damage caused by oil and gas exploration, as well as the concentrated political and economic power wielded by the fossil fuel industries. One problem that climate change activists have had in trying to mobilize action is the difficulty of concretizing or personifying climate change, or identifying specific villains to blame for the escalating threat. Instead, the crisis seems to be largely the product of impersonal forces beyond our control. As organizers know all too well, it is much easier to mobilize people when you can focus their anger on a potent symbol of the evil they are seeking to vanquish. The oil and gas industries serve exactly this function for the various anti–fossil fuel movements.

These various movements enjoy at least one other significant strategic and emotional advantage over any broader effort to combat global warming per se. By pursuing very specific goals—for instance, blocking drilling in this coastal area or outlawing fracking in this county—these movements have the ability to achieve the small victories that sustain struggles by reinforcing hope and the shared sense of collective efficacy on which movements depend (Alinsky 1989). Despite the long odds they face, if climate change activists can somehow build on the successful efforts of the anti–fossil fuel movements, while simultaneously encouraging ownership of the broader issue by college students and other groups, they might be able to slowly build the kind of sustained popular struggle that would force elected officials to rethink their policy preferences, and eventually transform the United States from a major impediment to a powerful force for international action on global warming. This scenario may not be very likely, but no significant social movement in history has ever looked likely beforehand. Given the unprecedented dangers associated with climate change, we have little choice but to theorize and advocate the dynamic processes that might help to set such a movement in motion.

DISCLOSURE STATEMENT

The author is not aware of any affiliations, memberships, funding, or financial holdings that might be perceived as affecting the objectivity of this review.

ACKNOWLEDGMENTS

I thank Johannes Urpelainen and Nancy Rosenblum for very helpful comments on an earlier draft of this article and Robert Brulle for extensive bibliographic and general advice on issues touched on here.

LITERATURE CITED

Akerlof K, Maibach EW, Fitzgerald D, Cedeno AY, Neuman A. 2013. Do people "personally experience" global warming, and if so how, and does it matter? *Glob. Environ. Change* 23(1):81–91

Alinsky S. 1989. *Rules for Radicals: A Primer for Realistic Radicals*. New York: Vintage

Aminzade R, McAdam D. 2001. Emotions and contentious politics. In *Silence and Voice in the Study of Contentious Politics*, ed. R Aminzade, JA Goldstone, D McAdam, EJ Perry, WH Sewell Jr., et al., pp. 14–50. New York: Cambridge Univ. Press

Andrews KT. 1997. The impacts of social movements on the political process: a study of the Civil Rights Movement and Black electoral politics in Mississippi. *Am. Sociol. Rev.* 62:800–19

Andrews KT. 2004. *Freedom Is a Constant Struggle*. Chicago: Univ. Chicago Press

Ansolabehere S, Konisky DM. 2014. *Cheap and Clean: How Americans Think About Energy in the Age of Global Warming*. Cambridge, MA: MIT Press

Baumgartner FR, Berry JM, Hojnacki M, Kimball DC, Leech BL. 2009. *Lobbying and Policy Change: Who Wins, Who Loses, and Why*. Chicago: Univ. Chicago Press

Birnbaum JH. 2000. *The Money Men: The Real Story of Fund-Raising's Influence on Political Power in America*. New York: Crown

Bord R, Fisher A, O'Connor RE. 1998. Public perceptions of global warming: United States and international perspectives. *Clim. Res.* 11(1):75–84

Brechin SR. 2003. Comparative public opinion and knowledge on global climate change and the Kyoto Protocol: the U.S. versus the world? *Int. J. Sociol. Soc. Policy* 23(10):106–34

Brulle RJ. 2000. *Agency, Democracy and Nature: The U.S. Environmental Movement from a Critical Theory Perspective*. Cambridge, MA: MIT Press

Brulle RJ. 2014. Institutionalizing delay: foundation funding and the creation of U.S. climate change countermovement organizations. *Clim. Change* 122:681–94
Brulle RJ, Carmichael J, Jenkins JC. 2012. Shifting public opinion on climate change: an empirical assessment of factors influencing concern over climate change in the U.S., 2002–2010. *Clim. Change* 114(2):169–88
Caniglia BS, Brulle RJ, Szasz A. 2015. Civil society, social movements, and climate change. In *Climate Change and Society: Sociological Perspectives*, ed. RE Dunlap, RJ Brulle, pp. 235–68. New York: Oxford Univ. Press
Capstick SB, Pidgeon NF. 2014. What is climate change scepticism? Examination of the concept using a mixed methods study of the U.K. public. *Glob. Environ. Change* 24:389–401
Cheon A, Urpelainen J. 2016. *Targeting Big Polluters: Understanding Activism Against the Fossil Fuel Industry*. New York: Oxford Univ. Press. In press
Clawson D, Neustadtl A, Weller M. 1998. *Dollars and Votes: How Business Campaign Contributions Subvert Democracy*. Philadelphia: Temple Univ. Press
Converse PE. 1964. The nature of belief systems in mass publics. In *Ideology and Discontent*, ed. D Apter, pp. 206–64. New York: Free
Dietz M, Garrelts H, eds. 2014. *Routledge Handbook of the Climate Change Movement*. New York: Routledge
Doyle T, MacGregor S, eds. 2013. *Environmental Movements Around the World*. Santa Barbara, CA: Praeger
Dryzek JS, Norgaard RB, Schlosberg D, eds. 2011. *The Oxford Handbook of Climate Change and Society*. Oxford, UK: Oxford Univ. Press
Dunlap RE, Brulle RJ, eds. 2015. *Society and Climate Change: Sociological Perspectives*. New York: Oxford Univ. Press
Dunlap RE, McCright AM. 2015. Challenging climate change: the denial countermovement. In *Climate Change and Society: Sociological Perspectives*, ed. RE Dunlap, RJ Brulle, pp. 300–32. New York: Oxford Univ. Press
Egan PJ, Mullin M. 2012. Turning personal experience into political attitudes: the effect of local weather on Americans' perceptions of global warming. *J. Polit.* 74(3):796–809
Feinberg M, Willer R. 2013. The moral roots of environmental attitudes. *Psychol. Sci.* 24(1):56–62
Fisher DR. 2004. *National Governance and the Global Climate Change Regime*. Lanham, MD: Rowman & Littlefield
Fisher DR. 2013. Understanding the relationship between subnational and national climate change politics in the United States: toward a theory of boomerang federalism. *Environ. Plan. C Gov. Policy* 31:769–84
Goodwin J, Jasper J, eds. 2004. *Rethinking Social Movements: Structure, Meaning and Emotion*. Lanham, MD: Rowman & Littlefield
Goodwin J, Jasper J, Polletta F, eds. 2001. *Passionate Politics: Emotions and Social Movements*. Chicago: Univ. Chicago Press
Gould DB. 2009. *Moving Politics: Emotion and ACT Up's Fight Against AIDS*. Chicago: Univ. Chicago Press
Hackmann H, St. Clair AL. 2012. *Transformative Cornerstones of Social Science Research for Global Change*. Paris: ISSC
Hamilton LC. 2011. Education, politics and opinions about climate change evidence for interaction effects. *Clim. Change* 104(2):231–42
Hamilton LC, Keim BD. 2009. Regional variation in perceptions about climate change. *Int. J. Climatol.* 29(15):2348–52
Huffington A. 2010. *Third World America: How Our Politicians Are Abandoning the Middle Class and Betraying the American Dream*. New York: Crown
Int. Soc. Sci. Counc. (ISSC). 2013. *World Social Science Report: Changing Global Environments*. New York: UNESCO
Kahan DM. 2015. Climate-science communication and the measurement problem. *Polit. Psychol.* 36:1–43
Kahan DM, Peters E, Wittlin M, Slovic P, Ouellette LL, et al. 2012. The polarizing impact of science literacy and numeracy on perceived climate change risks. *Nat. Clim. Change* 2(10):732–35
Kahn ME, Kotchen MJ. 2011. Business cycle effects on concern about climate change: the chilling effect of recession. *Clim. Change Econ.* 2(3):257–73
Kaiser R. 2009. *So Damn Much Money*. New York: Alfred A. Knopf
Kearns L. 1996. Saving the creation: Christian environmentalism in the United States. *Sociol. Relig.* 57:55–70

Kellstedt PM, Zahran S, Velditz A. 2008. Personal efficacy, the information environment, and attitudes toward global warming and climate change in the United States. *Risk Anal.* 28(1):113–26
Keohane RO. 1984. *After Hegemony: Cooperation and Discord in the World Political Economy*. Princeton, NJ: Princeton Univ. Press
Keohane RO, Haas PM, Levy MA, eds. 1993. *Institutions for the Earth: Sources of Effective International Protection*. Cambridge, MA: MIT Press
Keohane RO, Nye JS Jr. 1977. *Power and Interdependence*. New York: Addison-Wesley Longman
Keohane RO, Victor DG. 2011. The regime complex of climate change. *Perspect. Polit.* 9:7–23
Konisky DM, Hughes L, Taylor CH. 2016. Extreme weather events and climate change concern. *Clim. Change* 134:533–47
Krosnick JA, Holbrook AL, Lowe L, Visser PS. 2006. The origins and consequences of democratic citizens' policy agendas: a study of popular concern about global warming. *Clim. Change* 77(1–2):7–43
Lang C. 2014. Do weather fluctuations cause people to seek information about climate change? *Clim. Change* 125(3–4):291–303
Leiserowitz A. 2005. American risk perceptions: Is climate change dangerous? *Risk Anal.* 25(6):1433–22
Leiserowitz A. 2006. Climate change risk perception and policy preferences: the role of affect, imagery, and values. *Clim. Change* 77(1–2):45–72
Lessig L. 2011. *Republic Lost: How Money Corrupts Congress—And a Plan to Stop It*. New York: Twelve
Lupia A. 2013. Communicating science in politicized environments. *PNAS* 110(Suppl. 3):14048–54
Maibach EW, Nisbet M, Baldwin P, Akerlof K, Diao G. 2010. Reframing climate change as a public health issue: an explanatory study of public reactions. *BMC Public Health* 10(1):299
Malka A, Krosnick JA, Langer G. 2009. The association of knowledge with concern about global warming: Trusted information sources shape public thinking. *Risk Anal.* 29(5):633–47
Markowitz EM, Shariff AF. 2012. Climate change and moral judgment. *Nat. Clim. Change* 2(4):243–47
McAdam D. 1986. Recruitment to high-risk activism: the case of Freedom Summer. *Am. J. Sociol.* 92:64–90
McAdam D. 1999. *Political Process and the Development of Black Insurgency, 1930–1970*. Chicago: Univ. Chicago Press. 2nd ed.
McAdam D, Kloos K. 2014. *Deeply Divided: Racial Politics and Social Movements in Postwar America*. New York: Oxford Univ. Press
McAdam D, Paulsen R. 1993. Specifying the relationship between social ties and activism. *Am. J. Sociol.* 99:640–67
McCarthy JD, Zald M. 1977. Resource mobilization and social movements: a partial theory. *Am. J. Sociol.* 82:1212–41
McCright AM, Dunlap RE. 2011. The politicization of climate change and polarization in the American public's views of global warming, 2001–2010. *Sociol. Q.* 52(2):155–94
Michels R. 1959 (1915). *Political Parties*. New York: Dover
Moser SC. 2010. Communicating climate change: history, challenges, process and future directions. *Wiley Interdiscip. Rev. Clim. Change* 1(1):31–53
Myers TA, Nisbet MC, Maibach EW, Leiserowitz AA. 2012. A public health frame arouses hopeful emotions about climate change. *Clim. Change* 113(3–4):1105–12
Nepstad SE, Smith C. 1999. Rethinking recruitment to high-risk/cost activism: the case of Nicaragua Exchange. *Mobilization* 4:40–51
Nisbet MC. 2009. Communicating climate change: why frames matter for public engagement. *Environment* 51(2):12–23
O'Connor RE, Bord RJ, Fischer A. 1999. Risk perceptions, general environmental beliefs and willingness to address climate change. *Risk Anal.* 19(3):461–71
O'Connor RE, Bord RJ, Yarnal B, Wiefek N. 2002. Who wants to reduce greenhouse gas emissions? *Soc. Sci. Q.* 83(1):1–17
Olson M. 1965. *The Logic of Collective Action*. Cambridge, MA: Harvard Univ. Press
Oreskes N, Conway EM. 2010. *Merchants of Doubt*. New York: Bloomsbury
Passy F, Giugni M. 2000. Life-spheres, networks, and sustained participation in social movements: a phenomenological approach to political commitment. *Sociol. Forum* 15:117–44

Piven FF, Cloward RA. 1979. *Poor People's Movements*. New York: Vintage
Poloni-Staudinger I. 2009. Why cooperate? Cooperation among environmental groups in the United Kingdom, France and Germany. *Mobilization* 14:375–96
Poole KT, Rosenthal H. 1997. *Congress: A Political-Economic History of Roll Call Voting*. New York: Oxford Univ. Press
Roberts JT, Parks BC. 2007. *A Climate of Injustice: Global Inequality, North-South Politics and Climate Policy*. Cambridge, MA: MIT Press
Rootes C, Zito A, Barry J. 2012. Climate change, national politics and grassroots activism: an introduction. *Environ. Polit.* 21:677–90
Rudman LA, McLean MC, Bunzl M. 2013. When truth is personally inconvenient: Attitudes change the impact of extreme weather on implicit support for green politicians and explicit climate-change beliefs. *Psychol. Sci.* 24(11):2290–96
Rupp L, Taylor V. 1987. *Survival in the Doldrums: The American Women's Rights Movement*. New York: Oxford Univ. Press
Schuldt JP, Konrath SH, Schwartz N. 2011. "Global warming" or "climate change"? Whether the planet is warming depends on question wording. *Public Opin. Q.* 75(1):115–24
Scruggs L, Benegal S. 2012. Declining public concern about climate change: Can we blame the Great Recession? *Glob. Environ. Change* 22(2):505–15
Shwom R, Bidwell D, Dan A, Dietz T. 2010. Understanding U.S. public support for domestic climate change policies. *Glob. Environ. Change* 20(3):472–82
Smith N, Leiserowitz A. 2014. The role of emotion in global warming policy support and opposition. *Risk Anal.* 34(5):937–48
Snow DA, McAdam D. 2000. Identity work processes in the context of social movements: clarifying the identity/movement nexus. In *Self, Identity and Social Movements*, ed. S Stryker, TJ Owens, RW White, pp. 41–67. Minneapolis: Univ. Minn. Press
Tarrow S. 1989. *Democracy and Disorder: Protest and Politics in Italy, 1965–75*. Oxford, UK: Clarendon
Tilly C. 1978. *From Mobilization to Revolution*. Reading, MA: Addison-Wesley
Urpelainen J. 2013. International environmental agreements. *Polit. Law Econ.* 13:107–25
Victor DG. 2001. *Collapse of the Kyoto Protocol and the Struggle to Slow Global Warming*. Princeton, NJ: Princeton Univ. Press
Villar A, Krosnick JA. 2011. Global warming versus climate change, taxes versus prices: Does word choice matter? *Clim. Change* 105(1–2):1–12
Walsh EJ, Warland RH. 1983. Social movement involvement in the wake of a nuclear accident: activists and free riders in the Three Mile Island area. *Am. Sociol. Rev.* 48:764–81
Walström M, Wennerhag M, Rootes C. 2013. Framing "the climate issue": patterns of participation and prognostic frames among climate change protestors. *Glob. Environ. Polit.* 13:101–22
Weber M. 2009 (1905). *The Theory of Social and Economic Organization*. New York: Simon & Schuster
Whitmarsh L. 2008. Are flood victims more concerned about climate change than other people? The role of direct experience in risk perception and behavioural response. *J. Risk Response* 11(3):351–74
Wiltfang G, McAdam D. 1991. Distinguishing cost and risk in sanctuary activism. *Soc. Forces* 77:289–310
Wood BD, Vedlitz A. 2007. Issue definition, information processing, and the politics of global warming. *Am. J. Polit. Sci.* 51(3):552–68
Zehr S. 2014. The sociology of global climate change. *WIREs Clim. Change*. doi: 10.1002/wcc.328
Zhao D. 1998. Ecologies of social movements: student mobilization during the 1989 prodemocracy movement in Beijing. *Am. J. Sociol.* 103(6):1493–529