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Communicating Climate Change and Motivating Civic Action: Renewing, Activating, and Building Democracies

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Introduction

Governments are critical for bringing about the transition to a more sustainable human interaction with the environment as they set priorities and policies and may model new behavior. Yet, civil society is also indispensable in bringing about change. It is no small challenge to communicate effectively in order to engage civil society in this task. Many argue that the federal governments of North America are failing to provide needed leadership on climate change. In the absence of committed top-level leadership, bottom-up pressure is building to force policy changes at the federal level. This volume provides convincing evidence of growing action on climate change at various levels and in different sectors of North America (Farrell and Hanemann, this volume; Gore and Robinson, this volume; Rabe, this volume; Selin and VanDeveer, this volume). At the same time, a social movement for climate protection is beginning to emerge (Moser 2007b).

Broad sections of U.S. and Canadian societies, however, are not yet fully on board regarding the need for comprehensive climate change action and meaningful behavioral changes (Rabe, this volume; Stoett, this volume). In Mexico, civic mobilization around climate change has been barely evident at all in the early years of the twenty-first century (Pulver, this volume). This chapter examines civic mobilization around climate change primarily in the United States, and to a lesser extent in Canada and Mexico, in relation to climate governance efforts in public and private sectors from local to international levels. It focuses on how greater civic engagement on climate change can be fostered. Civil society can play at least two critical roles in climate change governance: (1) it can mobilize to push for policy changes at any level of government, and (2) it may enact behavioral changes consistent with needed mitigation and adaptation strategies.

If North American societies are to engage in these two types of civic responsibilities, however, communicators of climate change must go beyond merely conveying

climate change knowledge and more effectively encourage and enable individuals to take part in the societal transformation necessary to address climate change successfully (Moser and Dilling 2004, 2007a). Climate communicators have not yet fully taken on this challenge, but climate change presents an opportunity to renew U.S. society and democracy with greater civic engagement, build enduring democratic institutions in Mexico, and activate civic engagement more fully in Canada. The next section explores and compares public opinions about climate change across North America, demonstrating that deeper civic engagement has not yet been achieved in any of the three countries.

Public Opinions about Global Warming in the United States, Canada, and Mexico

Expressing concern about climate change and general support for government and industry actions, while indicative and encouraging, is very different from actively engaging in civic action. Understanding public opinions and attitudes is important, however, to increase civic engagement. In the United States, according to a 2007 national poll, 72 percent of Americans are convinced that global warming is not just a problem of the future, but happening now, and a majority (57 percent) think it is largely caused by human activities (Leiserowitz 2007). Other polls have found that Americans feel more confident than ever in their understanding of the basics of global warming, yet only 22 percent say they understand the issue "very well." Questions testing their knowledge on the science or politics reveal that individual knowledge is superficial at best (Nisbet and Myers 2007).

After several years of expanding media coverage, concern about climate change among Americans was slightly lower in 2008 than it was in 2007: 37 percent in 2008 said they personally worried a great deal about global warming, compared with 41 percent in 2007. Public concern in both these years was also only a few percentage points higher than in 1989, with climate change ranking ninth among twelve local and global environmental problems (Carroll 2007; Jones 2008). Importantly, American opinions differ markedly along party lines. In 2007, Democrats (75 percent) exhibited greater personal worry about global warming than Independents (59 percent) and Republicans (34 percent). Democrats are also more convinced than Republicans that climate change will affect them and their children, and they are more likely than Republicans to view the scientific debate over human-induced climate change as settled (ABC News/TIME/Stanford University 2006; Brewer 2005a, 2005b Carroll 2007; Saad 2006, 2007).

Nonetheless, between two-thirds and four-fifths of Americans support a wide range of policy measures to reduce greenhouse gas emissions (PIPA 2005). The American public specifically supports measures that mandate emission reductions

by industry and automakers, and it generally favors incentives and rebates over increased taxes. Americans, however, are resistant to any regulations that would directly affect their personal choices by increasing costs, restricting options, or demanding personal behavior changes (GfK Roper Public Affairs and Media 2007). As repeated U.S. election campaigns show, global warming and related energy-policy matters have not by any significant measure entered electoral debate or featured strongly in American voting decisions. A 2007 survey indicated that differences on energy and climate would not deeply affect Americans' choices among candidates in the 2008 presidential election (Leiserowitz 2007). Thus, there is a gap between concern about global warming and personal behavior.

A 2007 multinational poll found that equal percentages of Americans and Canadians (89 percent in both countries) had heard either "a great deal" or "at least some" about global warming, while only 73 percent of Mexicans shared this same level of familiarity, with nearly another quarter of Mexican respondents having heard "not so much" (BBC World Service 2007). The poll also found that while a majority of Americans (71 percent) thought human activity constitutes a "significant cause of global warming," more Canadians (77 percent) and even more Mexicans (94 percent) believed so. In 2007, 77 percent of Canadians were convinced that global warming was real, and 70 percent believed that the science behind human-induced climate change was "true" (Angus Reid Strategies 2007b). GlobeScan polls in 2000, 2003, and 2006 (asking similar questions in each survey year) found increasing numbers of Canadians and Americans viewing climate change as a "very serious problem," and overall higher, but slightly declining percentages of Mexicans agreeing (GlobeScan 2006; Leiserowitz 2008). Consistent with these judgments of seriousness, Mexicans (83 percent) are more likely than Canadians (72 percent) and Americans (59 percent) to state that it is "necessary to take major action very soon" to address global warming (BBC World Service 2007).

Climate change has risen in importance to Canadians over time. Canadians broadly support fulfilling Canada's Kyoto commitments (Stoett, this volume). While they favor incentive approaches to reducing emissions such as improving energy efficiency and conservation, they also widely reject policies that would restrict car travel (Angus Reid Strategies 2007a). However, Canadians vary in the level of action they take with respect to their global warming beliefs: surveyor-identified *skeptics* (23 percent) don't believe in global warming and are completely opposed to action; *agnostics* (16 percent), not having made up their mind on global warming one way or the other, tend to not act consciously in climate-friendly ways, nor do *converts* (22 percent), but they feel guilty about their lack of environmentally conscious behavior. *Believers* (22 percent) are far more environmentally conscious and behave accordingly, and *activists* (18 percent) act most environmentally conscious

and fervently try to convert others to do the same (Angus Reid Strategies 2007c). This survey suggests that about six out of ten Canadians either doubt the need for action and/or do not act on their beliefs for action.

Similarly detailed polling data on Mexican attitudes and beliefs are not available (and cross-national comparisons of survey data from separate polls are inherently difficult due to differences in methodologies and the questions asked). The comparatively low level of economic development in Mexico, however, gives Mexicans a far smaller per capita carbon footprint than their North American neighbors. Nevertheless, the greater vulnerability of many Mexicans to developing and possible impacts of climate change compared to Americans and Canadians could be a reason for them to actively engage on the issue. However, as Pulver (this volume) describes, the Mexican public has yet to do so.

The next section lays out why climate change communication, if it is to have a constructive role in democratic governance, must accomplish more than just informing and alerting a citizenry to the reality of climate change (which it has largely accomplished in the United States and Canada) and explaining the science, its causes, and its implications (which it has done, achieving uneven results). Effective communication as a tool and force of democracy would be considered "effective" if it brought about civic engagement, both in the sense of political activism and behavioral change (Moser 2007a).

Communication and Civic Action

Communication plays an essential role in mobilizing and sustaining civic action. It expresses and supports the fundamental work of civic engagement in a democracy. Interestingly, *communication* and *community* share the same etymological root. "To communicate" derives from a Latin word that means "to impart," "to share," and "to make common"; in turn, the word "common" derives from the two roots *com* "together" and *munia* "public duties" (Harper 2001). This etymology links communication closely to the ideal of civic action. Practically, communication and community can also mutually foster each other, whereas unsuccessful communication can alienate individuals from acting in the public sphere and hence completely fail to be an instrument of citizenship. Thus, creatively designed and skillfully executed communication can be declared effective if it serves as a tool for building and sustaining the community that acts on a *res publica* (a matter of public interest) such as climate change, and in helping individuals create, and feel part of, a civic community.

The civic movement literature distinguishes "being a citizen," that is, in a narrow sense merely being an individual member of a city, country, or otherwise defined

community, from "participating in civic action." The former may be quite divorced from public and political life, relegated to being a self-interested individual acting on his or her own needs and wants, consuming goods and services, and otherwise ensuring that these personal desires are met (through complaints, advocacy, volunteering, or voting). In this capacity, people can help reduce their energy use and reduce the use of those technologies that produce large amounts of greenhouse gas emissions. The role of communication in this case would be to foster individual behavioral changes. Individuals engaging in civic action, by contrast, use their actions to express commitment to, and awareness and support of, a larger common goal.

Civic action is public action by members of a community in response to a public matter of great concern. "'Public work' is work done by ordinary people that builds and sustains basic public goods and resources—what used to be called 'our commonwealth'" (Boyte and Kari 1996). In that sense, public work contributes to sustaining the moral fabric that is at the heart of "community." The role of communication in such "public work" focuses on how the issue of concern is framed; how its causes, implications, and solutions are explained; how dialogue occurs; and how it draws on and feeds social capital (Daniel, Schwier, and McCalla 2003). As a means to create common cause and understanding, communication makes connections across issues and thus helps build a public that is engaged on climate change.

Common Obstacles to Civic Engagement on Climate Change

For communication to achieve these objectives is no small order. It is difficult enough to communicate the unwieldy problem of global climate change to various lay publics; it is extraordinarily difficult to overcome the lethargy, habits of thought and action, and institutional arrangements that underlie current emissions-generating behaviors. In the United States, individuals frequently must overcome their widespread disenfranchisement from the political process. In Canada, where civic engagement may be considered higher than in the United States, if measured by voter turnout in elections, individuals may not see the need for other forms of civic engagement beyond voting, leaving climate change solutions to technical experts (Henderson 2008). In Mexico, the challenge of political engagement may be more fundamental: civic skills building, spreading of democratic norms, overcoming poverty, and fostering basic education.

In short, there are internal psychological and cognitive processes that may prevent an individual from engaging on this issue, as well as social, political, economic, and other structural external barriers to such engagement. These barriers are discussed further next.

Psychological-Cognitive Barriers

Processing of climate change information may undermine the motivation of individuals to engage on the issue if they have emotional responses to it that are demotivating. These responses could include: a sense of being powerless and overwhelmed; denial; numbing; feeling exempt from the threat; blame; wishful thinking or rationalization that the problem will be resolved by experts; displacement of attention on other problems; apathy; fatalism; or other forms of "capitulatory imagination" (Immerwahr 1999; Loeb 2004). These types of cognitive and emotional responses are particularly common in response to issues which are scary, ill-understood, difficult to control, overwhelming, and in which people are complicit, such as global climate change (Moser 2007c).

Common cognitive barriers to more active personal engagement on climate change include: not understanding the issue, the causes, the relevance of climate change impacts to one's life, or the possible solutions; misunderstanding, confusion, or disagreement with the actions, policies, or strategies proposed by advocates or policymakers to address climate change; an unattractive future vision painted in people's imagination (often one of doom); and lack of resonance with the framing and language in which climate change is being discussed (synthesized in Moser and Dilling 2007b).

Social Barriers

Individuals are embedded in social networks, hold social identities, engage in social interactions, and adhere in varying degrees to social norms that circumscribe appropriate or inappropriate behavior. If engaging in civic action on climate change portrays a particular social identity, produces a social stigma, or reflects social norms that are in conflict with people's desired identity and accepted norms, they are unlikely to engage in this particular type of civic action. If civic engagement takes "too much" time or resources, and is inconvenient or too demanding given other daily concerns and competing obligations, even people sympathetic to the cause may not get involved. Finally, individuals—who are deeply embedded in society through socialization, institutions, modern-day habitual activities, or the provision of basic needs—may not question or see alternatives to common emission-generating behaviors, and may resist calls for alternative behaviors (Tribbia 2007).

Political Barriers

Individuals may be generally disinterested in political matters, prefer to leave political activism to others, be genuinely unfamiliar with forms of civic engagement, and/or feel deeply disenfranchised from the political process. Some may hold a belief that government or industry or some other "other" will find a technological fix or policy

solution (political transference). Others may not believe that existing institutions are failing in their responsibilities, thus seeing no need for activism, especially if it is inconvenient. A related response is blaming others for the problem and/or projecting responsibility for remedial action onto them. Still others, wedded to tradition and habit, may refuse to do anything different or new. Scientific uncertainty about the causes, urgency, or solutions of a problem can serve as a convenient rationale to hold on to the status quo (e.g., Klandermans and Oegema 1987; Leighley 1995; Macnaghten and Jacobs 1997).

Other Barriers

Even if the internal psycho-cognitive and external social and political barriers could be overcome, a person may still face structural barriers. These include the lack of a convenient or economically feasible alternative technology, existing laws and regulations, lack of public infrastructure, and existing political institutions and electoral processes that are heavily controlled by vested interests. Information channels and communication infrastructure may also hinder engagement, even in the information age. Heavy filters against the overabundance of information, declining newspaper readership, continued reliance on television as the main news source (especially for Americans), and increasing reliance on, and high selectivity among, internet news sources can limit depth of coverage and understanding of any issue (The Pew Research Center for the People and the Press 2004).

   Moreover, the political economy of the media industry, with its increasing concentration of media ownership and consequent narrowing of the range of diversity of voices heard in mass communication channels, frequently does not offer individuals the breadth of views that may allow them to develop a well-informed opinion. More typically, people exist in rather homophilous environments: because of individuals' similarity in sociodemographic backgrounds, they tend to have access to similar kinds of information, issue framings, and so on, and therefore are more likely to communicate with each other but are rather isolated from other equally homophilous sections of society (Mcpherson, Smith-Lovin, and Cook 2001; Rogers 2003).

Communication Strategies to Mobilize Civic Action on Climate Change

Understanding major barriers to civic engagement can give communication efforts a clearer focus and infuse them with a longer "shelf life" than the average ten-second sound bite or ten-week outreach campaign. This section focuses on specific communication strategies that build on a recognition of these barriers to engagement. In particular, it highlights elements of communication strategies that focus both on elevating the motivation to engage and lowering the barriers to doing so.

Audience Choice

Best practice in communication begins with consciously and strategically selecting an audience and understanding that audience's mental models and level of understanding of climate change as well as its interests, values, and concerns. This deeper understanding helps communicators make connections to issues already of concern to a given audience and to frame climate change in a language that resonates.

The strategic selection of audiences reflects the fact that not all audiences have equal influence over particular changes that must be made to reduce emissions. Even individuals inclined to use non-CO_2-emitting energy sources, or more energy-efficient transportation or appliances, will be hindered in acting on their inclination if their preferred choices are not available. Rather than engaging in a massive social marketing campaign to change travel or purchasing behavior, the more strategic campaign would select those with direct influence over regional transportation planning, vehicle emission standards, or energy efficiency standards of appliances, while only secondarily fostering market demand for these alternatives. This simplistic example serves to illustrate the basic rule: those targeted for a particular type of civic engagement must be in the position to actually effect the desired change.

Framing Climate Change

Naming and framing an issue is one of the additional fundamental challenges for communicators, especially for an "invisible" global problem such as climate change. Frames are mental structures that influence perspectives. Expressed and suggested through language, images, gestures, and the messengers who use them, such frames shape our goals and plans as well as the way we act and what we think are good or bad outcomes of our actions (Lakoff 2004). Audience-specific communication thus means making global climate change "local" in more than the geographic sense. While people generally relate better to the things they can directly feel, experience, or see, making global warming "local" means reasonably connecting it with anything that is currently or persistently salient to them. Every chosen frame also entails a certain set of solutions. For example, climate change framed as an energy problem (a common frame used in Canada) primarily engages those providing energy, those setting energy policy, and those advocating for various energy choices.

Climate change as a moral problem, by contrast, brings in a different set of players, such as spokespeople claiming high moral standing and people of faith. While their practical solutions may still focus on energy questions, their motivation and possibly their deeper "solutions" might include moral commitment, renewal, or reorientation. This is an emerging framing among faith communities, such as factions of the Evangelical church in the United States, including the Interfaith Climate

Change Network, Web of Creation, and the Eco-Justice Programs of the National Council of Churches of Christ. A more moral framing could also be a possibility in Mexico if the liberation theology wing of the Catholic Church were to take up climate change as a cause for mobilization (Norget 1997).

Such a framing would not necessarily resonate with business leaders, whose primary concern is with the bottom line, investments, markets, and competitiveness in domestic and international economies. Local and state governments, students, or low-income communities in less-developed Mexico or in the poorer U.S. and Canadian cities would have still different concerns, understandings, and values that effective communication must tap into (Agyeman, Doppelt, Lynn, et al. 2007). Different audiences need to be addressed in audience-specific ways that match frame, message content, and language with their specific information needs, preexisting knowledge, and concerns. Frames also are critical for sustaining civic engagement through challenging periods; crossing social divides, thereby aiding the forming of coalitions; and assisting in the deeper societal transformation ultimately needed to address this immense challenge (Moser 2007a).

The task of framing and reframing, as an issue evolves in public consciousness and the political process, involves identifying those frame(s) that promise to be most powerful to a particular group of social actors. Frames are strategic tools of social movements and countermovements precisely because of their power to mobilize some actors while disengaging or disregarding others. That is, they can be employed to either unite factions or split and create opposition between them (Goffman 1974; Lakoff 2004). The history of public debate of climate change in the United States (but more recently also in Europe and Australia), in which climate contrarians have deeply influenced the framing and discussion of the issue, attests to the power of framing and the power of access to media channels that promote these frames (McCright and Dunlap 2001, 2003).

In the early years of the twenty-first century, communication of climate change in the United States is witnessing an important transition, where the issue is no longer just framed as an "environmental" issue but also as a social, economic, technological, educational, security, and moral issue. For example, the Apollo Alliance, invoking the compelling national focus on putting the first man on the moon, envisions a future of clean energy; technological, economic, and moral leadership; and secure employment. Leaders in the environmental justice community who have taken up the climate issue tend to focus on fairness, health, safety, and well-being. Al Gore's film, *An Inconvenient Truth*, prominently framed global warming as a moral issue, and a behavior change campaign launched in early 2008 by his Alliance for Climate Protection evokes an optimistic, "can do" attitude, emphasizing the power in numbers and business opportunities in acting on climate change.

These alternative frames help individuals, organizations, and communities already active on other issues see how their work might be impacted by climate change. It also helps people not yet concerned with (or skeptical of) global warming find common cause and ground. In short, not every conversation must begin or end with climate. Instead, the climate change conversation can be entered through a myriad of doors.

Messenger Choice

To reach audiences heretofore unengaged, it is also important to select the messenger(s) carefully. In the United States, scientists, environmental NGOs, contrarians, and the media have dominated climate change communication in the past, resulting in high levels of problem awareness, but also in a perception of global warming as a largely technical/scientific, (still) uncertain, and controversial environmental issue. While one may argue that scientists must remain important communicators of climate change for the foreseeable future, there is an equally legitimate argument for bringing a greater diversity of people into the needed discourse, and thereby to reach into sections of civic society yet to be engaged, crossing important social divides. To reach these goals, the choice of messenger is a critical strategic decision. Effective communication matches messengers with the message and the audience.

In the first match, it is critical to understand messengers as part of the framing: Former Director of the Central Intelligence Agency James Woolsey talking about the need to reduce oil consumption as a matter of national security (while also benefiting the climate) is an example of matching messenger with message content and frame (Warriors and Heroes 2005). Messengers also need to be credible to the audience being addressed. The CEOs of companies involved in the Pew Center for Global Climate Change's Business Environmental Leadership Council are more persuasive spokespeople to other business leaders because they are like them and understand the pressures and issues CEOs have to deal with on a daily basis. Such "people like us" (or PLUs) are important for an audience's personal comfort, identity, and group-internal norms and cohesion. Often, PLUs (especially if the audience knows and trusts them personally) have greater credibility and legitimacy than someone who does not know an audience's circumstances as well.

Beyond Information and Emotional Appeals to Create Urgency

To overcome the psychological and cognitive barriers to engagement, communicators must be critically aware of the role of information and emotions in behavior change. While a minimum amount of information is necessary to understand a problem and its causes, implications, and solutions, information and understanding

by itself typically do not suffice to motivate behavioral change or civic engagement (Moser and Dilling 2007b; O'Connor, Bord and Fisher 1999). In some instances, simply learning more about an issue can lead individuals to lower their concern or sense of responsibility for it and seduce them to believe that they have actually "done something" (Kellstedt, Zahran and Vedlitz 2008; Rabkin and Gershon 2007). Thus, even the most well-intended information dissemination effort can become a dead end. Efforts such as the speaker trainings through Al Gore's Climate Project, or the 2008 nationwide educational effort Focus the Nation, are hugely ambitious, but these efforts are primarily focused on helping people to more effectively disseminate information and to educate a broader segment of the American population. Efforts such as these, if they are to contribute to a sea change in American thinking and action, must not end with these first-order goals but serve as springboards for deeper behavioral and political engagement.

Similarly, trying to get people to "care more" about an issue through appeals to fear or guilt can backfire and produce the opposite results (that is, denial, numbing, and disengagement) unless a series of conditions are met that actually enable people to translate their concern and fear into appropriate actions that reduce the danger (Moser 2007a). A communication strategy that does not very quickly tell people that there are feasible solutions with which to begin to address the problem, and what specific and appropriate actions individuals can take to help, is more likely to hinder than help the outreach and engagement effort. Moreover, because people feel manipulated and numbed by exposure to overtly guilt- or fear-evoking messages, emotional appeals are frequently not enough to break through disinterest, apathy, and information filters. Surprise and novelty are more promising.

Thus, rather than inundate audiences with more information or scary images of a gloom-and-doom future, it is critical now for communicators to constructively engage and support individuals and communities by creating a sense of feasibility, collectivity, and urgency arising from fact, experience, common sense, and a moral sense of responsibility. Such messages—several of which are illustrated in this volume's chapters —are only beginning to emerge in 2007–2008 and tend to include the following elements:

· Global warming is not a future problem but a present challenge (illustrated through already observed climatic changes and impacts on regional and local levels).
· A concerted collective effort is needed to address global warming, and many people, communities, and businesses are already involved.
· Any delay now makes later solutions more difficult and expensive (for example, illustrated with ecosystems that cannot adapt, or social systems close to a threshold beyond which they may not be able to adapt).

• Examples are available of people and communities who have taken first steps and actually saved energy and money, improved their quality of life, or enhanced their business operations or local economies (e.g., through less traffic congestion, cleaner air).
• We already have models (and metaphors) for acting responsibly and reasonably in our long-term interest without sacrificing terribly in the present (saving for retirement or college, insurance, etc.).

Scientific Confidence, Practical Solutions, and Hope

Looking over the past twenty years of research, what is remarkable is not how much remains uncertain, but how strong the scientific consensus on climate change has actually grown. At the same time, a public impression remains—fed by climate contrarians and common "balancing" media practices—that there still is scientific controversy over the basic notion of human-caused climate change (ABC News/TIME/Stanford University 2006; Leiserowitz 2007). Scientists themselves share in the responsibility for this situation, partly because of their common emphasis on remaining uncertainties, and partly because of their point-by-point engagement with climate contrarians. There is good reason to do so—misinformation should never be left standing unchallenged, and opportunities to educate the public should not be missed. But this pattern has left the proenvironmental and scientific side on the defensive, as it is far more powerful to dictate the frame than to respond to someone else's (Lakoff 2004).

To the extent communicators continue to focus on persuading the public of climate science, three tasks stand out to strengthen public resolve. First, scientists and educators must continue to convey the state of the science and how the confidence in scientific understanding of climate change has grown over time. Second, they must never overstate the scientific confidence with which aspects of climate change are known. But to retain credibility while conveying confidence, communicators should lead with what is most certain, and discuss remaining uncertainties in light of what is well understood.

Typically, people respond constructively to uncertainty (because they live with uncertainty all the time!) when they have some bearings that help them navigate unknown territory. In fact, it is an unsubstantiated claim that people need to have certainty in important matters before they can act (such as in decisions to go to war, invest in the stock market, or act on medical diagnoses). Finally, communicators should provide context for the evolving scientific understanding of climate change, that is, that it is the nature of science to always push back the frontiers of the unknown, and in the process, to stumble upon findings that require revisions of what was previously thought to be known.

It is, however, at least as important to communicate clearly established facts, the risks of not acting, and which solutions are already available (while even bigger answers and solutions are being developed). As the polls cited above suggest, most Americans, Canadians, and Mexicans are already convinced that climate change is real, serious, and already underway, even if this belief is not very solid or anchored in deep scientific understanding of the issue (ABC News/TIME/Stanford University Press 2006). Once people are engaged and realize the magnitude of challenge that climate change presents, however, they instinctively want to know what can be done, and what *they* can do. People want practical solutions. Those inclined to engage in civic action may be particularly predisposed to taking or supporting personal actions, but also to supporting larger political efforts.

The polls also suggest that most people do not know which solutions are most useful, available, feasible, or which are to be prioritized, and many cannot see their own role in tackling the problem. Moreover, polls show that distant policy solutions are preferred over personally enacted or felt ones. Thus, the communication challenge is to answer the question of what any one person can do, but also how such individual actions are part of a larger collective effort. Importantly, communication must counter the sense of futility and powerlessness individuals experience vis-à-vis this global problem through practical solutions, help and support from others, encouragement, and empowerment (DeYoung 2000; Gärling et al. 2003; Kaplan 2000).

At the same time, communicators must not mislead their audiences: larger policy and structural changes are also needed. An appeal to the deeply held value of "everyone doing their part" is maybe the most direct effort to counter the temptation of free-riding in this collective-action challenge. Tapping into people's desires for a better future, their social identities and aspirations, and cultural values that promote individual and collective action and engagement for the greater good (e.g., ingenuity, responsibility, stewardship, being a good team player, and leadership) can all increase people's motivation besides the more instrumental reasons (such as personal economic gain, competitiveness, legal compliance, and so on).

Finally, to counter overly pessimistic portrayals of the future and the pervasive sense of futility, individuals need a sense of real hope—not an overly optimistic, false promise of a future that is most likely unattainable, but constructive encouragement to work toward a future worth fighting for. No assumption is made here that any collection of individuals would want the same future or that they would be inspired by the same thing. Frequently, however, examples of what others are already doing successfully and constructive communal engagement in an action can generate hope for a better future—one in which individuals are part of active, engaged communities working toward livable, enjoyable, and fulfilling lives.

New Communication Forums

Mass communication channels bear the clear advantage of reaching large numbers of people, and fast. Getting media coverage is for many who communicate on climate change an unsurpassed measure of success, garnering visibility, attention, and the ability to reach policymakers, who claim to pay close attention to the news. In the increasingly fast-paced political economy of today's media landscape, where science reporting is declining, reporting staff is cut, and consequently the extent and depth of climate news coverage is threatened, it can be a jackpot experience to get a thirty-second clip on the evening news or a brief quote in the morning paper (Project for Excellence in Journalism 2006; Readership Institute 2002). Communicators cannot afford to abandon such communication channels and opportunities.

"Retail" communication does not benefit from the economy of scale of mass communication channels, nor does it have the same level of visibility. Yet, while mass media can help raise awareness and set social and political agendas (and thus connect to activities in other governance networks), they are never as persuasive and engaging as one-on-one conversations. Communication in smaller groups, through existing networks and forums, and where feasible in new groupings, will be a critical element to foster greater civic engagement. Such smaller forums offer the opportunity for communicators, and in fact all involved in the dialogue, to help individuals stay engaged on an easily overwhelming task, sort through complex issues, understand difficult trade-offs, and change ingrained habitual thoughts and behaviors. Thus, communicators would be well advised to identify such smaller forums to fully engage as many sources of social support as possible.

There is good reason why the most successful behavior change programs (e.g., Alcoholics Anonymous, Weight Watchers and various social marketing campaigns) are group-based. Typically, interpersonal and small-group dialogue can address people's needs much better than mass communication received in the privacy (and isolation) of one's living room. Neighborhood-based eco-teams, green-living projects on campuses, science cafés, and church-based discussion and support groups illustrate these insights, and many such examples exist already across North America. In such small settings, the power of social norms, accountability, identity, and personal ties is brought to bear on the barriers and resistance to change. They also allow individuals to be acknowledged and appreciated for their efforts, to unfurl the influence of role models, and to provide very immediate positive feedback on and social support for one's actions.

A Compelling Positive Vision

Finally, most news about climate change in the media, from scientists and environmental advocates, involves projections of frightening futures, possible doom for

treasured environments and species, and mental images of disaster and havoc. Frequently used phrases like "climate chaos" or "climate crisis" are suggestive of this tendency. Scenarios of our global climate future are indeed very difficult to face, and consequently, many would rather not confront them. While empirical studies of U.S. or other audiences' emotional responses to the frequently scary images evoked in the news are scarce, anecdotal evidence suggests that many Americans actively avoid thinking about these possible climate futures because they are too frightening. An added challenge is that citizens alive today are unlikely to see greenhouse gas concentrations in the atmosphere return to preindustrial levels, or even to 2005 levels, even with a concerted global mitigation effort. This and the next generation may well become witness to a deteriorated climate for many regions of the world.

Communicators face the challenging task of giving a realistic assessment of the challenges ahead while trying to avoid doom-and-gloom or false hopes. The time lags built into our social and climate systems require that communicators think hard about what success would look like, and how to sustain civic engagement when positive feedback is not forthcoming from an unforgiving atmosphere. Defining a positive vision of a worthwhile future must therefore become a key focus of communication, outreach, and civic engagement efforts in coming years, including defining easily identifiable measures of progress (Olson 1995). Communicators must convey these indicators of forward achievement just as much—and maybe even more so—than what is wrong or not yet happening. Thus, pointing to positive examples and on-the-ground successes in other communities, states, and sectors (e.g., the stories emerging from many of the chapters in this book) will serve as the milestones that people need to hear. While it is unrealistic to expect that citizens will stay focused on climate (or any other issue) through the ups and downs of issue attention cycles, a vision of a compelling positive future will be essential as a compass through challenging times (Downs 1972).

Conclusion

In closing, I return from the challenge of linking communication with civic engagement to the opportunity embedded in climate change. If climate change communication can be improved to foster the kind of civic engagement that climate change demands, this tremendous challenge may well serve a much-needed democratic renewal in the United States, and perhaps more active forms of civic engagement in Canada, while helping to build a more democratic society in Mexico.

Burgeoning levels of activity at lower levels of government and in civil society have characterized America's response to climate change in the last years of the

twentieth and the first few years of the twenty-first century. Local and state governments, pioneering businesses, religious communities, campuses across the country, traditional environmental and social advocacy groups, and a range of newly created groups have emerged as "grassroots leaders" on climate change. Even if and when they succeed in building sufficient political pressure on federal leaders to force nationwide policy changes, their role in societal response to climate change is not complete.

What the already-existing civic engagement illustrates is that countless leverage points exist to initiate and realize social change (from the bottom-up, top-down, and across sectors). Smaller changes plow the ground for bigger ones while spreading an important symbolic message to those who are not yet engaged. It is the typical pattern of pioneers and early adopters to create the conditions for a majority of actors eventually to adopt some innovative practice or technology (Rogers 2003). Given the long-term nature of climate change, civic engagement as a reflection of a community's or society's social capital will be essential in dealing with the impacts of climate change and addressing not just mitigation but eventually also adaptation needs.

Effective communication is an essential tool in mobilizing, linking, and uniting people for civic engagement, which is essential for the governance of climate change at all levels of society. The tasks of attaining deeper understanding of climate change, persuading people of its urgency, constructively and respectfully debating the value choices that underlie societal responses, envisioning a positive future, and practically supporting individuals and groups in actually changing behavior and policies, point to an important shift needed in future communication efforts. Mass media and the internet have been and will remain critical in creating and maintaining networks of information distribution, and in serving as an alert- and rapid-response system.

While existing communication efforts can be improved, more dialogic forms of communication are also needed. Such dialogs serve not only to exchange information and increase knowledge of climate science but also to develop common visions for a better future, address value differences, and form or revitalize social bonds to support the necessary behavioral and social changes. It is this much-needed face-to-face communication that stirs the hope that communication could play an essential role in forming trustful social bonds, building and maintaining social capital, facilitating civic engagement on climate change, and ultimately rejuvenating the democratic political process in the United States.

Canadians' level of active engagement with climate change is quite similar to that of Americans: low, safe, small-scale, neighborhood-based activities (e.g., social marketing campaigns to change energy consumption behavior), regionally based

research, visioning and policymaking efforts, and a relatively active and well-networked, but much smaller, NGO community working toward sustainable energy policies. By contrast, in Mexico, civic engagement to date has been focused on more local environmental issues. If the climate change issue were to engage civil society in Mexico, it might play an important role in the process of building democratic virtues and forms of governance (Norget 1997). Given the very different level of development, energy consumption, vulnerability, and response capacity, the tone, foci, and language with which to engage Mexicans on climate change are likely to be very different from those used by its northern neighbors.

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