BOOK REVIEW ON:

"CREATING A CLIMATE FOR CHANGE: COMMUNICAT-ING CLIMATE CHANGE AND FACILITATING SOCIAL CHANGE"

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'Creating a Climate for Change: Communicating Climate Change and Facilitating Social Change', edited by Susanne Moser and Lisa Dilling, offers insights into the state of discussions and actions on climate change, as well as visions for ongoing and potential engagement. Highly instructive chapters navigate effectively through these intersections. As the book title suggests, the volume seeks to intervene in the spaces of communications, climate change, and social change in order to encourage, mobilize and assist in greater public involvement.

Given the trappings of positivist and deficit-model reasoning (articulated in the Introduction by Editors Susanne Moser and Lisa Dilling), moving into complex and non-linear webs that connect knowledge/information production and consumption are not straightforward endeavors. Carefully addressing and interrogating links between climate change and social change takes a great deal of steady meticulousness, as well as space. While individual peer-review articles can get at pieces of these interactions, this volume – even the paperback edition makes for a weighty five-hundred-plus pages – patiently utilizes the necessary word count. Analyses from the multiple viewpoints found in this book do well to move discussions forward; therefore, this project deserves great praise.

The book is organized into three main sections: 'Part I: Communicating Climate Change', 'Part II: Facilitating Social Change', and 'Part III: Creating a Climate for Change'. The first two sections follow a number of threads along those themes. While Part I appears more coherent than Part II, and the progression of chapters within Part II jumps around at times, overall this is a useful collection of intersecting concepts and case-studies

at a range of scales and emphases. The chapters in Part III by Robert Harriss (Chapter 31) and Editors Susanne Moser and Lisa Dilling (Chapter 32), then weave together the two previous sections. In total, this tome is a bold intervention into a complex set of issues, and one that I suspect will prove to be a truly seminal contribution over time.

Part I works through a number of baseline elements that shape communications on climate change. From the start in Chapter 1, Ann Bostrom and Daniel Lashof succinctly walk through key differences between weather and climate, anecdotal evidence and systematic climate research. They then discuss how the issue of climate change is 'framed'. Chapters in this section continue along similar threads: for instance Anthony Leiserowitz examines risk perception and communication in the USAmerican context through a set of associated empirical polling and survey studies (Chapter 2); Sharon Dunwoody discusses media representational practices and agenda setting, focusing on both 'roadblocks' complicating links between media communications and behavior change as well as "some relationships between media messages and cognitive, affective, or behavior outcomes that are realistic and achievable" (99) (Chapter 5); Reverend Sally Bingham explores how religious influences shape considerations of climate change, making links between environmental stewardship, interconnectedness and theology (Chapter 9); and Aaron McCright interrogates how "coordinated anti-environmental countermovement[s]" as well as "massive lobbying efforts by the American fossil fuels industry" support dissenting voices known collectively as 'climate change contrarians' (200) (Chapter 12).

A number of the chapters in this section put forward particularly novel and compelling points. For example, Susanne Moser's 'The Risk of Neglecting Emotional Responses' stands out (Chapter 3). In that chapter, Moser challenges some of the over-intellectualizing of climate change that can be found in academic writing on the topic. While it is a complex scientific and policy issue for a number of reasons, it also permeates the patterns of our everyday. Moser makes insightful as well as provocative links between engagement and messaging as she outlines how messaging affects many involved, from the investigator framing the problems to those experiencing them on the ground. Through this, she also examines why negative messages may actually induce despair and actually paralysis while the positive focus can inspire. As a second example of a stand-out contribution, Julian Agyeman, Bob Doppelt, Kathy Lynn and Halida Hatic (Chapter 7) address equity issues as they pertain to differential vulnerability and impacts from climate change (in this case within the United States). The authors effectively dispel certain 'myths' about environmental risk and poverty, and call into question 'traditional' ways of defining environmental problems. They call for re-framing in ways that inspire active trust, empower stakeholders, and enroll participation at local and community levels. They comment, "The emerging climate-justice movement shifts the discursive framework of climate change from a scientific-technical debate to one about ethics focused on human rights and justice" (121).

These chapters in Part I bridge effectively to content in chapters in Part II, focused primarily on 'Facilitating Social Change'. Part II is much more varied in its treatment of the stated theme, and can be thought of also in roughly three sub-sections. The first grouping addresses issues of individual consumption and behavioral change. As an example, John Tribbia writes in 'Stuck in the Slow Lane of Behavior Change?' about the many factors and challenges shaping transport choices (and their impacts), focused on his community of Boulder, Colorado (Chapter 15). Also, Sarah Rabkin and David Gershon discuss the successes and challenges of the 'Low Carb Diet', in reducing carbon dioxide emissions in households, through a community case study in Portland, Oregon (Chapter 19). A second sub-set focuses on political economics. For instance, Keith James, April Smith and Bob Doppelt examine 'drivers' and 'resistors' to organizational change at multiple scales as they related to greenhouse gas (GHG) emissions (Chapter 20). This contribution intersects productively with the chapter by Vicky Arroyo and Benjamin Preston on 'Business Leadership and Communication' (Chapter 21) as well as John Atcheson's elucidation of 'The Market as Messenger' (Chapter 22). Surprisingly, Atcheson begins, "At first blush, a chapter on economic and fiscal tools would seem to be out of place in a book about communicating climate change..." (339) I would argue the opposite: given the strength of influence that carbon based industry has in shaping US climate policy and politics (as alluded to in Aaron McCright's Chapter 12), this kind of intervention in the discussion - along with further attention to political economic influences – actually needs greater prominence.

In fact, a critique of this grouping of chapters is that the actually variegated role of 'business' was not unpacked and interrogated in much detail. In the Arroyo and Preston chapter, discussions could have benefited from specific analyses of fossil fuel industry players. Instead, fossil fuel giant British Petroleum is only briefly mentioned (leaving out the other two big actors Exxon Mobil and Royal Dutch Shell) in terms of the measures, achievements and cost savings from their company GHG emissions reductions. Now in 2008, while oil prices are skyrocketing past \$120 a barrel and gasoline prices at the pump are soaring, and while the \$7-10 billion first-quarter profits of these big three fossil fuel companies beckon for ongoing and particular scrutiny. While everything does count, associated power mobilized through messaging, communications and framing of the climate change issue by companies like these arguably dwarf the influence as to whether the hypothetical USAmerican drives or bicycles to work.

The third group in Part II deals primarily with policy, from cities to states and regions to federal levels. For example, in Chapter 24 Abby Young describes the decade and a half of tireless work that ICLEI-Local Governments for Sustainability has carried out in their Cities for Climate Protection campaign. The chapter works through many and various examples of local government actions – such as the installment of more energy efficient light-emitting diodes (LED) traffic signals in Philadelphia – that link the global-scale issue to everyday activities. Young also links such initiatives to examples of leadership, such as that exhibited at the 2005 Mayors' Agreement on Global Warming where hundreds of Mayors representing their communities have signed on to meet the targets of the Kyoto Protocol in each of their cities. As recent research has noted that approximately three-quarters of GHG emissions from human activities come from cities, this kind of work as critical as it has ever been. Reasons like these make this sub-section of Part II a particularly important contribution to the volume.

Altogether, the value of this book – through the coordinated work of the Editors and chapter authors - is enormous. Appealing to a wide range of audiences and readers, this book raises many questions worth ongoing pursuit, refinement, interrogation and reassessment while highlighting reasons to hope. The importance of this intervention cannot be underestimated, in my view. Since the three-day workshop (they describe in the Introduction) at the National Center for Atmospheric Research in June 2004 that spawned this edited collection, much has happened. A number of subsequent events are captured in the various chapters. For example, Julian Agyeman, Bob Doppelt, Kathy Lynn and Halida Hatic (Chapter 7) discuss the influence of Hurricanes Katrina and Rita in 2005. The Editors themselves have noted, "Over the course of the project that culminated in this book, the landscape of climate change science, communication and related societal responses has changed remarkably - both in the United States and elsewhere" (491). Nonetheless, this book is a great antidote for those (like me) who can grow weary from overly academic and insular echo chambers of alienating language that ironically aims to bridge communication gaps. All contributors seem to 'keep their eyes on the prize' as they provide valuable insights and bridges to multiple audiences and communities. Moreover, there is obviously a lot of work that has been put into connecting themes together throughout the volume, most apparent through cross-referencing in each chapter to others. In so doing, the Editors do a great job of getting beyond the "generic prescription" of "better communication" (3), to help enhance actions that grapple with various facets of the climate challenge.

That said, the Editors acknowledge and prefigure some of the book's inevitable gaps. They themselves mention that the book cannot cover everything. In the Introduction, Susanne Moser and Lisa Dilling write, "...some readers will find particular voices and insights missing such as that of federal government policy-makers and communicators, discussions of specific policy approaches and technological solutions, or – given the global scope of the problem – more on non-US activities. Others will look fore a greater focus on adaptation..." (20). This all strikes me as true. However, for the potentially international audience of the 'International Journal of Sustainability Communications' reading this now, it is necessary to mention that attention is largely, and nearly solely, paid to the United States context.

In addition, I felt that there are a few other places where the volume could have been improved. The contributions could have benefited from more (self) critical reflections addressing how normative, ethical and philosophical undercurrents shaped their analysis. By that I mean, what kinds of actions would they determine perhaps more optimal than others, and why? What kinds of involvement are preferable over others, and why? In Chapter 32, Moser and Dilling themselves commented, "The deeper the sought social change, the longer it will take to bring about. There is an unresolved tension running through our chapters regarding how deep societal changes in response to climate change need be, and we don't try to resolve it here..." (507). Julian Agyeman, Bob Doppelt, Kathy Lynn and Halida Hatic (Chapter 7), David Meyer (Chapter 28) and Dale Jamieson (Chapter 30) do each deal with these kinds of questions to varying extents, but more consistent attention throughout the volume was needed. I would have liked to have seen some more textured treatment of what kinds of actions may be more desirable and/or beneficial over short-,

medium-, and long-term time scales and why. In Chapter 32, Moser and Dilling refer to the importance of "advancing our understanding of resistance and barriers to climate action..." (511). However, in the last decades in which climate change has been part of the public and policy discourse we have already experienced the effects of some 'bad' actions. Look no further than the deployment of biofuels and the displacement of agricultural lands to grow food, increased (rather than decreased) GHG emissions from production through consumption, and so on. The volume would have benefited from more nuanced treatment of the kinds of climate actions and their differential impacts over time and space.

Related to this, I would have liked to have seen some textured assessments of the basic question, 'do the public need be concerned about climate change for action to happen?' Perhaps Keith James, April Smith and Bob Doppelt could have incorporated this into their 'force-field model of organizational change' somehow (Chapter 20), or Abbey Tennis could have commented on this in her assessment of Northeast United States 'leading the way on climate change action' (Chapter 26). It would have been productive to make explicit what seemed to be some linear thinking in the contributions that public/social pressure was a pre-requisite for significant change. For instance, what if a the next US president championed a 2009 federal carbon tax to provide large funding sources for massive research and development that would lead to energy mode switching to renewables from fossil fuels, development and implementation of carbon capture and storage and widespread dissemination of air capture of carbon dioxide technologies? Would this need social change ingredients, or could such significant shift take place irrespective of expressed public concern? The fifth declaration in the Boulder Manifesto – as articulated by Robert Harriss – claims, "Climate change communicators and change agents will embody the change, demonstrating that personal climate-friendly lifestyles can eventually lead to change in the system as a whole" (488). Might we not need such change agents, if we can skip to macro-scale significant system changes?

These small critiques aside, this edited book ultimately represents a leap forward in pursuits that grapple with the challenges communicating climate change, and facilitating social change. As Moser and Dilling shrewdly state, "despite serious signs emerging from the climate science, for us, this is *not* the time for hopelessness or despair, but a time for deep concern, creative engagement, and informed committed and forward-looking action" (508). This volume is an inspiration for the re-doubling of efforts and to help us to continue to move forward. Therefore, I strongly recommend this book to anyone with an interest in critical engagement at the interstices of climate change communication and social change.