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Here and Now

> We are looting both the past and the future to feed the excess of the present. It's the dictatorship of the here and now.
>
> – *John Schellnhuber, director of the Potsdam Institute for Climate Impact Research, in an interview for* Der Spiegel *(2011)*

We live in remarkable times. Amidst high-quality and well-funded scientific research into the causes and consequences of climate change, conversations about climate change in our lives – and climate communications – are stuck. Consciously or unconsciously, a feeling of complacency has often weighed on our collective and on our individual selves.

Those of us who have waded into these choppy waters of climate discussions have often found turbulent, polarized and partisan exchanges. Too often, when many of us feel those instabilities – amid daily challenges of putting food on the table, staying healthy, caring for loved ones – we choose to not rock the boat. Instead, we have sensed that the most viable alternative to avoid these rough waters is to stay in the proverbial shallows and to choose to remain silent. Over time, such individual choices have contributed to patterns of "climate silence." This social norming of silence on climate change (Marshall, 2014) has limited our abilities to coherently and adequately address one of the most looming challenges in the twenty-first century.

In addition, over the past decades many of us who have devoted our professional lives to working on climate change have been saddled with a recognition – perhaps most acutely within the climate science communities – that more information about climate change has not adequately addressed the chronic challenges of climate literacy, public awareness and engagement on its own. We have then sensed that more creative approaches are needed to more effectively meet people where they are on climate change.

Responding to these emergent needs, in recent years has been a blossoming of valuable research in the peer-reviewed literature addressing various elements of this larger challenge. More research groups, organizations, institutions and practitioners around the world have increasingly explored creative spaces of climate communications to better understand what works where, with whom (what audiences), when and why.

This book seeks to more comprehensively make sense of the developments, movements and key challenges therein. Within these chapters, I draw out varying modes, methods, audiences and cultural contexts while analyzing larger considerations of awareness, inspiration and engagement (see the Preface for more). As I move through these elements, I work to pivot from a limited place of convincing people of the facts, of winning arguments, of mere naming and shaming into more creative spaces in communications about climate change. In other words, to address this collective action problem I encourage a creative shift from "turning on each other" to "turning to each other" for support and collaboration. By drawing out trends, patterns, experiments, findings and key successes as well as challenges associated with creative (climate) communications through all this research and experimentation, I then provide some guidance on effective and successful communications in the face of today's climate challenges (see Chapter 7 for more).

There is a time and place for just about everything. However, to find common ground and to work collectively to address climate change, there is a burning need to consider mindfully and methodically how we communicate about it. To be clear, finding common ground does not mean violating one's own commitments, concerns and aspirations. It is important to be authentic in these interactions (see Chapter 7 for more). It is not productive to act as an apologist for positions with which one disagrees in order to just get along. Finding common ground means listening carefully to other points of view and entering into open, respectful and honest dialogue about both different perspectives and shared values. Creative pathways through these processes can then be seen as ones that "smarten up" communications and thereby facilitate more effective connections through issues, people and things that everyday citizens care about.

Creative approaches involve the deployment of multimodal communications. A mode is "a system of choices used to communicate meaning. What might count as a mode is an open-ended set, ranging across a number of systems, including but not limited to language, image, color, typography, music, voice, quality, dress, gesture, special resources, perfume, and cuisine" (Page, 2010, p. 6).

Amid many elements seeping into these environments, I consider dynamics that shape creative and potentially effective messages as well as messengers of

those climate change communications. Over time, broad references to communications through media platforms have generally pointed to television, films, books, flyers, newspapers, magazines, radio and internet as pathways for large-scale communication. These processes have typically involved publishers, editors, journalists, professional content producers and members of the communications industry who produce, interpret and communicate texts, images, information and imaginaries.

But clearly, modes of communication are not limited to speeches, textbooks, video interviews, advertisements or news media pieces. While there are many great texts to guide science communication (e.g., Bucchi and Trench, 2008; Bennett and Jennings, 2011; Leshner et al., 2017), environmental communication (e.g., Perrault, 2013; Pezzullo and Cox, 2017) and analyses of news media that influence public discourse (e.g., Anderson, 1997; Boyce and Lewis, 2009; Boykoff, 2011; Painter, 2013), these works take us only partway down a road that must be traveled more extensively on these topics (Blanding, 2017) (see Chapter 7 for more). Along with those important contributions, we must also take into account how creative (climate) communications shape perspectives, attitudes, intentions, beliefs and behaviors among public citizens around the world. In addition, we must recognize the significant expansion into new, more creative and interactive webs of democratized, peer-to-peer communications (van Dijk, 2006; O'Neill and Boykoff, 2010).

Additional modes and manifestations of communication also include (analyses of) documentary films about dystopian futures, stand-up comedy about climate and cultures, podcasts about climate science and policy interactions, lawn sculptures made from reusable water bottles and choreographed human glacial melt. Kathryn Cooper and Eric Nisbet (2017) have commented, "Influencing audiences about climate change is a challenging task due to the diversity of the media landscape, audience predispositions and selective exposure, and psychological biases such as affect. Documentaries, both those made to inform as well as those made to influence audiences to action, have the potential to overcome these challenges."

Participatory and experiential activities (Osnes, 2014) have been considered as a powerful way to consider resonant climate challenges (Smith and Joffe, 2009). Moreover, extensions into entertainment media and interactive platforms have been increasingly recognized as important facets of making climate change meaningful (Boykoff, 2011; Dudo et al., 2017). Therefore, multimodal techniques draw on many systems of communication.

Meeting people where they are takes carefully planned and methodical work. It does not mean "dumbing things down" for different audiences. Through this process of assessment of research and practice in these areas, conversations can

more capably seek answers to a provocative question that Mike Hulme posed in his seminal 2009 book *Why We Disagree about Climate Change*. He asked, "How does the idea of climate change alter the way we arrive at and achieve our personal aspirations and our collective social goals?" (Hulme, 2009, p. 56). Pursuing answers to that fundamental question necessitates dialogue, deliberation, active listening to other points of view and consideration of one's place in the collective. These then become productive yet more manageable forays into dynamic, immense and complex systems of meaning-making at the interface of climate science, policy and society.

As such, these climate change conversations are not contained solely in the province of science or environmental communication. They involve politics, economics, culture, ideology, environment and society. These expanded considerations help to more comprehensively make sense of ways in which meaning and knowledge are derived from communications, interactions, listening, exchanges and dialogues.

Philip Smith and Nicolas Howe (2015) have alluded to climate change as "social drama," writing, "we believe there is a real possibility for climate change to emerge as a truly compelling social drama – a cultural form that will change history for *us* before climate-change-the-natural-event changes it radically *for* us" (p. 209, emphasis in original). As I stated at the beginning of this chapter, we are living through momentous times as we fundamentally grapple with issues that cut to the heart of how we live, work, play and relax in society. However, the "we" here in my blanket statement, and the "us" in Smith and Howe's exhortation are in fact very differentiated groupings.

There are cruel realities in gaps in opportunity and access to natural resources and to meeting livelihood needs for large segments of our global population (Agyeman et al., 2007; Pezzullo, 2009). Many grim paradoxes are associated with people and places at the forefront of climate impacts (see Chapter 4 for more). Among them, (1) those at the forefront of impacts are those with the least capacity to address them; (2) those most impacted are often those with the least influential voices in decision-making; and (3) mechanisms to confront associated problems are often weak, under-resourced and fragmented across scales.

In his book *Earth Odyssey*, Mark Hertsgaard (1998) wrote, "On my way to Brazil from Asia, I had stopped off in San Francisco . . . After a year of travel, much of it in Africa and Asia, seeing my old hometown again was more than a little disorienting . . . the sheer wealth of the place was staggering. With their leather jackets, designer eyeglasses, and stylish haircuts, many San Franciscans were *wearing* more money than African and Chinese peasants would earn in a lifetime" (p. 195, emphasis added). Therefore, treatments of "we" and of "us"

must be approached carefully and mindfully. Doing so helps to better understand how assorted players – from competent citizens and audacious activists to willing ignoramuses or cunning obstructionists – shape the theater of contemporary emotional, rational and intellectual conversations.

Know Thy Audience[1]

These creative (climate) communication endeavors must start with considerations of audience. These may be imagined, target, (un)intended or actual audiences. Researchers and practitioners have increasingly paid attention to differentiated audiences as key components to deliberate development of effective communications.

Anders Hansen (2015) has stressed the importance of integrating conceptions of perceived audiences into the production of environmental communications. Long-time journalist Richard Black concurred that "effective communication always begins with the audience" (p. 283). Dietram Scheufele (2018) has pointed out that empirical social science research has helped "enable more effective communication with publics whose demographic, socio-structural, or value-based characteristics position them squarely outside of the proverbial choir that science communication is often preaching to" (p. 1123). Sheila Jasanoff (2014) has pushed for consideration of "a more robust conception of *publics* – not treating them as natural collectives (e.g., housewives or teenage women) but as dynamically constituted by changes in social contexts" (p. 23). John Besley and Matt Nisbet (2013) have examined surveys of scientists' perceptions of imagined "public audiences" and motivations to participate in public life. They found that the strongest predictors of participation were attributed, among other things, to a view that "a lack of public knowledge is harmful" and therefore communicating their work represented a "commitment to the public good" (p. 971).

Perceived audiences vary. At times, one may intend to rally supporters and those with a common perspective; at other times, one may endeavor to reach audiences with other points of view. Effectively reaching these different audiences necessarily requires different communication strategies. Moreover, clearly we do not all think the same; we do not all interpret a given meme or message equally to the friend or family member next to us. Even those in tight epistemic communities, families, or marriages have different ways of knowing

[1] This is a reference to a part of an enduring adage from Stephen Schneider, "Know thy audience, know thyself, know thy stuff." It is discussed in more detail in Chapter 7.

about climate change, as well as different perspectives on how to communicate effectively about it. Therefore, we need to tailor messaging to meet unique people where they uniquely may be.

Audience segmentation and consequent message alteration has been a part of marketing and associated communication strategies since the 1950s (Smith, 1956; Slater, 1996). Audience segmentation endeavors, as they relate to climate change communications, have proliferated over the past decade (Leal Filho, 2019). For example, Julia Metag and Mike Schäfer (2018) have mapped out a schematic representing processes of audience segmentation in relation to scientific and environmental issues (see Figure 1.1). Going forward, they called for segmentation work to enable more detailed accounting of "how people belonging to a specific segment get in contact with information about science or environmental issues in their everyday life, how they evaluate this information, and how this relates to their attitudes" (Metag and Schäfer, 2018, p. 1001).

Most prominently among audience segmentation work resides the "Global Warming's Six Americas" project on climate communication, the results of which were first published in 2009. The project has been a latent class analysis of the US public to create perspective segmentation based on responses to a survey about climate change (Maibach et al., 2009).[2] Six categories of responses emerged from these survey questions, defined as "dismissive," "doubtful," "disengaged," "cautious," "concerned" and "alarmed." Since its inception, Six Americas has tracked public perspectives on concern, belief and motivation in regard to climate change or global warming. This categorization was first applied to the US context but has since been tested in the Chinese (Wang et al., 2017; Wang and Zhou, in press), Indian (Thaker and Leiserowitz, 2014) and German (Metag et al., 2017) contexts as well.

Similarly, in the US context John Besley (2018) has examined US National Science Foundation survey responses on views of science and technology. He categorized respondents into six groups: "disengaged," "moderate," "optimists," "worried," "liberal friends of science," "cautious conservative" and "conservative friends of science." Besley argued that this categorization makes sense "to help understand views about science and technology and communicate more effectively" (Besley, 2018, p. 14). In other audience segmentation research, Megan Brenan and Lydia Saad (2018) sorted US adults into three perspectives on climate change: "concerned believers," "cool skeptics" and "mixed middle" based on Gallup survey data[3] showing deep divisions on climate change concern depending on political ideology. They found that

[2] In 2018, this was whittled down to four key questions in order to segment audiences (Zhang et al., 2018).
[3] This was a survey conducted March 1–8, 2018 of 1,041 US adults.

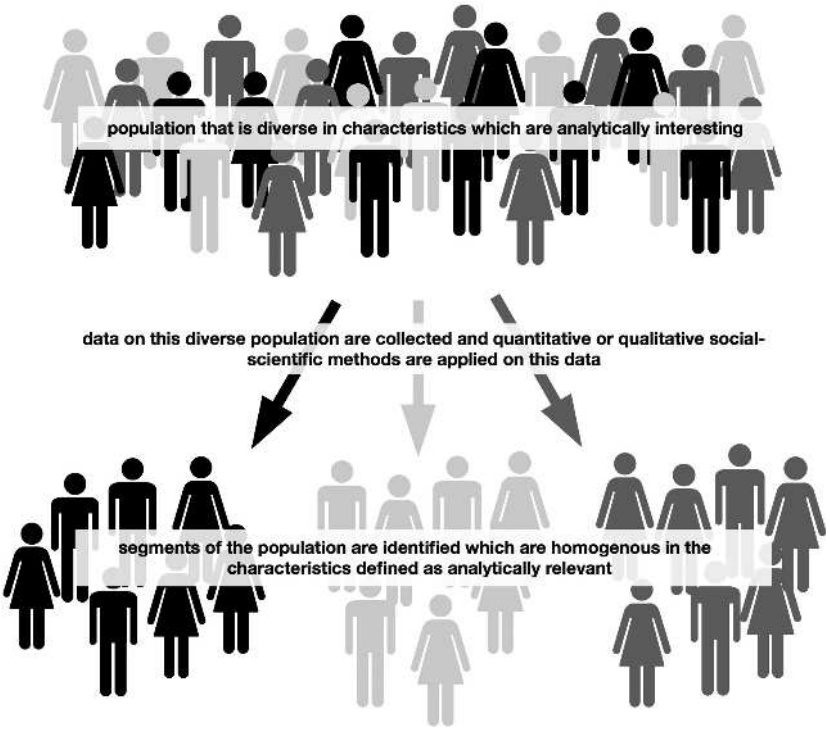

Figure 1.1 A schematic depicting the logic of segmentation analyses (from Metag and Schäfer, 2018). This is a process in which a more generalized audience is subdivided into groups based on factors such as socioeconomic characteristics, political worldviews, psychological traits, ideological preferences, demonstrated attitudes, or behaviors relating to environmental issues. These are not necessarily real-world communities but are clusters of people with these similar characteristics.

these categories were represented by 48%, 19% and 32% of the overall population but just 17%, 45% and 38% for self-described Republicans (Brenan and Saad, 2018). Furthermore, Donald Wine, Wendy Phillips, Aaron Driver and Mark Morrison (2017) have explored segmentation through socio-demographic factors and across attitude–behavior dimensions. Together, audience segmentation research endeavors have sought to better understand how to tailor climate change communications to engage effectively with a targeted subgroup (e.g., Flora et al., 2014; Monroe et al., 2015).

Understanding that a population is diverse and its members therefore respond to stimuli differently is important. It then helps to facilitate processes of more effective communications about climate change. For example, Jordan

Harold, Irene Lorenzoni, Thomas Shipley and Kenny Coventry (2016) have studied how to tailor climate change graphics and images as visual representations for different audiences. Others have examined how color graphics can be helpful for some and alienating for those who face color blindness challenges (Light and Bartlein, 2004). Moreover, one's native spoken language has been found to influence color discrimination (Thierry et al., 2009). Therefore, something mundane like color choices (e.g., achromatic versus chromatic color scales) needs to be thoughtfully selected (Harold et al., 2016).

Moreover, placing value on how different audiences have different ways of knowing about climate change helps to produce more effective communication strategies. Shane Gunster (2017) has commented, "How one conceives of an audience shapes how one communicates with it" (p. 54). He continued, "in the case of climate change, assumptions about audience needs, interests, scientific and political literacy, beliefs and values inform key decisions about . . . content, including areas of emphasis (and avoidance), framing, sourcing, diversity of argument, level of complexity and analysis, tone and style" (p. 54). Carefully evaluating people's conceptions and expressions of themselves in relation to climate change demonstrates respect that then effectively opens up discussions rather than closing them down. As a result, opening up ways of knowing (see Chapter 4 for more) and of communicating about climate change serve as democratizing forces for new voices and perspectives.

To illustrate, Texas Tech University professor Katharine Hayhoe has shown deftness in effectively tailoring ways of discussing climate change with varied audiences. She has also been someone who has drawn strength by speaking clearly from her identities as (1) an atmospheric scientist studying climate change, (2) a political science professor and (3) an Evangelical Christian. As a few examples of her communication work, Katharine has been the host of the "Global Weirding" series of short YouTube videos, answering questions about global warming and climate change (see Chapter 7 for more). She was also in the first episode of the documentary TV series *Years of Living Dangerously* featuring her work and communication with religious audiences in Texas. For a number of years now, Katharine has effectively communicated about dimensions of climate change through a three-step approach she has called "bond/connect, explain, and inspire." By this she means that effective communication first must involve a conscious exploration of what the speaker and audience have in common, what they both may care about at the human–environment interface. Second, it must entail why those involved in the communication might care about what is happening (e.g., that climate change is exacerbating drought in certain regions). Third, it must contain considerations about how those involved can help confront the problem in ways that are

compatible with shared values, inspiring action. According to Katharine Hayhoe, these steps involve a sense of collective struggle and positive actions.

However, her approaches are more anomalous than representative of wider communications engagements to date by researchers, scholars and practitioners in the public sphere. Candice Howarth and Richard Black (2015) have pointed out that "the communication of climate change historically has been generic, untailored and untargeted" (p. 506). As such, more is needed to carefully tailor facilitated communications and dialogue that values different perspectives on climate change in order to increase concern and engagement. From these more systematic and methodical approaches, evidence-based communications can be designed to creatively resonate with target audiences.

Trust Us, We're the Experts[4]

Considerations of audience lead into important considerations of whom to trust and who the "experts" or "authorized speakers" are in the context of relationships between science and society (Engdahl and Lidskog, 2014). Trust in communications has been defined as "willingness to make oneself vulnerable to another based on a judgment of similarity of intentions or values" (Siegrist et al., 2005, p. 147). More broadly, claims makers who are perceived to be within a person's perceived affinity or identity groups have higher legitimacy, credibility and trustworthiness (Makri, 2017). Consequently, public citizens more willingly adhere to the claims that these trusted sources make (Dearing et al., 1994).

At the interface of science, policy and society, many have routinely relied on "expert" perspectives and advice to make sense of the complexities of climate change. However, developments of user-generated, peer-to-peer, democratized and interactive communications have led to substantive changes in how people access and interact with information as well as in who they consider authorized definers of the various dimensions of climate issues. Andrew Hoffman (2015) has posited that "the *messenger* is as important as the message" and therefore communicators must "address the *process* by which the message was created; choose *messages* that are accessible; and present *solutions* that represent a commonly desired future" (p. 53, italics in the original).

Social science research into the relationships between trust and environmental issues has found that trust can lead to higher acceptance of risks and greater

[4] This section title is adapted from the Sheldon Rampton and John Stauber book *Trust Us, We're Experts: How Industry Manipulates Science and Gambles with Your Future*, published in 2002.

support for recommended policy actions (e.g., Poortinga and Pidgeon, 2003). Trust can also boost conceptions of reliability. In research on wildlife management policy support, Hwanseok Song, Katherine McComas and Krysten Schuler (2018) found that sources or messengers that were viewed as more trustworthy led to more support for the policy measure they advocated. This is also consistent with work by Michael Manfredo, Tara Teel and Harry Zinn (2009), who mapped conceptions of trust onto notions of "care." With respect to younger people, research by Matthew Motta found that interest in science in early teen years (ages 12 to 14) is associated with greater trust in climate scientists and in climate science in adulthood. He also found these trends occur independently of political ideology (Motta, 2018).[5] Therefore, cultivating interest in science among young people can be a pathway to trust in scientists and in science, as well as to a greater likelihood to advocate for support of sciences as well as policy interventions based on science (Gauchat, 2018) (see Chapter 8 for more about youth and climate communications). In conjunction with this, Ishani Mukherjee and Michael Howlett (2017) have found that "the ebb and flow of ideas gaining government attention is heavily dependent on the actions and interactions of not one, but rather several identifiable groups of actors involved in defining problems, articulating solutions to them, and gaining and retaining political support for specific matches of problems and solutions" (p. 70; see also Mukherjee and Howlett, 2015; Béland and Howlett, 2016).

Over time, the enlargement of scientific ways of knowing about climate change into aesthetic, affective,[6] emotional, visceral, tactile and experiential ways of knowing (see Chapter 4 for more) has prompted a democratization of who are considered authorized, legitimate expert voices in the public sphere. Increasingly, researchers and practitioners have studied how these various ways of knowing and learning about climate change influence awareness and engagement (e.g., Baum and Groeling, 2008; Fahy and Nisbet, 2011; Jacobson, 2012; Horan, 2013; Zhu and Dukes, 2015). For instance, through a rich ethnographic account of various perspectives on climate change including religious groups, business associations and Inuit leaders, Candis Callison (2014) has commented, "Even though climate change may have begun as a scientific concept, it has flourished and it's been adopted, torqued, politicized, paired.

[5] Through these findings, he offered an insight that "attention-grabbing and engaging content of board and video games offers an intriguing medium" for more successful communication and engagement (Motta, 2018, p. 487).

[6] Anthony Leiserowitz and Nicholas Smith (2017) have defined affect as "the specific quality of 'goodness' or 'badness' experienced as a feeling state (with or without conscious awareness) or the positive or negative quality of a stimulus" (p. 2).