ENVIRONMENTAL COMMUNICATION and the Public Sphere

Phaedra C. Pezzullo | Robert Cox

Environmental Communication and the *Public Sphere*

5 EDITION

For Niko, Cruz, Michelle, Harrison, Daniel, Keenan, and Cam.
May the work of those reported here and those reading this book leave a more sustainable and just world for you.

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Preface to the Fifth Edition

Environmental communication perhaps has never been as important as it is today. While scientific consensus affirms that we need to reduce greenhouse gases and the renewable energy market grows, some people remain unconvinced that humans can have an impact on the planet's climate and are fearful of changing cultural practices based on fossil fuels. No matter where you stand on this political spectrum, environmental communication matters. We need to listen and to express ourselves with more care and thought in order to engage others in meaningful ways.

Since earlier editions of this book, the ways in which we communicate our environmental concerns, hopes, and confusion have continued to change. For example, even as more traditional media—newspapers and broadcast TV—transform, environmental news proliferates online at sites such as *Grist* (http://grist.org) and *Environmental Health News* (www.environmentalhealthnews.org). Social media are enabling users to report, tag, and distribute environmental content widely, such as through the #solar trending topic on Twitter and Greenpeace International's videos (www.greenpeace.org/international/en/multimedia). Sites such as 350.org and Avaaz.org also call attention to the worsening impacts of a range of topics (such as climate change) and the hopeful solutions (such as the Paris Climate Agreement). Meanwhile, anti-environmental communication also draws on the same new media trends, including sharing videos online of "rolling coal" (Roberts, 2016).

Our knowledge of the many forms of environmental communication also continues to grow. The fifth edition of *Environmental Communication and the Public Sphere* gives us the opportunity to share these new developments, which include defining environmental communication as a discipline of crisis and care, remapping the field of environmental communication to reflect our growing community of scholars and practitioners, and engaging new research on everything from industrial apocalyptic rhetoric to emerging ways to assess media impact. This edition also explores recent controversies and milestones to illustrate key terms of environmental communication, including the coalition of water protectors involved in the Dakota Access Pipeline (DAPL) controversy, the Flint water crisis as an example of systemic environmental racism, allegations of disinformation campaigns about climate research and the March

for Science in response, new alliances for a "just transition" in a growing renewable energy economy, the Liberate Tate campaign, the symbolic value of bison and wolves, and more.

A book attempting to introduce such a wide range of communication about the environment could not have been conceived initially, or revised for this fifth edition, without the help of many of our colleagues, students, and friends, nor without the many helpful suggestions from colleagues with the International Environmental Communication Association (https://theieca.org) and various environmental and civil rights groups whose work we admire. For Chapter 9, in particular, we are indebted to meeting notes of the Zuni Salt Lake Coalition and its campaign materials and to Andy Bessler, a coalition member and environmental justice organizer, who worked for the Sierra Club and generously shared his recollections of the campaign in a personal interview with Robert. Phaedra also thanks her colleagues Leah Sprain and Michael Kodas for their feedback on the last edition. And, as always, we thank our students, who have inspired us over the years with their intelligence, dedication, and passion for a better world.

In addition to reviewers and colleagues noted in the previous four editions, the following anonymous reviewers are gratefully acknowledged for their feedback on this edition: Jennifer L. Adams, DePauw University; Tracylee Clarke, California State University Channel Islands; Jeffrey L. Courtright, Illinois State University; Catalina M. de Onís, Willamette University; Damon M. Hall, Saint Louis University; Joan Faber McAlister, Drake University; and Laura M. Mercer Kollar, CDC Foundation.

At SAGE, our thanks go to the always supportive associate director Matt Byrnie and acquisition editors Karen Omer and Terri Accomazzo for their help with this edition, as well as to Sarah Dillard for her skillful work as editorial assistant on this edition, particularly for securing the many images that we share, and to Laureen Gleason for her careful copyediting, including double-checking many links and updates during this quick attempt to keep up with the changing moment we are in. Although we have benefited from the suggestions and warm support of many who believe in the value of this book, we are clearly responsible for any mistakes that have found their way into the text.

Finally, none of this would be possible without our wonderful partners, Ted Striphas and Julia Wood. Thank you for your support, patience, insights, and humor.

About the Authors

Phaedra C. Pezzullo (PhD, University of North Carolina at Chapel Hill) is Associate Professor at the University of Colorado Boulder. Her interdisciplinary background in the environmental sciences and humanities informs her research on environmental justice, climate justice, public advocacy, and tourist studies. Her first book, *Toxic Tourism: Rhetorics of Travel, Pollution, and Environmental Justice* (University of Alabama Press, 2007), won four awards, including the Jane Jacobs Urban Communication Book Award and the Christine L. Oravec Research Award in Environmental Communication. She coedited *Environmental Justice and Environmentalism: The Social Justice Challenge to the Environmental Movement* (MIT Press, 2007) and edited *Cultural Studies and the Environment, Revisited* (Routledge, 2010). She was a founding editor of the journal *Environmental Communication* and serves on its editorial board. She has volunteered on the Sierra Club's national Environmental Justice Committee, served on the International Environmental Communication Association's Climate Negotiations Working Group at COP21 in Paris, has consulted with cities on climate justice, and directs BoulderTalks (www.colorado.edu/bouldertalks). She also enjoys weekly hikes in the outdoors with her kid and partner, as well as cooking a plant-based diet.

Robert Cox (PhD, University of Pittsburgh) is Professor Emeritus at the University of North Carolina at Chapel Hill. His principal research areas are environmental and climate change communication and strategic studies of social movements. One of the nation's leading scholars in environmental communication, Cox is coeditor of *The Routledge Handbook of Environment and Communication* (2015), editor of the four-volume reference series *Environmental Communication* (Sage, 2016), and the author of numerous studies of environmental and climate change campaigns. He has served three times as president of the Sierra Club, the largest grassroots U.S. environmental organization, and was also on the board of directors for Earth Echo International, whose mission is "to empower youth to take action that restores and protects our water planet." Cox also served as an advisory editor for the journal *Environmental Communication* and continues to advise environmental groups on their communication programs. He regularly participates in environmental and climate change initiatives and has campaigned with former vice president Al Gore, singer Melissa Etheridge, and other public figures. He also enjoys hiking and trekking in the Himalayas and the southern Appalachian Mountains in the United States.

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Is the environment silent? Who speaks for (or about) the environment? What constitutes an *environmental problem?* How does seeing, listening to, and hanging out in different environments move you? The bison became the first national mammal of the United States in 2016. What does this animal symbolize to you? And how does where you live impact your perception of the bison's symbolic meaning? What does declaring this icon a "national mammal" communicate for the United States? Look up "Yellowstone National Park bison selfie" on a search engine and you will find countless images and warnings against taking these pictures. How is media technology changing our relationship to the ways we tour and remember vacations, as well as how we gauge danger or how our actions can impact animals like the bison?

Introduction: Speaking for/ about the Environment

Environmental communication occurs every day. As we'll explain in the following pages, our understanding of the environment and our roles within it can't be separated from *the need to communicate with others.*

Environmental communication expresses threats to the environment, as well as its wonders. Some topics seem more urgent than ever—including weekly reports compiled by climate scientists sharing information on the increasing global impact of climate change making life on Earth more precarious (NOAA, n.d.). Other topics sound like common sense, such as news coverage of studies on how spending time in nature improves one's mental and physical health (Reynolds, 2015). Some of us enjoy the hope and virtual adventures around the world provided by environmental documentary films like *How to Let Go of the World* (2016) and *Chasing Coral* (2017). Some of us painfully debate with our family at the holidays over specific topics, from what we eat to whether or not we have confidence in global environmental treaties. Others do not believe that everyday people can shape politics, let alone the planet. Some environmental topics are old, and some are new.

Environmental communication is pervasive. While some individuals still speak at public hearings about pollution in their communities, others are organizing through social networking sites to address the harmful consequences of climate change. Online sites and popular blogs showcase breaking environmental news and marvels of the world daily, including the clothing company Patagonia's travel tales and photographs on *The Cleanest Line* (http://www.patagonia.com/blog); news aggregates like *Treehugger* (treehugger.com) and *HuffPost Green* (huffingtonpost.com/green) share stories written by journalists inside and outside their organizations; and scholarly sites with compelling content alert us to the latest trends and topics, like *Yale Environment 360* (http://e360.yale.edu) and Bill McKibben's Twitter feed (@billmckibben). Meanwhile, anti-environmental communication also abounds, from the current White House of the United States, to court rulings, to advocacy groups that thwart municipal rights to ban fracking, to global treaties that do not incorporate indigenous knowledge in policy.

If everyone communicates all the time, you might ask, why do we need to *study communication?* Taking the time to reflect on the environmental communication of ourselves and others allows us to critically think about what we believe, how we want to express those perspectives, and the ways in which others' communication might shape us in return. Drawing on the vocabulary and insights of scholars who study expression provides more tools and ways of thinking about and acting in the world.

As we'll see throughout this book, many different voices claim to speak for, about, or against the environment. The public sphere is filled with competing voices, media, and forums.

Communication and the Environment's Meaning

Not everyone sees herself/himself/themselves as an "environmentalist" or envisions being a professional environmental communicator, such as an adventure journalist, science educator, green filmmaker, or green communications consultant. Some might be reading this book as communication majors with little knowledge of environmental matters; some of you may know a good deal about environmental issues but very little about communication studies. Yet it is impossible to separate our knowledge about environmental issues from the ways in which we communicate about these issues. As founding environmental communication scholars James Cantrill and Christine Oravec (1996) observed, the "environment we experience and affect is largely a product of how we come to talk about the world" (p. 2). That is, the way we communicate with one another about the environment powerfully affects how we perceive both it and ourselves and, therefore, how we define our relationship with the natural world. For example, scientist E. O. Wilson (2002) used the language of biology to describe the environment as "a membrane of organisms wrapped around Earth so thin it cannot be seen edgewise from a space shuttle, yet so internally complex that most species composing it remain undiscovered" (p. 3). Meanwhile, U.S. president Donald Trump stated in an interview (while still a candidate), "We'll be fine with the environment. We can leave it a little bit, but you can't destroy businesses" (Elkin, 2015, para. 4).

Furthermore, the images of the planet and information we produce and receive from friends, blogs, news media, teachers, or popular films play a powerful role in influencing not only how we perceive the environment but also what actions we take. How can we make renewable energy more accessible to all? What jobs will new energy economies enable, and how will the end of the fossil fuel economy impact everyday people? Is it possible to create a zero-waste or vegetarian city? Is it the government or private sector's job to protect clean air, water, and land? Do we need incremental or radical system change? Why do we often plan vacations to places that allow us to immerse ourselves in different environments, whether it's a coral reef, a safari, or skiing?

We wrote this book because we believe that communication about the environment matters. It matters in the ways we interact with others and in naming certain conditions as worthy—or not—of our attention and time. And it matters ultimately

in the choices we make in response to environmental problems and possibilities. This book, therefore, focuses on the role of communication in helping us negotiate the relationship between ourselves and the environment, as well as how we make collective decisions and build ecological futures together.

Environmental Communication and the Public Sphere is designed with ambitious learning outcomes in mind. When we revised this textbook, we considered eight key pedagogical values:

1. Identify and explain the ethical principles of environmental communication as a crisis and a care discipline.
2. Define environmental topics and how they have changed over time to illustrate the importance of appreciating the intertwined relationship between the environment and communication, as well as to foster a better historical appreciation of how cultural beliefs, laws, and practices change through communicative practices.
3. Explain significant communication theories, principles, and keywords that have relevance to environmental discourse in the public sphere.
4. Invite readers to engage in interpreting, evaluating, and applying communication inquiry across various approaches within the field, spanning rhetoric and law to journalism and risk communication and beyond.

AP Images/Tao xiaofang—Imaginechina

Environmental communication is contested. In 2015, former Chinese state television reporter Chai Jing released a video documentary, *Under the Dome,* to share her research on China's air pollution and her personal concerns for her daughter; after the video got more than 150 million views in a month, the national Chinese government issued an order for employees to no longer promote the film (Mufson, 2015).

5. Provide multiple examples throughout the book to illustrate how diverse voices in the public sphere research, adapt, and craft sustainable and unsustainable messages across various goals and audiences, as well as how to critically analyze attitudes, practices, meanings, and impact.
6. Demonstrate how cultural similarities and differences across symbolic interactions shape environmental communication, which matters in a globally connected world.
7. Introduce the related concepts of the public sphere, democracy, and citizenship to encourage you to join in conversations and debates that are already taking place locally and globally that matter to the environments where you personally live, work, and play.
8. Offer ways to develop critical thinking and research, as well as oral and written communication skills, in conjunction with your teacher's assignments and classroom discussions.

Why Do We Need to Speak for the Environment?

Although public opinion about environmental issues varies, most people polled in the United States and globally generally express strong support for environmental values. At some basic level, who wants to breathe dirty air or drink polluted water? And who doesn't want to share a cat meme or watch a panda be born? Even so, differences exist among the public about which environmental "crises" are truly crises, how society should solve specific environmental problems, and how we might imagine ideal environmental futures.

Environmental communication always faces a fundamental dilemma. Although the environment appears popular among many today and alive with sounds from wild species, streams, forests, transportation, and more, the environment itself has little voice in the public sphere without human intervention. And people don't always agree. Only in a society that allows democratic, public debate can people choose among the differing voices and ways of relating to the environment, as well as express our own opinions. That is one of our purposes in writing this book: We believe that you, we, and everyone else in society have a pivotal role to play in addressing environmental matters, from making choices in our everyday lives to forging global treaties.

Background and Perspectives of the Authors

After inviting you to join in conversations about the environment, it's time we describe our own involvement in this challenging field.

Phaedra: I started my undergraduate education earning a BS in natural resources; however, I realized then that scientists knew a good deal about what we needed to do to make the world more sustainable—they just hadn't figured out how to communicate their research in compelling ways or weren't willing to take into consideration the cultural contexts that matter to the uptake of their research. To learn more about the systems that shape cultural attitudes, I also earned a degree in political economy and social theory. I met Robbie when I was 20, when he was president of the Sierra Club, and I joined him for graduate school, becoming his first PhD student. Now, I am a professor at the University of Colorado Boulder, which is home to leading climate scientists, environmental documentary filmmakers, and more notable voices in environmental communication.

For as long I can remember, I have cared about nonhuman life and social justice. Growing up in the sprawl of Philadelphia, I became a vegetarian at the age of nine and quickly identified with feminist, labor, and civil rights advocacy. In North Carolina, I advocated with residents of Warren County to help clean up a toxic dump, with migrant farmworkers for better working conditions, and on the Sierra Club's Environmental Justice Committee. In Colorado, I have worked with artists creating public exhibits to raise awareness about pollution, trained scientists in improving communication practices, and designed public participation feedback on a just transition to lobby my city's planning department. I also have shared my environmental communication work internationally, including at *the Université de Paris-Sorbonne* in France and at Fudan University in Shanghai, China, which further emphasizes to me the ways in which we all are interconnected.

Robert: For a number of years, I served as a professor of communication studies and also in the curriculum for the environment and ecology at the University of North Carolina at Chapel Hill. Although I trained in rhetorical theory, I have long focused on the diverse ways in which our communication aids, challenges, and sometimes obstructs our understanding of—and our ability to solve—environmental problems. I've also worked actively in the U.S. environmental and climate justice movements, both at the local level and nationally as president of the Sierra Club; with Earth Echo International in Washington, D.C.; and as an adviser with other environmental organizations. More recently, I have been working with an initiative to encourage U.S. cities to commit to achieving 100% renewable energy.

My interest in the environment, however, arose long before I heard the word environment. As a boy growing up in the Southern Appalachians of West Virginia, I fell in love with the wild beauty of the mountains near my home and the graceful flow of the Greenbrier River. As I grew older, I saw coal mining's devastating effects on both miners and the natural landscape, including the streams and water supplies of local communities. In graduate school, I saw the health effects of air pollution from steel mills in Pittsburgh and later from an abandoned chemical plant in a low-income, multiracial neighborhood in Mississippi. I began to realize how intimately people and their environments are bound together, and I have come to respect the diverse voices that have spoken about both the health of their communities and their awe of the natural world.

From these experiences and also from our own research and teaching in environmental communication, we've become more firmly persuaded of several things, including the following:

1. Individuals and communities have stronger chances to safeguard environmental health and advocate for the world in which they want to live if they better understand some of the dynamics and opportunities for communication about their concerns and dreams.
2. Environmental issues and public agencies do not need to remain remote, mysterious, or impenetrable. The environmental movement, legal action, and both new and "old" media have helped demystify governmental procedures and open the doors and computer files of government bureaucracies to greater public access and participation in environmental decisions, locally and globally.
3. As a consequence, individuals have many opportunities to participate in meaningful ways in public debates and dialogues about our environment; indeed, there is more urgency than ever in doing so. That is why we wrote *Environmental Communication and the Public Sphere.*

One other thing: Because of our experiences, we cannot avoid personal perspectives on some of the issues discussed in this book, nor do we wish to do so. In this sense, we bring certain values and insights to our writing. We do two things, however, to expand our own experiential and academic expertise as we cover the topics in this book. First, when we introduce views or positions, we explain how we arrived at them, based on our experience or research. Second, we include "Another Viewpoint" features throughout to alert you to important disagreements about a topic. Our aim is not to set up false dichotomies but to introduce a diversity of perspectives, because this empirically reflects environmental communication today. We also refer you to suggested resources that allow you to learn more about the issues in each chapter. No book is exhaustive, but we hope this book provides you with new insights, knowledge, and motivation to act as environmental communicators.

Distinctive Features of the Book

As its title suggests, the framework for *Environmental Communication and the Public Sphere* is organized around three core concepts:

1. The importance of *communication.* **Communication** is expression in specific contexts, as well as the significance of these symbolic modes of interaction to create shared meanings, values, and/or actions. Studying communication, therefore, focuses on *what* we express (information, emotions, hierarchy, etc.), *how* we express it (in which style, through which media, when, by whom, where, etc.), and with what *consequences* (cultural norms, political decisions, popular trends, etc.).

2. The need to address communication *and the environment,* wherein it is impossible to imagine one component without the other. As we note in Chapter 2, the environmental justice movement defines the **environment** as everywhere we are: where we live, work, and play. There is no communication without an environment, and life on Earth can be saved or destroyed with communication.

3. The vital role of the *public sphere* in providing opportunities for different voices communicating about the environment. We use the idea of the **public sphere** throughout this book to refer to the forums and interactions in which different individuals engage each other about subjects of shared concern or that affect a wider community, from neighborhoods to international relations.

We also have approached this new edition with awareness of the seriousness of the many crises facing us, the rapidly changing politics of recent times, and our hope that thinking more deeply about how we communicate about the environment can enrichen wider conversations and debates now taking place in the public sphere.

Along with the focus on environmental communication and the public sphere, this fifth edition includes distinctive features we regularly provide:

SAUL Loeb/AFP/Getty Images

The movement #KeepItInTheGround emphasizes the importance of symbols in its signs and artwork protesting new fossil fuel exploration and excavation, such as the dinosaur representing extinction and, as pictured here, the polar bear, reminding us of melting ice caps.

1. A comprehensive introduction to the study of environmental communication, with an emphasis on how various key terms from the diverse field of communication studies can help us think critically about and engage the world
2. Updated research, case studies, and examples to show how the concepts—old and new—matter today
3. Updated multimodal suggested resources to illustrate key concepts in and outside of class
4. Opportunities to apply the principles of environmental communication in "Act Locally!" exercises
5. A comprehensive glossary of key terms at the end of the book

New Terrain and New Questions

In this book, we do not assume any special knowledge on your part about communication, environmental science, or politics. Nor do we assume that you know about particular theories or practices of communication. This textbook provides a survey introduction, so that your teacher may help you learn about this broad and robust field. We use **boldface** type when we introduce an important term, and we provide a list of these key terms at the end of each chapter, as well as a glossary following the chapters.

In turn, we invite you to be open to exploring the distinct perspective of this book—the ways in which communication shapes our perceptions of the environment and our own relationships with the environment, as well as with each other. Increasingly, we have had people—students, colleagues, and activists—reach out to us about the high stakes of the environmental crises we face and how we maintain hope about everything from global climate negotiations to local interactions that shape our everyday lives. The pages that follow seek to provide accurate information as this book goes to press, which can be depressing or overwhelming at times, but they also draw on stories of successful social change that aim to inspire you.

KEY TERMS

Communication 6
Environment 7
Public sphere 7

PART I

Communicating for/about the Environment

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The first part of this book defines the field of environmental communication and provides a brief history of key terms we use to communicate for/about the environment, such as "nature" or "the commons," to illustrate how intertwined our understanding of "the environment" is with communication. When you look at an urban park like Central Park in New York City (pictured here), what words, feelings, and events do you associate with it? How is its value communicated or not to you?

CHAPTER 1

Defining Environmental Communication

All of us engage in environmental communication on a daily basis—whether or not we are wearing a T-shirt with an environmental message, bringing a reusable water bottle to class, debating with a peer about the ethics of eating burgers, joining a campus petition online about divesting from fossil fuel industries, voting to choose candidates who have strong environmental records, or biking home. No matter what we do, we are using verbal or nonverbal communication to reflect our attitudes about the environment. We also are shaped by countless environmental communication practices every day—from our peers, family, religious leaders, teachers, journalists, bloggers, politicians, corporations, entertainers, and more.

This chapter describes environmental communication as a subject of study and a set of practices that matter, shaping the world in which we live. As a timely and

The first section of this chapter provides a definition of *environmental communication;* then we identify seven areas of environmental communication in this ever-changing field, as well as why we define environmental communication as both a crisis discipline and a care discipline.

The second section introduces three themes that constitute the framework for this book:

- Communication as *symbolic action*
- The significance of communication to our understanding of and behavior toward the *environment*
- The public sphere (or spheres) as a vital discursive space in which competing voices engage about environmental matters

The final section describes some of these diverse voices, whose communication practices we'll study in this book.

significant field of study, our understanding of the environment and our actions within it depend not only on the information and technology available but also on the ways in which communication shapes our environmental values, choices, and actions in news, films, social networks, public debate, popular culture, everyday conversations, and more.

After reading this chapter, you should have an understanding of environmental communication as an area of study and an important practice in public life.

Defining Environmental Communication

The words *nature* and *environment* are contested terms whose meanings have evolved throughout history. We trace some of these meanings in Chapter 2. In this book, however, we introduce a specific way in which we come to know about—and relate to—the environment: the study of communication.

What Is "Environmental Communication"?

At first glance, a definition of *environmental communication* can be confusing if we define it simply as information or "talk" about environmental topics—water pollution, forests, climate change, pesticides, grizzly bears, and more. A clearer definition takes into account the roles of language, visual images, protests, music, or even scientific reports as different forms of **symbolic action**. This term comes from Kenneth Burke (1966). In his book *Language as Symbolic Action,* Burke stated that even the most unemotional language is necessarily persuasive. This is so because our language and other symbolic acts *do* something, as well as *say* something. Language actively shapes our understanding, creates meaning, and orients us to a wider world. Burke (1966) went so far as to claim that "much that we take as observations about 'reality' may be but the spinning out of possibilities implicit in our particular choice of terms" (p. 46). From this perspective, communication may focus on what we express (emotions, information, hierarchies, power, etc.), how we express it (in which style, through which media, when, by whom, and where, etc.), and/or with what *consequences* (cultural norms, political decisions, popular trends, etc.).

The view of communication as a form of symbolic action might be clearer if we contrast it with an earlier view. After World War II, Warren Weaver attempted to translate the work of Claude Elwood Shannon, a founder of information theory. Shannon himself imagined communication as a process of decrypting—that is, trying to clarify a complex message. When communication scholars refer to a "Shannon-Weaver model of communication," it is used to symbolize how communication can be imagined as the transmission of information from a source to a receiver through a specific channel to be decoded (Shannon & Weaver, 1949). Though Shannon and Weaver were interested in the infrastructure of telephone systems, David Berlo (1960) and others drew on their research to promote a "sender-message-channel-receiver"

(SMCR) model of communication. There was, however, little effort in this model to account for meaning or reception; instead, the focus was on what information was being shared with whom, and how.

Unlike the SMCR, symbolic action assumes that communication does more than transmit information one way, from experts to lay audiences. Sometimes, we misunderstand what someone is communicating. Sometimes, we reject what we're told. Sometimes, we reach consensus through dialogue with others. Although information is important, it is not the only facet relevant to communication that affects, moves, or persuades us (or not).

By focusing on symbolic action, then, we can offer a more robust definition of environmental communication that better reflects the complicated world in which we live. In this book, we use the phrase **environmental communication** to mean *the pragmatic and constitutive modes of expression—the naming, shaping, orienting, and negotiating—of our ecological relationships in the world, including those with nonhuman systems, elements, and species.* Defined this way, environmental communication serves two different functions:

1. *Environmental communication is **pragmatic**:* It consists of verbal and nonverbal modes of interaction that convey an instrumental purpose. Pragmatic communication greets, informs, demands, promises, requests, educates, alerts, persuades, rejects, and more. For example, a pragmatic function of communication occurs when an environmental organization educates its supporters and rallies public support for protecting a wilderness area or when the electric utility industry attempts to change public perceptions of coal with TV ads promoting "clean coal" as an energy source. "Buy this shampoo" or "vote for this candidate" are explicit verbal pragmatic appeals.

2. *Environmental communication is **constitutive**:* It entails verbal and nonverbal modes of interaction that *shape, orient,* and *negotiate* meaning, values, and relationships. Constitutive communication invites a particular perspective, evokes certain beliefs and feelings (and not others), fosters particular ways of relating to others, and thus creates palpable feelings that may move us. Let's illustrate this a little further.

University of Cincinnati Professor Stephen Depoe invites his students reading this textbook to Tweet examples of functions of environmental communication. In 2016, one student, @SornKelly, tweeted an image of a glass filled halfway with water, with the words *half empty* on one side and the words *half full* on the other. This classic English expression is a wonderful way to think about constitutive communication. By naming the same glass "empty" or "full," we are not only *describing* what we perceive and wish others to perceive; we are also *defining* the object in a way that *imbues an entire attitude.* Consider, for example, whether you have a half-empty or half-full attitude about climate change: How does that shape everything from your attitude in everyday life to which politicians garner your vote?

Constitutive communication, therefore, can have profound effects on when we do or do not define certain subjects as "problems." When climate scientists call our attention to "tipping points," they are naming thresholds beyond which warming "could trigger a runaway thaw of Greenland's ice sheet and other abrupt shifts such as a

dieback of the Amazon rainforest" (Doyle, 2008). Such communication orients our consciousness of the possibility of an abrupt shift in climate and its effects; it therefore constitutes, or raises, this possibility as a subject for our understanding—as opposed to being simply another number to signify carbon levels.

Communication about climate change occurs daily in news media, TV ads, social media, popular culture, and other sources. Select one example that interests you—from a news report about rising sea levels, a documentary on food scarcity or acidification of oceans, a TV show about electric cars, an ad for organic clothes, or a local event.

Find an example that uses both pragmatic and constitutive functions—that is, communication that may educate, alert, persuade, and so on, while also subtly creating meaning and orienting your consciousness. Then answer these questions:

What pragmatic function does this communication serve? Who is its intended audience? What is it trying to persuade this audience to think or do? How? What does the communication assume about the audience?

Does your example illustrate constitutive functions in its use of words or visual images? How do these invite a particular perspective or orient you to a set of concerns that establish or invoke a belief about a specific idea, practice, or event? How is something or someone imbued with meaning, value, or affective associations?

Symbolic action about the environment, then, not only describes but also defines who we are and want to be in relation to a wide range of environmental topics. Following are just some of these ways in which we can study environmental communication.

Ways of Studying Environmental Communication

Since the 1980s, environmental communication has proliferated as a professional field. Associated with such disciplines as communication, media, journalism, and information, it has emerged as a broad and vibrant area of study. Pezzullo (2017a) has identified seven general approaches existing today:

1. Environmental communication research focused on *environmental personal identity and interpersonal relationships* may involve assessing one's ecological footprint, autoethnography, consumption studies, a sense of self-in-place (Cantrill, 1998), environmental education practices, or studying groups' environmental attitudes and practices. This approach might also focus on intercultural distinctions and dialogues, such as varying perspectives on discourses of dwelling (Carbaugh & Cerulli, 2012) or ways of engaging the nonhuman (Salvador & Clarke, 2011). Although the emphasis of this book is on interactions in the public sphere, we hope that bringing in our own

stories and inviting you to act locally will help open up opportunities for you to make connections between personal and public life.

2. *Environmental organizational communication studies* inquire how certain institutions or networks talk about or organize around environmental matters. This area explores the hierarchal language, stories, rituals, roles, and/or rules of environmental and anti-environmental discourse affecting both our public and our everyday lives. Notable research includes, for example, scholarship on the discourses surrounding the U.S. government's production of nuclear energy, secrecy around those practices, and debates over the disposal of nuclear waste (Taylor, Kinsella, Depoe, & Metzler, 2007).

3. *Environmental science, technology, and health communication* explore a range of subjects, from personal choices about technology and interpersonal communication in labs and hospital rooms to risk assessments of environmental policymakers. These approaches focus less on public and popular discourses and more on personal or technical discourse communities, such as doctor–patient interactions, public health campaigns, and how scientists may communicate more effectively with the public. Some of this scholarship values structural critique, such as Mohan Dutta's (2015) compelling communication research in southeast Asia on how subaltern communities can embrace a culture-centered approach to public health decisions related to agriculture.

4. *Public participation in environmental decision making* draws on rhetoric, discourse studies, and organizational communication and reflects a commitment to democratic practices, principally ways to resolve or navigate controversies over public goods and the commons. When protest has not been successful or is desired to be avoided, studies of public participation inquire about the ways in which various stakeholders (for example, loggers, forest activists, and businesses) contribute to decisions about environmental policies and projects; studies include the diverse voices and interactions (verbal and nonverbal) that shape choices, such as management of a community's water supply (Sprain, Carcasson, & Merolla, 2014).

5. *Environmental mass media studies* have become popular at a time when climate scientists increasingly are eager to reach broader audiences. Drawing more on a social scientific perspective, this approach includes discourse analysis of mainstream news coverage of environmental topics, studies of the social construction and/or framing of the environment in the media, visual green brands, and environmental media effects, including framing, cultivation analysis, and narrative analysis (Boykoff, 2007; Carvalho & Peterson, 2012).

6. *Green applied media and arts* is a broad umbrella term for those environmental practitioners and scholars who focus on *production*: in a specific medium, its circulation, its intermediation, and/or technology-based arts (including photo imaging, video, digital designs, sound, and live performance). This category may focus on environmental journalism, public relations, green design, environmental architecture, and more. Green applied media and arts could involve, for example, how environmental journalists are moving from a primarily print form to digital and

social media platforms, such as producing or linking to a documentary short within a story. Green arts might also involve community poetry slam performances to raise awareness about farmworker lives in the global South or environmental scientists and artists who work collaboratively to raise awareness through exhibits in public spaces.

7. *Environmental rhetoric and cultural studies* bridge fiction and nonfiction; individual and collective expression; verbal and nonverbal interactions; communication face-to-face or face-to-screen; concerns for meaning, materiality, and affect; and more. Rhetoric and cultural studies primarily may involve analysis of a range of communicative phenomena—language, discourse, visual texts, popular culture, place, environmental advocacy campaigns, movements, staged performances, and/or controversies in a public sphere. For such studies, thinking about context, voice, creativity, and judgment are vital. Less interested in universal claims, rhetoric and cultural studies explore the relationship among bodies, institutions, and power within specific situations or conjunctures. Topics vary widely, including the environmental justice movement's foregrounding the relationship between racial injustices and environmental degradation; the commodification of human–nonhuman animal relationships on eco-tours; and the cultural salience of environmental documentary films or cli-fi films.

Given the breadth of these broad approaches, can there be a common thread in their undertakings? We believe that there is, and we propose in the next section that this tread is *an ethical dynamic or dialectic between crisis and care.*

The Ethics of Crisis and Care

In the inaugural issue of *Environmental Communication: A Journal of Nature and Culture,* Cox (2007) proposed that environmental communication is a **crisis discipline**. This argument drew on the Society for Conservation Biology's stance that, like cancer biology, conservation biology has an ethical norm as a "crisis-oriented" discipline in addressing the threat of species extinction. Similarly, we embrace a crisis discipline frame for environmental communication as a field—and practice—dedicated to addressing some of the greatest challenges of our times, but a frame that also foregrounds the *ethical* implications of this orientation.

While work in environmental communication addresses cancer, climate chaos, disappearance of wildlife habitat, toxic pollution, and more as crises, we also believe the stakes of such crises invite a dialogue or dynamic relationship with an ethic of concern or care. As Cox (2007) observed,

> scholars, teachers, and practitioners have a duty to educate, question, critically evaluate, or otherwise speak in appropriate forums when social/symbolic representations of "environment," knowledge claims, or other communication practices are constrained or suborned for harmful or unsustainable policies toward human communities and the natural world. Relatedly, we have a responsibility through our work to identify and recommend practices that fulfill the first normative tenet: *to enhance the ability of society to respond appropriately to environmental signals relevant to the well-being of both human civilization and natural biological systems.* (p. 16, emphasis in original)

This ethical duty gives value to humans and nonhuman systems, as well as to our communication both inside and outside the academy. It assists those who want to assert that environmental communication scholarship is contributing not solely to existing literature, but also to the wider struggles of which research is a part. Indeed, some scholars have argued that environmental communication as an *ethic of crisis and care* should incorporate nature that cannot speak for itself, listening to a broader range of signals.

As a consequence, while we endorse the field as a crisis discipline, we also embrace environmental communication as a "care discipline" (Pezzullo, 2017a). As a **care discipline**, environmental communication involves research devoted to unearthing human and nonhuman interconnections, interdependence, biodiversity, and system limits. This means that we have not only a duty to *prevent* harm but also a duty to *honor* the people, places, and nonhuman species with which we share our world. This ethic may be witnessed in indigenous and feminist thought (Whyte & Cuomo, 2015), documentaries, and stage performances that express, for example, a love of place, the cultural centrality of a particular food, the millions who visit national parks annually as tourists with limited vacation time and money, animal studies of affectionate interspecies relations, and intergenerational rights policy in international law.

As a care discipline, there are phrases circulating in environmental discourse that capture this sentiment, including the goal of *not just surviving but thriving* and of *not just bouncing back from a disaster but bouncing forward as well.* These discourses aim to foster a world that exceeds reactionary practices and includes hope for generative community building in which our dreams and ideals may help shape our plans and platforms. Although dialogue that allows *only* space for happiness and optimism can feel oppressive, the opposite also rings true: Creating spaces that enable only sadness and cynicism can feel oppressive as well.

Crisis is a vital motivation for environmental communication, but other drives are important as well, including those spaces (environments) and conversations that are inspirational, healing, spiritual, profitable, and/or transformative. By coupling crisis and care as a dynamic and intertwined dialectic, we arguably might enable recognition of existing and emergent environmental communication on the wider range of emotional, physical, and political responses that warrant our attention.

Let's now bring to these perspectives on the field of environmental communication three core principles that serve as the framework for the remaining chapters of this book:

1. Human communication is *symbolic action.*
2. As a result, our beliefs, choices, and behaviors about the *environment* are imagined, shared, and judged through *communication.*
3. The *public sphere* (or spheres) is a discursive space in which competing voices engage each other about environmental matters as a cornerstone of democratic life.

Communication, the Environment, and the Public Sphere

The three principles organizing the chapters in this book obviously overlap (for example, our beliefs about an environmental topic occur as we converse with others in public spaces), but here, we want to introduce and illustrate these three briefly and then draw on them in each of the remaining chapters.

Communication as Symbolic Action: Wolves

Earlier, we defined environmental communication as a form of symbolic action. Whether considered as pragmatic or constitutive functions, our symbolic acts *do* something. Films, websites, apps, photographs, popular magazines, and other forms of human symbolic behavior are produced by us and act on us.

As such, communication leads to real-world outcomes. Consider the American gray wolf. Concern for the extinction of wolves has not always been a concern of many Americans. Wolves, for example, had been extirpated from the Northern Rocky Mountains by the mid-20th century through intensive "predator control" (trapping, poisoning, or shooting). It was not until the mid-1990s that the U.S. Fish and Wildlife Service initiated a restoration plan for wolves.

In 1995, Secretary of the Interior Bruce Babbitt celebrated the return of the first American gray wolf to Yellowstone National Park in a speech marking the event. Earlier that year, he had helped carry and release the wolf into the transition area in the park where she would mate with other wolves also being returned. After setting down the wolf, Babbitt (1995) recalled, "I looked . . . into the green eyes of this magnificent creature, within this spectacular landscape, and was profoundly moved by the elevating nature of America's conservation laws: laws with the power to make creation whole" (para. 3).

Babbitt's purpose in speaking that day was to support the beleaguered Endangered Species Act, which was under attack in the Congress at the time. In recalling a Judeo-Christian biblical story of a flood, Babbitt evoked a powerful cultural narrative for revaluing wolves and other endangered species for his audience. In retelling this ancient story, he invited them to embrace a similar ethic in the present day:

> In the words of the covenant with Noah, "when the rainbow appears in the clouds, I will see it and remember the everlasting covenant between me and all living things on earth." . . . Thus we are instructed that this everlasting covenant was made to protect the whole of creation. We are living between the flood and the rainbow: between the threats to creation on the one side and God's covenant to protect life on the other." (Babbitt, 1995, para. 56)

Communication orients us toward events, people, and, yes, wildlife. And because different individuals may value nature in diverse ways, we find our voices to be a part of a conversation with others. Secretary Babbitt invoked an ancient story of survival to invite the American public to appreciate anew the Endangered Species Act. So, too,

U.S. National Park Service, U.S. Public Domain

Photo 1.2 Secretary of the Interior Bruce Babbitt, releasing the first American gray wolf back into Yellowstone National Park in 1995. States and various organizations continue to debate wolf reintroduction as a result of the pragmatic and constitutive communication associated with the species.

our own contemporary communication helps us make sense of our own relationships with nature, what we value, and how we shall act.

Wolf reintroduction policies continue to be negotiated in the United States, from children's books to state and federal wildlife debates. How people debate the reintroduction of wolves reflects the dual functions of symbolic action we highlighted earlier. Wolf policy might be a pragmatic debate with a clear decision (will we or won't we?), yet the discourse creating the grounds for those judgments is constitutive: What does a wolf symbolize? Are wolves a keystone species in an ecosystem? Are they a predator of livestock and, therefore, livelihoods? Does "the fierce green fire" in their eyes hold intrinsic value and insight beyond human comprehension (Leopold, 1949, p. 138)? Your responses to these questions constitute what a wolf means to you and shapes whether you might support wolf reintroduction.

Human communication, therefore, is symbolic action because we draw on symbols to construct a framework for understanding and valuing and to bring the wider world to others' attention.

Why Communication Matters to "the Environment"

It may seem odd to place "the environment" in quotation marks. After all, the environment exists: Lead in water can cause brain damage, large glaciers in Antarctica are

calving into the Southern Ocean due to planetary warming, and we need oxygen to breathe. So, what's going on?

Simply put, whatever else "the environment" may be, it is deeply entangled with our very human ways of interacting with, knowing, and addressing the wider world. As Norwegian environmentalist Arne Naess (2000) once exclaimed, "Having been taken at least twice by avalanches, I have never felt them to be social constructions. But every word I utter about them may have social origins" (p. 335). At a basic level, our beliefs, attitudes, and behaviors toward the environment are shaped by human ways of communicating.

Consider, for example, *naming* (which we define and address in more detail in Chapter 3). When we name, we also orient ourselves. Naming can reflect how we value or devalue, understand or are confounded by, or find hardship or rejuvenation in the environment. As Christine Oravec (2004) observed in her essay on Utah's Cedar Breaks National Monument, this act of naming is not only a mode by which we socially construct and know the natural world; it also orients us and thus "influences our interaction with it" (p. 3). For instance, is *wilderness* a place of primeval beauty, or is it a territory that is dark, dangerous, and alien to humans? Many European colonizers in New England viewed North American forests and the indigenous peoples living in them as forbidding and dangerous. Puritan writer Michael Wigglesworth, for example, named or described the region as

> A waste and howling wilderness,
> Where none inhabited
> But hellish fiends, and brutish men
> That Devils worshiped. (quoted in Nash, 2001, p. 36)

As a result of these different orientations to the environment, writers, citizens, conservationists, poets, scientists, business lobbyists, and more have communicated for centuries over whether or not forests should be logged, rivers dammed, air quality regulated, and endangered species protected.

Public Spheres as Democratic Spaces

A third principle central to this book is the idea of the public sphere—or, more accurately, public spheres. Earlier, we defined a *public sphere* as the forums and interactions in which different individuals engage each other about subjects of shared concern or that affect a wider community, from neighborhoods to international relations.

The German social theorist Jürgen Habermas (1974) offered a similar definition of the ideal of the public sphere when he observed that "a portion of the public sphere comes into being in every conversation in which private individuals assemble to form a public body" (p. 49). As we engage with others, we translate our private or technical topics into public ones and, thus, create circles of influence that affect how we

imagine the environment and our relationships within it. Such translations of private concerns into public matters occur in a range of forums and practices that give rise to something akin to an environmental public sphere—from a talk at a campus environmental forum to a scientist's testimony before a congressional committee. In public hearings, newspaper editorials, blog posts, speeches at rallies, street festivals, and countless other occasions in which we engage others in conversation or debate, the public sphere emerges as a potential sphere of influence.

But private concerns are not always translated into public action, and technical information about the environment may remain in scientific journals or proprietary files of corporations. Therefore, it is important to note that other spheres of influence exist parallel to the public sphere. Communication scholar Thomas Goodnight (1982), for example, named two other areas of influence the *personal* and *technical* spheres; the personal is one's private opinion, and the technical is scientific, specialized knowledge. The public sphere, the primary focus of this book, is collective opinion, knowledge, and action. All spheres shape the world we live in, but all do not carry the same values, particularly when considering democratic governance.

The idea of the public sphere itself, however, can be misunderstood. We want to dispel a few misconceptions early on. First, the public sphere is not only, or even primarily, an official space. Although there are officially sponsored spaces such as public hearings that invite citizens to communicate about the environment, these forums do not exhaust the public sphere. In fact, discussion and debate about environmental concerns often occur outside of government meeting rooms and courts. The early 5th-century (BCE) Greeks called these meeting spaces of everyday life *agoras,* the public squares or marketplaces where citizens gathered to exchange ideas about the life of their community. Similarly, we find everyday spaces and opportunities today, publicly, to voice our concerns and influence the judgment of others about environmental concerns, from social media apps to marches in the streets.

Second, the public sphere is neither monolithic nor a uniform assembly of all citizens. As realms of influence are created when individuals engage others, public spheres may assume concrete and local forms, including calls to talk radio programs, blogs, letters to the editor of newspapers, or local meetings where citizens question public officials. Rarely does every person impacted participate equally or is every idea expressed.

Third, far from elite conversation or "rational" forms of communication based on norms of which cultures and bodies are imaged as "reasonable" or not, public spheres are most often the arenas in which popular, passionate, and democratic communication occurs. Such a view of the public sphere acknowledges the *diverse* voices and styles that characterize a robust, participatory democracy. In fact, in this book, we introduce the voices of ordinary citizens and the special challenges they face in gaining a hearing about matters of environmental and personal survival in their communities.

Diverse Environmental Voices in the Public Sphere

The landscape of environmental communication is complex, as is the possibility of having one's voice heard. As communication scholar Eric King Watts (2001) emphasizes, "voice" is not merely predicated upon if one is speaking but might be better appreciated as an embodied, ethical, and emotional occurrence that cannot be heard or ignored void of communal contexts and commitments. Whether or not someone feels capable of expressing his or her voice and feels heard is connected to the health of the public sphere. While Watts's research has focused on race and conservative voices, his argument is relevant to the ways in which environmental communication scholars have long studied voice (Peeples & Depoe, 2014).

In this final section, we describe some of the voices you may hear in the public sphere on environmental matters. Individuals in these six groups take on multiple communication roles—writers, press officers, group spokespersons, community or campus organizers, information technology specialists, communication directors, marketing and campaign consultants, and more. As we discuss in the book, their embodied identities and styles of communicating matter to the ways in which they are heard or not. In this introduction to the topic, we want to emphasize how various voices in public spheres that communicate about the environment may be motivated for different reasons and play different roles.

Citizens and Civil Society

Residents who engage public officials about the local environment—such as dealing with asbestos in their children's school or establishing a neighborhood park—and who organize their neighbors to take action are the common sources of environmental change. Citizens or residents of a community are considered part of **civil society**, growing out of families and the private sphere. Let us explore how these spheres interact with an extended example.

In 1978, Lois Gibbs and her neighbors in the working-class community of Love Canal in upstate New York became concerned when, after they noticed odors and oily substances surfacing in the local school's playground, their children developed headaches and became sick. At first, these illnesses were just private concerns: *My kid doesn't feel well.* Then, Gibbs began talking with some of her neighbors about their similar struggles, which made her begin to think this was a public issue, something worth thinking about as more than just her private family but related to her larger community (see Photo 1.3). She also read in a newspaper report that Hooker Chemical Company, a subsidiary of Occidental Petroleum, had buried dangerous chemicals on land it later sold to the school board (Center for Health, Environment, and Justice, 2003), giving her a source of pollution to make what once were private health concerns feel like a matter for political debate.

Despite an initial denial of the problem by state officials, including bias against the possibility that housewives might be experts worth hearing, Gibbs and her neighbors sought media coverage, carried symbolic coffins to the state capital, marched on

Associated Press/Alex Milan Tracy

Photo 1.3 Everyday people can make a difference when they don't give up sharing their concerns with family and neighbors. Organizing collective action can start with a conversation at the grocery store, knocking on a door, making a phone call, or any number of communication actions anyone can take any day. Some, like those pictured here, turn to protests to defend their homes.

Mother's Day, and lobbied health officials to take their concerns seriously. Finally, in 1982, the residents succeeded in persuading the federal government to relocate many of those who wanted to leave Love Canal. The U.S. Justice Department also prosecuted Hooker Chemical Company, imposing large fines (Shabecoff, 2003, pp. 227–229). Today, Lois Gibbs leads a nongovernmental organization, the Center for Health, Environment & Justice (CHEJ), to provide a clearinghouse of technical and firsthand knowledge to those seeking help in assessing risks (see http://chej.org).

Nongovernmental Organizations

The United Nations defines a *nongovernmental organization* (NGO) as a nonprofit, voluntary citizens' group that is organized locally, nationally, or internationally and speaks. Environmental NGOs are among the most visible sources of environmental communication in public spheres. These groups come in a wide array of organizational types and networks, online and on the ground.

NGOs range from grassroots groups in local communities to nationwide and internationally established organizations. In every country, NGOs exist to advocate for a wide range of environmental concerns and hopes. In India, for example, Navdanya, meaning "nine seeds" (navdanya.org), is a women-centered movement for protecting

native seeds and biological diversity, while the African Conservation Foundation (africanconservation.org) is a continent-wide effort to protect Africa's endangered wildlife and their habitats. Other groups, such as Greenpeace (greenpeace.org) and Avaaz (avaaz.org), organize on an international scale in the fight against climate change and for environmental sustainability. Notably, students and campus groups have been at the forefront of environmental change throughout history. For example, in the United States, environmental activists are coordinating with wider networks and environmental organizations like the Sierra Student Coalition's "Beyond Coal" campaign and 350.org's global push for divestment from fossil fuel companies.

Anti-environmental NGOs also exist. Sometimes, these are grassroots-driven, and sometimes, they are industry front groups attempting to sound like civil society voices. Though this book primarily focuses on the wide range of environmental advocates, we also bring your attention to voices like those who oppose wolf reintroduction or actions to address climate change to emphasize the ways in which the public sphere is a space of contest, in which the challenge is not just deciding what you want to communicate but also finding ways to move others who may not agree. Finding common ground with those who might seem to disagree can be an important first step for NGOs working across political affiliations.

Politicians and Public Officials

Governments are organized at a wide range of scale, including but not limited to cities, states, nations, and intergovernmental organizations. Within any of these governing bodies, there is a range of public figures in charge of managing and communicating about environmental matters, including politicians and public officials. Politicians and public officials are charged with making decisions about public goods, such as utilities, public squares, national forests, and more, as well as making decisions about private interests. They also reflect whether or not a society is democratic, legislating, judging, policing, and protecting access to public goods, public speech, public participation, public spaces, public policy, and other elements that indicate the health of a democracy. While publics may exist without a government, governmental support can ideally enable under-heard, more diverse voices to have greater opportunities to be heard. Furthermore, the environment is a significant topic in most elections; the voices running for office or working in government, therefore, reflect the whole spectrum of political opinions.

Businesses

The United Nations organizes environmental and other intergovernmental decision making around three sectors: civil society and NGOs, governments, and business. The business sector represents corporations or what sometimes is referred to as "the private sector." This realm of public life is referred to as "private" because, unlike governments, these organizations have little legal requirement to make decisions, knowledge, or opinions public.

As with all other voices we note here, the voices of corporations span the spectrum of environmental communication. Some corporations are building solar panels as

thin as hair and imagining how to improve public health. Other businesses may prioritize private financial gain over improving the world we all live in, launch disinformation campaigns, avoid paying taxes for the greater good, pollute, and impede environmental legislation. No matter the intent or impact, the voices of businesses in the public sphere are undeniably present, from lobbying governments on decision making to promoting public relations through multimedia campaigns.

Scientists and Scholars

Much of what we know and believe about communication, the environment, and the public sphere has been established and studied by scientists and other scholars. In public spheres more broadly, environmental scholars play many roles: as organizers and advisors in civil society, with NGOs, as consultants for governments and businesses, and in communicating their findings in published reports, public testimony, editorials, blogs, documentaries, performances, and more.

In 2011, environmental scholars and practitioners established the International Environmental Communication Association (theieca.org) to coordinate research worldwide. Interest has grown not only in North America, the United Kingdom, and Europe, where "environmental communication has grown substantially as a field" (Carvalho, 2009, para. 1), but also throughout the world. We draw on these voices throughout the book.

Notably, scientists working for universities, governments, and corporations face different limitations and possibilities when communicating in the public sphere than in other areas. Climate scientists, for example, have provided vital research and testimony that has shaped public understanding of anthropogenic climate change, prompting public debate over actions by governments. Early warnings of scientists have contributed substantially to public awareness, debate, and corrective actions on everything from asthma in children to how species may adapt, resist, and evolve in relation to climate changes. Scientists also can help us, for example, identify keystone species and make connections between plankton in the ocean and our ability to breathe. Given the resistance to science that many have observed, particularly since the 2016 U.S. presidential election, more and more climate scientists specifically are considering how to improve the communication of their findings to the public in more effective and urgent ways.

Journalists

It would be difficult to overstate the impact of journalism—both "old" and new—on environmental communication and the public sphere. Journalists not only share information but also may act as conduits to amplify other voices—citizens, public officials, corporate spokespersons, academics, and more—seeking to influence public attitudes and decisions about environmental matters. A healthy democracy long has been gauged by the health of the press.

Journalism has gone through a great transformation in our lifetime, given changes in communication technologies. With more people having greater access to share information more quickly, over farther distances, the role of journalists has adapted.

Today, most of us do not worry about a lack of information; instead, the greater challenge is figuring out how to sort through, critically think about, and make judgments about environmental news. Who can we trust not to be driven by bias over evidence? Which sources of information can help us make links to causes and outcomes instead of just presenting isolated segments that can grab our attention momentarily? How will news organizations raise funds for long-term investigative research to hold governments and industry accountable?

SUMMARY

This chapter defined environmental communication, its major areas of study, and the principal concepts around which the chapters of this book are organized:

- The term *environmental communication* itself was defined as the *pragmatic and constitutive modes of expression—the naming, shaping, orienting, and negotiating—of our ecological relationships in the world, including those with nonhuman systems, elements, and species.*
- Using this definition, the framework for the chapters in this book builds on three core principles:
  1. Human communication is symbolic action.
  2. As a result, our beliefs, choices, and behaviors about the environment are imagined, shared, and judged through communication.
  3. The public sphere (or spheres) is a discursive space in which competing voices engage each other about environmental matters as a cornerstone of democratic life.

Now that you've learned something about the field of environmental communication, we hope you're ready to engage the range of topics—from the challenge of communicating about climate change to your right to know about pollution in your community—that make up the practice of speaking for/about the environment. And along the way, we hope you'll feel inspired to join the public conversations about environmental crisis and care.

SUGGESTED RESOURCES

- Comedian John Oliver hosts popular scientist Bill Nye on his show to try to explain what "consensus" is: *Last Week Tonight with John Oliver: Climate Change Debate*. (2014, May 11). HBO. Available at https://www.youtube.com/watch?v=cjuGCJJUGsg.
- To consider more about the relationship between environmental communication and ethics, read the following article: Bruner, M., & Oelschlaeger, M.

(1994). Rhetoric, environmentalism, and environmental ethics. *Environmental Ethics, 16*(4), 377–396.

- The following book explores how people give voice to, and listen to the voices of, the environment: Peeples, J., & Depoe, S. (Eds.). (2014). *Voice and environmental communication.* Basingstoke, UK: Palgrave Macmillan.
- Follow or subscribe to an environmental daily news site, like one of the following: Environmental News Network (enn.com), Grist (grist.org), *The Guardian*'s Climate Change page (theguardian.com/environment/climate-change), or Al Jazeera's Environment News page (aljazeera.com/topics/categories/environment.html).

KEY TERMS

Care discipline 17
Civil society 22
Constitutive 13
Crisis discipline 16
Environmental communication 13
Pragmatic 13
Symbolic action 12

DISCUSSION QUESTIONS

1. Is nature ethically and politically silent? What does this mean? If nature is politically silent, does this mean it has no value apart from human meaning? Which environmental voices are you trying to hear?
2. The rhetorical theorist Kenneth Burke (1966) claims that "much that we take as observations about 'reality' may be but the spinning out of possibilities implicit in our particular choice of terms." Does this mean we cannot know "reality" outside of the words we use to describe it? What did Burke mean by this? Do you agree or disagree?
3. With some people living in segregated neighborhoods and many using personalized digital media newsfeeds, do we hear a diversity of voices in our everyday lives? What steps do you take to hear voices and opinions that differ from your own?
4. Watch this toy store ad on YouTube: https://www.youtube.com/watch?v=WHhBaU4cFDQ. Pragmatically, this company wants its audience to go to its toy stores and buy more toys that it sells; what is less obvious is the constitutive communication of the ad, deliberate or not: How does the company constitute its toys in contrast to nature? What assumptions does it make? What stereotypes does it reinforce or challenge about people? How does its constitutive communication reflect or challenge your values?

"Many people assume that I must have been inordinately brave to face down the thugs and police during the campaign for Karura Forest. The truth is that I simply did not understand why anyone would want to violate the rights of others or ruin the environment. Why would someone destroy the only forest left in the city and give it to friends and political supporters to build expensive houses and golf courses?" (Wangari Maathai, 2008, p. 272)

CHAPTER 2

Contested Meanings: A Brief History

Nature might well be thought of as the original Rorschach test.

—Jan E. Dizard

We need different ideas because we need different relationships.

—Raymond Williams

Since the latter half of the 20th century, few words have acquired the symbolic currency of *environment*. No matter which culture or time period one studies, it is important to realize that our beliefs about the environment and how we communicate about them are contingent; that is, they have and can change. Like Rorschach inkblot tests used by psychologists to determine one's state of mind, the hopes and fears we feel in relation to the environment reflect a good deal about ourselves in a specific place and moment of time, in addition to the environment we are describing. To illustrate this dynamic relationship and significant legacies that continue to shape perceptions today, this chapter traces some of the more notably contested meanings of *environment* in the United States and, to a lesser extent, globally.

Throughout this chapter, we imagine each of these historical periods through notable changes in **discourse**, or a pattern of knowledge and power communicated through human expression, both linguistic and nonlinguistic (Foucault, 1970). One way to analyze discourses is to identify their conditions of possibility, or how they reflect both previous attitudes and emerging antagonisms of a culture in a particular period of history. In everyday language, the term **antagonism** means a *conflict* or *disagreement*. Here, we are using the term more specifically to signal the cultural

In this chapter, we'll describe five pivotal historical periods in the United States through which individuals and new movements contested the dominant attitudes about the environment and what society accepted as an environmental problem or solution.

The first section describes discourses from the 1600s to the 1900s that shaped what some understood as nature: romanticism, nationalism, and transcendentalism.
The second section defines two influential discourses: preservationists, who challenged dominant views about exploiting wilderness, and conservationists, who promoted an ethic of using natural resources wisely.
The third section describes the rise in the mid-20th century of an ecological discourse, challenging pollution to protect human health, as well as an environmental commons.
The fourth section describes "sacrifice zones" of people and places and the discourse of environmental justice, which contests a view of nature as a place void of humans' everyday lives.
Finally, the fifth section defines three key contemporary discourses: (a) sustainability, (b) climate justice, and (c) a "just transition."

recognition of the *limit* of an idea, a widely shared viewpoint, or an ideology (Laclau & Mouffe, 2001). A conceptual limit is recognized when questioning or criticism reveals a prevailing view to be inadequate or unresponsive to new demands. Recognizing this inadequacy creates an opening for alternative voices—and ideas to redefine what is appropriate, wise, or ethical within a specific context—in this case, the changing relationship between people and the environment.

In this chapter, we underscore major antagonisms that have defined environmental discourse when new voices have challenged prevailing cultural values. This is not an exhaustive list globally or even from the United States, but highlighting these antagonisms is meant to illustrate how contested meanings of environmental discourses are shaped by culture and shape culture in return.

Overall, this chapter contextualizes and defines a cluster of words that often serve as synonyms for the environment, but signify distinct meanings and power relations—*nature, wilderness, natural resources, ecology, public health, the commons, sustainability, environmental justice, climate justice,* and *just transition.* Following the definition of environmental communication in Chapter 1, each of the following discourses is born of *pragmatic* exigencies and *constitutes* different ways of relating with the environment.

Learning to Love Nature

Although many indigenous cultures valued Earth, nonhuman animals, and future generations, many early European settlers did not immediately value nature in North America. Colonist Michael Wigglesworth, for example, described the dark forests in 1662 as "a waste

and howling wilderness" (Nash, 2001, p. 36). "Progress" often was defined by dominating nature and indigenous peoples to make way for colonial farms and cities. Writing from a European perspective of "the New World" at Plymouth in 1620, William Bradford incredulously asked, "What could they see but a hideous and desolate wilderness, full of wild beasts and wild men?" With that phrase, he began what environmental historian Roderick Nash (2001) called an American "tradition of repugnance" for nature and people associated with it (p. 24).

Eventually, voices in art, in literature, and on the lecture circuits began to challenge the colonial view of nature solely as alien and exploitable through the championing of wilderness. In his classic study, *Wilderness and the American Mind,* Roderick Nash (2001) identifies multiple sources of this cultural shift away from early colonial attitudes, including the following:

1. *Romantic aesthetics:* "Appreciation of wilderness," Nash argues, "began in cities" (2001, p. 44). In the 18th and early 19th centuries, English nature poets and aestheticians, such as William Gilpin, "inspired a rhetorical style for articulating [an] appreciation of uncivilized nature" (p. 46). These urban dwellers were removed from the day-to-day hardships of living in rural areas and fostered, in American art and literature, an ideal of sublimity in wild nature. The **sublime** was an aesthetic category that associated God's influence with the feelings of awe and exultation that some experienced in the presence of wilderness. "Combined with the primitivistic idealization of a life closer to nature, these ideas fed the Romantic movement which had far-reaching implications for wilderness" (Nash, 2001, p. 44). Carleton Watkins's 1861 photographs of Yosemite were pivotal to establishing the area as the nation's first protected land and in fostering admiration for the environment (DeLuca & Demo, 2000).

2. *American national identity:* Believing that the new nation could not match the reverence many felt for Europe's illustrious monuments and cathedrals, advocates of a uniquely American identity championed the distinctive characteristics of its natural landscape. "Nationalists argued that far from being a liability, wilderness was actually an American asset" (Nash, 2001, p. 67). Writers and artists of the Hudson River school, such as Thomas Cole, celebrated the wonders of the American wilderness by defining a nationalistic style in fiction, poetry, painting, and eventually photography. In his 1835 "Essay on American Scenery," for example, Cole argued, "American scenery . . . has features, and glorious ones, unknown to Europe. The most distinctive, and perhaps the most impressive, characteristic of American scenery is its wildness" (quoted in Nash, 2001, pp. 80–81).

3. *Transcendentalist ideals:* The 19th-century philosophy of **transcendentalism** also proved to be an important impetus for revaluing wild nature. Transcendentalists held that "natural objects assumed importance because, if rightly seen, they reflected universal spiritual truth" (Nash, 2001, p. 85). Among those who drew on such beliefs to challenge older discourses about wilderness was the writer and philosopher Henry David Thoreau. Thoreau (1893/1932) argued that "in Wildness is the preservation of

the World," and that there exists "a subtle magnetism in Nature, which, if we unconsciously yield to it, will direct us aright" (pp. 251, 265). The Union of Concerned Scientists and Penguin Classic Books (2009) have launched an interactive digital book titled *Thoreau's Legacies: American Stories About Global Warming* in tribute to Thoreau's keen observations of the world around him and his ability to inspire environmental activists, including John Muir and Rachel Carson, both of whom we discuss further in this chapter.

With the articulation of each of these discourses, though they vary in many ways, the focus primarily is on constituting the environment as **nature**, or the physical world that generally exceeds human creation (trees, birds, bears, clouds, rainbows, oceans, seashells, and so forth). Of course, today, from practices in landscape architecture that radically transform the Earth (such as New York City's Central Park) to the capability of genetically cloning animals, this distinction between what humans can create and what we cannot is more complicated, which perhaps is why *environment* has become a more prominent term than *nature* today.

Nevertheless, how humans relate with this definition of the environment remains an ongoing cultural anxiety. Consider, for example, Richard Louv's (2008) best-selling book *Last Child in the Woods: Saving Our Children From Nature Deficit Disorder,* in which he argues that in an age of increased technology, we must remember how direct exposure to nature is essential for emotionally and physically healthy human development and our ability to respond to current environmental crises. Those concerns seem to resonate with early beliefs that the salvation of urban dwellers would be found in nature.

Wilderness Preservation Versus Natural Resource Conservation

As more people began to imagine the value of the environment, diverging viewpoints came about as to its use. Should we set spaces aside where humans tread lightly in order to enable nature to thrive? Or should we find ways to cultivate nature efficiently for increasing human demands for wood, paper, drinking water, and more?

John Muir and the Wilderness Preservation Movement

By the 1880s, key figures had begun to argue explicitly for the **preservation** of wilderness areas, that is, to maintain certain places and protect them from harm, in order to safeguard water supplies and areas for recreation (Nash, 2001). Arising out of these efforts were campaigns to designate spectacular regions of natural scenery as preservation areas, such as Yosemite Valley and the Mariposa Grove of Giant

Sequoias in California. The discourse of preservation was invoked to ban commercial use of these areas, instead keeping them for appreciation, study, and low-impact outdoor recreation.

One of the leaders of the U.S. preservation movement was Scottish immigrant John Muir, who was influenced by Thoreau and whose own literary essays in the 1870s and 1880s did much to arouse national sentiment for preserving Yosemite Valley. Communication scholar Christine Oravec (1981) has observed that Muir's essays evoked a romantic **sublime response** from his readers through his description of the rugged mountains and valleys of the Sierra Nevada. This response on the part of readers was characterized by (a) an immediate awareness of a sublime

Library of Congress, U.S. Public Domain

Photo 2.2 Shown here, posing on Overhanging Rock at the top of Glacier Point in 1903, John Muir led U.S. President Theodore Roosevelt into Yosemite Valley as part of his continuing efforts to advocate for the preservation of wilderness areas. To celebrate the 100th anniversary of the National Park Service in 2016, the first African American president of the Sierra Club, Aaron Mair, shook hands with the first African American U.S. President, Barack Obama, in Yosemite National Park. (You can see a photo of Mair and Obama shaking hands here: http://www.sierraclub.org/sites/www.sierraclub.org/files/Mair%20Obama.jpg.)

object (such as Yosemite Valley), (b) a sense of overwhelming personal insignificance and awe in the object's presence, and (c) ultimately a feeling of spiritual exaltation (p. 248).

Muir's influence and the support of others led to a long-term national campaign to preserve Yosemite Valley, including the art of George Catlin (Mackintosh, 1999) and the landscape photographs of Carleton Watkins (DeLuca & Demo, 2000). By 1890, these combined efforts resulted in the U.S. Congress's creation of Yosemite National Park, "the first successful proposal for preservation of natural scenery to gain widespread national attention and support" from the public (Oravec, 1981, p. 256).

Logging of giant redwood trees along California's coast in the 1880s also fueled interest in the preservation movement. Laura White and the California Federation of Women's Clubs were among those who led successful campaigns to protect redwood groves in the late 19th century (Merchant, 2005). As a result of these early campaigns, groups dedicated to wilderness and wildlife preservation began to appear: John Muir's Sierra Club (1892), the Audubon Society (1905), the Save the Redwoods League (1918), the National Parks and Conservation Association (1919), the Wilderness Society (1935), and the National Wildlife Federation (1936). In the 20th century, these groups launched other preservation campaigns that challenged exploitation of these wild lands. The National Parks Act of 1916 established a national system of parks that continues to expand today. Other designations of parks, wildlife refuges, and wild and scenic rivers would follow into the 21st century. Preservationists' most significant victory was the 1964 Wilderness Act, which authorized Congress to designate **wilderness** areas using the following definition:

> A wilderness, in contrast with those areas where man [*sic*] and his own works dominate the landscape, is hereby recognized as an area where the earth and its community of life are untrammeled by man, where man himself is a visitor who does not remain.

The idea of wilderness as a concept created by lone European male heroes is a convenient way to share this history, but historical records show a greater role for women than usually noted (Merchant, 1995). Communication studies scholar and wilderness advocate Kevin DeLuca (2001) also persuasively has argued that contemporary concerns over the role of the private sector in environmental organizations and matters has an ahistorical and mythic perspective of history: "The concern is predicated on imagining environmentalism to be as pristine as the wilderness it valorizes" (p. 634). In contrast, DeLuca points out,

> In 1851, Captain James Savage and the Mariposa Battalion stumbled upon Yosemite Valley in pursuit of their genocidal goal of cleansing the region of Native Americans.

> For the Ahwahneechee, Yosemite was not wilderness but home. The campaign of the Mariposa Battalion in the 1850s literally and figuratively cleared the ground for the construction of Yosemite as pristine wilderness. One of the soldiers, Lafayette Bunnell, admired the scenery and, recognizing the tourist potential, established a toll road in 1856. In less than a decade, Yosemite Valley passed from Ahwahneechee home to tourist attraction and wilderness icon. (p. 638)
>
> DeLuca argues that the fact that wilderness is a social construction with a bloody history should not deter us from defending its preservation, but "preservation must rest on the recognition that wilderness is not a divine text but a significant social achievement. The preservation and expansion of that achievement depends on making arguments about the worth of wilderness" (p. 649).

Gifford Pinchot and the Conservation of Natural Resources

Muir's ethic of wilderness preservation clashed with a competing vision that sought to manage America's forests more like a "natural resource" that needed to be cultivated and harvested. Influenced by the philosophy of **utilitarianism**, the idea of the greatest good for the greatest number, some in the early 20th century began to promote a new conservation discourse, which promoted economic gain as the primary value to arbitrate contested environmental decisions. Associated principally with Gifford Pinchot, President Theodore Roosevelt's chief of the Division of Forestry (now the U.S. Forest Service), the term **conservation** interpreted the most valuable relationship with the environment to be "the wise and efficient use of natural resources" (Merchant, 2005, p. 128). That is, while conservationists tended to enjoy the outdoors for hunting, fishing, hiking, and more, they believed that human relationships with the environment ultimately should be determined by economic demands. For example, in managing public forest lands as a source of timber, Pinchot instituted a sustained yield policy, according to which logged timberlands were to be reforested after cutting, to ensure future timber supplies (Hays, 1989; Merchant, 2005). In the following decades, Pinchot's conservation approach strongly influenced the management of natural resources by U.S. government agencies such as the Forest Service and the Bureau of Land Management (BLM).

The debate between preservationists and conservationists came to a head in the fierce controversy over the building of a dam in Hetch Hetchy Valley in Yosemite National Park. In 1901, the City of San Francisco's proposal to dam the river running through this valley as a source for its residents' water supply sparked a multiyear dispute over the purpose of the new park, with the Sierra Club launching a grassroots campaign to stop the dam. This conflict over the value of national parks and of the environment more broadly defined would continue long after conservationists won and the Hetch Hetchy dam was approved in 1913. (For more information, see http://vault.sierraclub.org/ca/hetchhetchy/history.asp.)

Cultivating an Ecological Consciousness

Overall, movements to preserve and conserve nature as wilderness or as a natural resource consist of a broad and diverse range of both voices and strategies that set the stage for a new ecological sensibility. The prefix *eco* in *ecology* (and *economics*) has roots in ancient Greece with the term *oikos,* meaning a house or dwelling. Yet it wasn't until the turn of the 20th century that a German scientist and artist, Ernst Haeckel (1904), coined the modern term **ecology** as the study of how an organism relates with its exterior world. The modern environmental movement remains heavily influenced by early 20th-century ecologists and the core terms they have identified, such as **resilience**, an organism's ability to adapt and to persist at the same time. This perspective not only assumes that the environment always is dynamic or changing but also recognizes limits to a species' ability to adapt before failing to thrive.

In the mid-20th century, an ecological consciousness began to be articulated, including Aldo Leopold's 1949 classic *A Sand County Almanac,* where he defined a *land ethic* as follows:

> (1) The land is not merely soil. (2) That native plants and animals kept the energy circuit open; others may or may not. [and] (3) That man-made [*sic*] changes are of a different order than evolutionary changes, and have effects more comprehensive than is intended or foreseen. (p. 255)

This growing sense of nature as dynamic carried into urban spheres and human communities as well, and it is to this third antagonism that we now turn.

Public Health and the Ecology Movement

By the 1960s, much was changing in the United States. Among the many social justice movements mobilizing during this time, urban activists fostered another pivotal antagonism based on an ecological perspective. At a time when environmental protections for the **commons** (resources accessible to all people and not privately owned, such as air, water, and the Earth) were weak or nonexistent, everyday people in the United States joined growing concerns among ecological scientists and began to question the effects of urban pollution, nuclear fallout, and pesticides on human health. Their concerns included the air and water emissions from factories and refineries, abandoned toxic waste sites, exposure to chemicals used to control agricultural pests, and the radioactive fallout from aboveground nuclear testing.

Rachel Carson and the Public Health Movement

Often, biologist and writer Rachel Carson is credited for voicing the first nationally recognized public challenge to business practices that affect the environment,