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Climate Change and Society: Sociological Perspectives

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This book is the final report of the Task Force on Sociology and Global Climate Change, which was commissioned by the American Sociological Association. This is an edited volume of 13 chapters, cowritten by a team of 39 sociologists. In the opening essay, Brulle and Dunlap situate the volume by pointing out the alarming and precipitous anthropogenic climate change that we face at the dawn of the Third Millennium (e.g., American Association for the Advancement of Science Climate Science Panel, 2014). While the discipline of sociology is over a century old, and environmental sociology has been in existence for the last four decades, the relationship of humankind with the natural environment has yet to be embraced as a core part of the discipline. In fact, much of the theorization and modeling of social systems tends to go on as if the external environment were barely worth considering.

This volume has the potential to make progress on two fronts. First and foremost, it represents a long-overdue accounting of some of the myriad contributions that sociological research necessarily makes to discussions about climate change—discussions that tend to be long on natural and physical science, but are typically lacking in the social sciences, particularly sociology. Second and more modestly, though still importantly, the volume may help to raise the consciousness of sociologists regarding the folly of continuing to treat humankind's relationship with the environment as if it were less than central to the human condition.

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Each of the chapters makes a contribution in its own right; in aggregate, the volume stands as a work that covers a considerable array of the aspects of climate change. The editors bookend nine substantive chapters with an opening and closing chapter of their own. Brulle and Dunlap (p. 8) point out that much of the social science that is incorporated in social science discourse and policy discussions tends to be individual-level analysis of the sort favored by psychologists and free market economists. This volume goes considerably beyond that.

In the first part of the volume, the chapters focus on the central driving forces of climate change. Rosa, Rudel, York, Jorgenson, and Dietz build on the IPAT model (in which environmental Impact is a function of Population, Affluence and Technology, typically working more interactively than in a simple additive way). They consider the role of culture and look at how Environmental International Non-Governmental Organizations can, under certain circumstances, serve to mitigate greenhouse gas (GHG) emissions on the macro level. They point out that, with the increasing economic integration of most nations around the world, it has become easier for developed and powerful nations to externalize major portions of their environmental impacts, such as pollution-heavy production and toxic dumping, to less-powerful and poorer nations. In effect, this globalizes the commons problem as never before, redounding disproportionately in the environment and public health. In addressing these issues, Rosa, Rudel, York, Jorgenson, and Dietz argue that it is crucial to move “beyond technical fixes and consider the social, political, and economic structures that condition human behavior and resource exploitation” (p. 52).

In their chapter on “Market Organizations and Environments,” Perrow and Pulver point out that while “human choices are at the root of everything, [they are] given effect by larger organizational structures” (p. 61). They focus their analysis on the organizational drivers of GHG pollution and mitigation. They see these organizations both as independent actors and as part of a larger organizational field that is characterized by “institutional isomorphism” and follows a “collective rationality.” They find that a “range of organizational characteristics shape firms’ environmental pollution profiles” (pp. 66); the larger the organization, the greater its releases per quantity of chemical used. An insidious stratagem that companies use to protect themselves from liability, taxes, and public

scrutiny is multiple subsidiaries. Owing to recent legal changes in response to well-funded lobbying efforts, this has become more viable for companies and harder for regulators and researchers to track. The authors note that research on the organizational determinants of GHG emissions has been hamstrung by the paucity of available data (p. 67). That said, the technology currently exists to reduce carbon emission by 90 percent or more (p. 85). What is needed is an organizational structure, embedded in a larger cultural ethos, that can sustain such a reduction.

Ehrhardt-Martinez and Schor, with Abrahamse, Alkon, Axsen, Brown, Shwom, Southerton, and Wilhite, draw on the IPAT model in their chapter on “Consumption and Climate Change.” In looking at household level consumption, they adduce a number of provocative findings that challenge some of the generally accepted theories. They draw on the combined effects of status, class and culture to try to make sense of the widely studied, but poorly understood, gap between people’s environmental attitudes and their actual behavior (pp. 100–102). They point out that individuals may profess pro-environmental attitudes but lead high-impact lives; this is because of the type of conspicuous consumption, articulated by Veblen over a century ago, that holds sway over their social positions and, perhaps, their identities. Yet, this can change; for example, individuals will often conform to a “neighborhood effect,” becoming more green in their own consumption patterns as a result of strengthening environmental norms in their local area. The authors argue that the greatest barrier to using green products is not attitudes, but cost (p. 114). For example, when mass marketers, such as Walmart, have made organic foods available, the competition has driven down prices among other providers, such as whole foods markets. In this case, the lower cost and availability of organic produce was met with an increase in consumption. The authors also highlight the well-documented attribution biases in the attitudes that justify consumption patterns that manage (or fail to address) climate change, noting that these have unequal consequences. They point out a substantial body of evidence that shows that people of color, indigenous people, and poor and immigrant communities are typically subject to higher levels of exposure to pollution and other hazards than more privileged communities. The most adversely affected tend to have

limited access to the decision-making power structures that lend such practices legitimacy, which means that the process tends to perpetuate. For example, individuals who benefit from fossil fuel industries are more likely to turn a “blind eye” to problems with activities such as fracking or attempts to minimize carbon emissions (pp. 114–115).

The second section of the volume considers the impacts of climate change and their complex connections with social processes. The chapter by Harlan, Pellow and Roberts, with Bell, Holt, and Nagel, focuses on “Climate Justice and Inequality.” The authors offer three reasons why climate change is a justice issue: 1) social inequalities cause unsustainable levels of GHG emissions; 2) the rich and the poor experience the impacts of climate change in a variety of different ways; and 3) policies, which are to manage climate change, not only produce differing effects, but also disproportionately exclude “the poor and the powerless” (p. 127). They draw on theoretical perspectives to understand issues in climate justice, such as C. W. Mills who described the “power elite”—a group of people with top-ranking positions in the military, politics, and economy who control institutions in ways that threaten equal opportunity (p. 131). At the same time, the authors posit that even the most defenseless groups can “have agency and ... organize to resist climate injustice” (p. 131). They point out that wealthier nations consume “more than three times their share” (p. 127) of CO₂ emissions and that poorer nations are less responsible for creating today’s environmental issues. Marginalized nations are at a greater risk of “suffering worst and first,” (p. 128) leaving wealthier nations in a “climate debt” (p. 134). Climate debt refers to groups who bear most of the responsibility of climate change and are responsible for repaying their “debt” to less developed nations who are suffering the most. The authors make the case that understanding climate change problems equates to understanding disparities in “wealth, power, and privilege” (p. 128) between the affluent and more vulnerable. However, wealthier nations are hesitant to address this disparity because addressing reasons for climate change means addressing their own patterns of overconsumption (p. 127). It is important to understand that overconsumption is largely driven by peoples’ desire for status within society and, further, that cutting back on fossil fuels is linked in many peoples’ minds to reducing or

eliminating economic growth. The authors posit the following four principles to define climate justice: 1) there should be “equity in distributing the burdens and sharing the benefits” of climate change (p. 136); 2) marginalized groups should be able to participate in the “governance and management of climate change” (p. 136); 3) individuals must have the freedom and capability to make choices that affect their lives; and 4) climate justice entails rebuilding relations that were broken historically, “correcting past wrongs against humanity, and restoring the Earth” (p. 136). The authors ask: “who has the right to control the Earth’s common space?” (pp. 143–144). They argue that marginalized groups should have the ability to participate in discussions, not only wealthy parties (p. 145), and contend that any attempt to mitigate the effects of climate change must address the underlying issues of global capitalism (p. 149). They conclude that while sociology, as a discipline, has been essential in addressing inequalities and injustices, there is a need for interdisciplinary cooperation (p. 153) that will assist in moving a climate change agenda forward.

In their chapter on “Adaptation to Climate Change,” Carmin, Tierney, Chu, Hunter, Roberts, and Shi point out that “social and institutional dynamics are critical to understanding and advancing climate change adaptation” (p. 168). By definition, adaptation is the process by which communities adjust to current or expected climate effects, with the intention of lessening destruction and vulnerability or using opportunities that will benefit human systems. Like Harlan et al., the authors of this chapter maintain that the powerless and the poor are more sensitive to climate change impacts and extreme weather events. Given the disparities induced by political and economic decisions, they liken adaptation to climate change to a social challenge (p. 165). They posit three key pathways for decreasing exposure and increasing adaptive capacity: 1) structural, 2) institutional, and 3) societal adaptation (pp. 166–168, Table 6.1). Structural measures include “redirecting rivers,” “environmental monitoring systems,” and “reestablishing wetlands” (p. 168). Institutional measures include “zoning and land use regulations,” “slum upgrading programs,” and “development aid” (p. 168). Societal adaptation measures include “technical assistance and training programs; public education,” “water quality monitoring; epidemiological monitoring,” “retreat and migration,” and “food banks; livelihood

replacement” (p. 168). The authors conclude with a call for interdisciplinary approaches to tackling the challenges of climate change adaptation techniques (p. 185). Their research shows that having interdisciplinary contributions to this vital and persistent issue of climate change facilitates deeper understandings of the mechanisms that encourage adaptation techniques to ameliorate social vulnerabilities, as well as the circumstances that continue to perpetuate those vulnerabilities (p. 185).

Ehrhardt-Martinez, Rudel, Norgaard, and Broadbent discuss mitigation efforts for reducing GHGs emissions in their chapter “Mitigating Climate Change.” They draw on sociological approaches to understanding mitigation efforts, such as international regime theory (p. 217), ecological modernization theory (p. 217), world society theory (p. 218), and the theory of global environmental systems (p. 220). They argue that the effects of climate change on society and ecosystems may be minimized through two pathways: mitigation and adaptation (p. 199). Mitigation includes reducing GHGs, whereas adaptation refers to our capacity to live with the changes that occur from climate change (p. 199). Current mitigation efforts are subpar and have a long way to go before becoming sufficient. The authors make a case for using a hybrid policy approach for evaluating mitigation; such an approach would include recognizing global inequalities, understanding historical influences, and challenging assumptions (p. 223). Further, they argue that significant mitigation efforts will require fundamental changes within the nested nature of economic and social structures (pp. 199, 203) at the micro, meso, and macro levels.

In “Civil Society, Social Movements, and Climate Change,” Caniglia, Brulle, and Szasz discuss climate change mobilization within society and within “international, national, and cross-national levels” (p. 235). They explain that social movements within civil society are “central actors in fostering social change” (p. 236) and that changing the collective foundation entails social movements “framing grievances” (p. 236) in relatable ways. However, the authors argue that framing alone is futile for broad scale mobilization (p. 237). They pose an important question: “how does the movement try to make its case, build its influence, and become effective enough to change what it seeks to change?” (pp. 237, 248, Table 8.3). According to the authors, the dominant viewpoint in

framing climate change efforts is ecological modernization, which focuses on “technological development, economic expansion, and the growth of environmental governance” (p. 245) in producing and lessening ecological issues. Central to this theory is the idea that all levels of society (i.e., social, economic, and governmental) can deal with the ecological problems; therefore, it is unnecessary to have “radical structural changes in industrial society” (p. 245). The authors conclude that, while there are several voices in the movement for climate change, critical pieces of information get overlooked (p. 260). They call for further research in the areas of organizational structure (p. 261), strategy and tactics, resource mobilization (p. 262), framing climate change, and the impacts of political opportunity structure.

In “Public Opinion on Climate Change,” Shwom, McCright, and Brechin, with Dunlap, Marquart-Pyatt, and Hamilton, discuss how broader social factors shape public opinion on climate change. Drawing from research on social psychology theories, they find that socially constructed individual-level characteristics impact differences in opinion on climate change (p. 282). They posit that variation in public opinion over time may be due to changes in things like “economic conditions, media discourse, new scientific findings, or even climate change itself” (p. 282). They raise an important point regarding how scholars study climate change trends. Temperature change indicators have been studied in a wide range of ways with “no standard for comparison” (p. 285). Less than a handful of studies have used multilevel modeling in their analyses. Multilevel modeling is important in determining whether respondents are non-independent (clustered), which may account for a significant portion of the variation in the outcome (Hox, 2010). They conclude by suggesting four avenues for future research: 1) “how individuals’ climate change views translate into household actions to mitigate climate change” (p. 287), 2) “the influence that climate change views have on individuals’ participation in political activities or collective action to address climate change” (p. 287), (3) the “extent to which climate change public opinion influences public policy through our democratic processes” (p. 287), and 4) the “extent to which climate change public opinion can influence corporate actions on climate change directly” (p. 289).

In their chapter, “Challenging Climate Change: The Denial Countermove-

ment,” Dunlap and McCright interrogate the denial campaigns of anthropogenic climate change. They outline the conditions, both historically and culturally, that help to explain why there is such opposition to working on a solution for climate change (p. 301). At the heart of such opposition are conservative think tanks that “spawn an enormous amount of denial information” (p. 312). Denial campaigns are further perpetuated by conservative politicians, conservative media outlets, and the recent emergence of “the denial blogosphere” (p. 317) that reaches wide audiences through social media (p. 318). The authors contend that more attention needs to be devoted to examining “the international coordination of denial activities” (p. 319) to understand the complexity and variation of the denial movement. They argue that the “time is ripe for ... sociologists” in the denial countermovement (p. 321) and suggest two key research priorities: 1) the use of theory to help explain the “emergence, structure, and impacts of organized climate change denial” (p. 320), and 2) the use of longitudinal studies to “fully capture the evolution of the structure, dynamics, and tactics of the denial countermovement” (p. 321).

Antonio and Clark discuss social theories that “criticize or formulate alternatives to the normative directions of research” (p. 334) in their chapter “The Climate Change Divide in Social Theory.” The social theories they discuss address meaningful concerns and incorporate a diverse set of methodologies (p. 334). The authors contend that theories about climate change and capitalism, taken together, “offer an extensive analysis of the workings and development of the modern economic system” (p. 352). They describe the opposing nature of the constructionist versus realist viewpoints and maintain that what is needed, in terms of acknowledging the issues and limitations of science, is “critical reflexivity” (p. 356). They argue that an essential topic for policy discussion and theoretical debate is the “question of whether global economic growth is the fundamental driver of climate change” (p. 359).

In their chapter, “Methodological Approaches for Sociological Research on Climate Change,” Marquart-Pyatt, Jorgenson, and Hamilton examine various challenges and approaches in climate change research. They argue that integrative scholarship, which is the incorporation of environmentally relevant variables to “delve further into the ‘nature, causes, and extent’” (p. 370) of connections be-

tween society and the environment, is fundamental to climate change research. They point out that integrated research should focus on how weather affects views on the climate, such as “time scales ... functional forms ... weather indicators ... and physical/social environments” (p. 373). This chapter includes examples of how space and time are relevant factors in the “integration of environmental and climate data for sociological research” (p. 369). The authors observe that SEM and multilevel modeling techniques are most appropriate for tackling “challenging issues related to the society-environment interface in general and climate change in particular” (p. 398). Further, they maintain that sociologists are well suited to face this challenge given the breadth of analytical methods that are part of their training (p. 403).

In the closing essay, Dunlap and Brulle complete the wide-ranging volume with thoughts on the future. They provide questions for future research and recommendations that will assist with the integration of sociological research on climate change. The authors contend that initiatives such as the United States Global Change Research Program and the International Social Science Council ignore the unique set of skills that social scientists bring to this important research (p. 419), and maintain that “what is needed is more sociological attention to climate change” (p. 425). They observe that social science’s role is not merely to provide advice or input to governmental organizations, but “to contribute to society’s reflexive capacity for addressing climate change” (p. 426). Their conclusion is noteworthy: that “one of the most pressing contributions our field can make is to legitimate big questions, especially the ability of the current global economic system to take the steps needed to avoid catastrophic climate change” (p. 429).

This is a landmark work in a number of ways. The work itself is first-rate and deserves a serious reading. Scholars and policy-makers would do well to take the time to work through the entire volume. Short of that, individual chapters have stand-alone value and can be of use in graduate seminars.

As brilliant as the founders and early thinkers in the discipline of sociology were, they failed to see humankind’s relationship with the environment as central (for outstanding attempts to reread classical sociological authors in envi-

ronmentally conscious ways see Foster, 1999; Moore, 2015; O'Connor, 1998). The discipline has been hobbled ever since. With the advent of environmental sociology over four decades ago (Dunlap was, and remains, one of the central figures; see Catton & Dunlap, 1978; Dunlap & Catton, 1979; Dunlap, 2008), sociology has been increasingly facing up to the challenge of acknowledging the centrality of the environment. Environmental sociologists have worked in earnest since the 1970s and have made considerable progress (for a review see Burns & Caniglia, 2017), yet many of the main journals in the discipline only publish environmental articles sporadically. It is high time for sociology to acknowledge the human–environmental interface as *the* master social problem of the Anthropocene Age. If humankind fails to address it, the others become moot by default. This volume has the potential to be a landmark work; in years to come, the discipline may look back on it as a watershed moment in the rise of environmental consciousness.

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