

**GUEST EDITORIAL:
THIS YEAR IN COPENHAGEN**

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Early last year, this journal issued a call for papers addressing the issue of global warming. The response was gratifying: the journal received a large number of meritorious submissions, too many, in fact, to place in a single special issue. The editors and I decided at that time to produce a second special issue on global warming. We present that second special issue to you now.

With regard to global warming, much has changed in the world over the past year, some for the better, some for the worse. On the positive side of the ledger, the election of Barack Obama as the 44th President of the United States of America -- and the extraordinary commitment that he and his senior appointees are showing to the issue -- will almost certainly enhance the prospects for successful global collaboration to limit greenhouse gas emissions and prepare human civilization to adapt to a rapidly changing climate. We don't know if President Obama read Susanne Moser's "Open Letter to the 44th President of the United States of America" that was published in the first special issue of this journal on global warming (Moser, 2008), but it is clear that he is doing much to help the American people come to a deeper level of engagement with the issue.

On the negative side of the ledger, the worldwide rate of greenhouse gas emissions continues to increase at an alarming rate. Moreover, the evidence continues to mount that earth's climate is changing more rapidly than the worst case scenarios previously predicted by the Intergovernmental Panel on Climate Change. And lastly, the meltdown of the world's financial systems and global economy is creating many impediments to national and international actions to limit global warming.

The need to improve communication about global warming -- and to engage citizens of the world in a sustained collective effort to re-stabilize our climate -- is more pressing than ever. In a recently published letter in *Science*, several colleagues and I issued an appeal to "the broader science, communication, and funding communities to support large-scale projects to translate scientific assessments into simpler, more useful terms" (Bowman et al, 2009). The wellbeing of humanity over the next millennium may well rest on our near-term ability to produce clear assessments of the risks and equally clear explanations of our options for managing those risks, to heighten public engagement in the issue and strengthen public commitment to dealing effectively with the threat, and to advance

effective dialogue and conflict resolution both nationally and globally. The UN negotiations in Copenhagen this December are, according to many, “our last best chance” to get it right.

With those comments as my overview, allow me to briefly orient you to the excellent papers in this volume.

I frequently hear the lament – in daily life and in my research – “we’ve got to get serious about global warming for our children’s and grandchildren’s sake.” Xiaomei Cai and her colleagues decided to see how kids feel about the situation. With a large representative survey of American children, they explored the extent to which children aged 6 to 14 are engaged in the issue of global warming. They found that global warming is not among the “problems, concerns or causes” that American children care most about: less than 25% listed it as a concern, and less than 5% listed it as their top concern. The investigators hypothesized, and confirmed, that children who have altruistic life goals, who have a track record of volunteerism, and who care about global warming are more inclined to express an interest in volunteering to help address global warming. They also identified a number of ways that community organizations can make volunteering to work on global warming more feasible and attractive to young children.

Intentional distortions of the rapidly growing scientific consensus about global warming were long used as a political stalling strategy in the US. Specifically, the logic went: if no scientific consensus exists, the prudent response must obviously be to conduct more science, not to prematurely commit to actions that might hurt the nation's economy. For the past decade, a large portion of the American public has perceived that there is no scientific consensus about global warming. Christine Brittle & Nithya Muthuswamy investigated, among other things, whether news stories about global warming that represented scientific agreement vs. disagreement would have differential impact on readers. Their research found that representations of scientific consensus, or lack thereof, had no impact on reader's concern about global warming. Likewise, whether scientific evidence was represented as strong or weak had no impact on reader's concern. Instead, concern about global warming was primarily explained by environmental and political beliefs. These findings may help explain public opinion polls that show that many people support action to address climate change even if they think the science is uncertain. This suggests that those wishing to engage the public more deeply in the issue of climate change should not make their case exclusively a scientific one. Instead, as suggested by Susan McDonald (see below), communication about climate change should take into consideration people's beliefs and values, and should frame their explanations with those values.

Susan McDonald provides an excellent review of the media effects literature – including the concepts of framing, priming, agenda-setting and the issue-attention cycle – to offer communication practitioners helpful strategies for increasing the salience of communica-

tion about global warming. These strategies, as suggested above, can help audience members connect more deeply with the information, and they can be easily implemented by virtually any organization that communicates about global warming.

Tom Bowman directly examines the global warming communication conundrum: top-down communication (from experts to the public), by itself, is unlikely to enhance public engagement in the issue. While encouraging efforts to improve traditional “top-down” forms of global warming communication, he makes a strong case for rapidly supplementing traditional science communication efforts with efforts to engage large groups of stakeholders in a deeper form of dialogue. Specifically, he recommends creating and scaling-up opportunities to engage in such dialogue as a necessary means of focusing society so that we become ready to seriously address one of our most pressing problems.

Science communication -- including environmental science communication-- is inherently challenging for a range of reasons including the complexity of the subject matter, low levels of science literacy among many audience members and among many professional communicators, and low levels of communication literacy among many scientists. In their paper, Robert Basow and his colleagues describe an innovative approach for teaching climate communication skills to university-level communication and environmental science students. The approach involves experiential education, service learning, and inter-disciplinary teaching, methods that are consistent with, and complementary of, the dialogue-based approaches to public engagement recommended by Tom Bowman.

Research by Krosnick and colleagues (2006) points to the importance of believing that global warming is a solvable problem: people who hold this belief are more likely to support a strong policy response. In his paper, Rich Grogan examined the extent to which newspapers in the United States reported on potential solutions in the context of their coverage of global warming news during a one-year period ending September 2007. He also examined the nature of the solutions presented -- individual or societal (including political, science & technological, and economic). He found that 61% of stories contained at least some coverage of solutions, 91% of which were societal-level solutions, and half of those being political solutions. Thus, just over 25% of global warming news stories in the American newspapers analyzed during this recent one year period included explicit discussion of political solutions to this global problem. Given the UN objective of negotiating a global carbon emission reduction framework in Copenhagen this December, effective media coverage of national and international political solutions to climate change is needed, now more than ever.

While solutions, by necessity, must be rooted in policy, the paper by Jernež Markelj explores a complementary objective: encouraging people to use less energy in the operation of their homes. His research investigated the extent to which English language TV advertisements promoting residential energy saving are consistent with principles of theory-based message design, specifically Protection Motivation Theory (PMT). He found that, for the most part, the ads analyzed were indeed consistent with

communication practices suggested by PMT, and that promotion of self-efficacy and positive outcomes associated with the recommended behaviors were the most common message strategies.

Beginning in summer 2007 to date, over 620 presidents of American colleges and universities signed a commitment to work towards achieving climate neutrality on their campuses at the earliest possible date. To plan a campus-wide public engagement campaign in support of the climate neutrality effort at George Mason University, Anne McCauley and her colleagues conducted a web-based survey of all students, faculty and staff at their university. Their survey revealed widespread support for the university commitment, identified specific behaviors that the majority of community members were willing to make efforts to perform, and identified specific issues that required attention by university officials. Perhaps most importantly, the survey also identified a cohort of over 660 people who volunteered to help make the initiative a success (nearly 20% of survey respondents). The results of this survey – most importantly, the unearthing of a large cohort of volunteers – provided an important input in helping the university plan programs to achieve its commitment.

I am writing these remarks on the eve of Passover. Tonight, to reaffirm their commitment to family, to faith, and to taking action to correct the problems in the world around them, Jews worldwide will speak the words: “Next year in Jerusalem.” With a similar intent, I hope you will join me now in speaking the words: “This year in Copenhagen.”

References

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