The natural world affects us, but our language and other symbolic action also have the capacity to affect or construct our perceptions of nature itself.

Studying/Practicing Environmental Communication

This chapter describes environmental communication as a subject of study and an activity that occurs in everyday life. As a study, this chapter points out that our understanding of nature and our actions toward the environment depend not only on information but on the ways our views of the environment are shaped by news media, films, social networks, public debate, popular culture, everyday conversations, and more. As an activity, this and other chapters trace the many ways and settings in which individuals, journalists, scientists, public officials, environmentalists, corporations, and others raise concerns and attempt to influence the decisions affecting our communities and the planet.

Chapter Preview

- The first section of this chapter describes environmental communication, defines the term, and identifies seven principal areas of study and practice in this field.
- The second section introduces three themes that constitute the framework for this book:

  1. Human communication is a form of *symbolic action*; that is, our language and other ways of conveying purpose and meaning affect our consciousness itself, shaping our perceptions and motivating our actions

  2. As a result, our beliefs and behaviors about nature and environmental problems are mediated or influenced by such communication

  3. The public sphere (or spheres) emerge as a discursive space in which competing voices engage us about environmental concerns

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

After reading this chapter, you should have an understanding of environmental communication as an area of study and an important practice in public life. You should also be able to recognize the range of voices and practices through which environmental groups, ordinary citizens, businesses, and others discuss important environmental problems—from management of public lands to global climate change. As a result, we hope you'll not only become a more critical consumer of such communication but also discover opportunities to add your own voice to the vibrant conversations about the environment that are already in progress.

The Study of Environmental Communication

Along with the growth of environmental studies on college campuses, classes that focus on the role of human communication in environmental affairs have also emerged. On many campuses, environmental communication courses include a wide range, from environmental rhetoric, climate change communication, environmental journalism, risk communication, and environmental advocacy campaigns to "green" marketing and popular culture images of nature. Along with such courses, scholars in communication, journalism, literature, and science communication are pioneering research in the role and influence of communication in the many public settings where the environment is a concern.

Frankly, the wide range of subjects included in environmental communication makes a definition of the field challenging. So first, let's look at some of the areas that you might study.

Areas of Study

Although the study of environmental communication covers many topics, most research and the practice of communication fall into one of seven areas. We explore many of these areas in later chapters. For now, we'll briefly identify these seven areas.

1. *Environmental rhetoric and the social-symbolic "construction" of nature.* Studies of the rhetoric of environmental writers and campaigns emerged as an early focus of the field. Along with the related interest in how our language helps to construct or represent nature to us, this is one of the broadest areas of study. For example, Marafiote (2008) has described the ways in which U.S. environmentalists' rhetoric reshaped the idea of *wilderness* to win passage of the 1964 Wilderness Act.

Relatedly, studies of language and other symbolic forms help us understand the constitutive power of communication to generate ideas and meanings about the environment. For example, Jennifer Peeples (2013) has documented the constitutive power of visual images to convey the effects of environmental toxins on children in ways that mere words cannot. She quotes a photographer describing his use of the camera: "I kept my camera's eye fixed on the haunting faces of children. . . . Their expressions and circumstances bespoke the consequences of

the environmental tragedies in ways that any retelling of the experts' verbal arguments never could" (p. 206). (We'll explore this area more in Chapters 2 and 3.)

2. *Public participation in environmental decision making.* When citizens are given a voice in environmental affairs, scholars report that their "participation improves the quality and legitimacy of a decision and . . . can lead to better results in terms of environmental quality" (Dietz & Stern, 2008, p. ES1). Still, in many cases, barriers prevent the meaningful involvement of citizens in decisions affecting their communities or the natural environment. As a result, a number of studies have scrutinized government agencies in the United States and other nations to identify the opportunities for—and barriers to—the participation of ordinary citizens, as well as environmentalists and scientists, in an agency's decision making.

Studies of public participation have covered topics such as citizens' comments about forest management plans, public access to information about pollution in local communities (Beierle & Cayford, 2002), and the barriers that citizens in India faced in gaining information and the privileging of technical discourse about a proposed hydropower (dam) project in their region (Martin, 2007). (We take up the study of public participation in Chapter 12.)

3. *Environmental collaboration and conflict resolution.* Dissatisfaction with some of the adversarial forms of public participation has led practitioners and scholars to explore other models of resolving environmental conflicts. They draw inspiration from communities that have discovered ways to bring quarreling parties together. For instance, groups that had been in conflict for years over logging in Canada's coastal Great Bear Rainforest reached agreement recently to protect 5 million acres of temperate rainforest.

At the center of these modes of conflict resolution is the ideal of collaboration, a mode of communication that invites stakeholders to engage in problem solving rather than advocacy. Collaboration has been defined as "constructive, open, civil communication, generally as dialogue; a focus on the future; an emphasis on learning; and some degree of power sharing and leveling of the playing field" (Walker, 2004, p. 123). (We describe collaboration further in Chapter 13.)

4. *Media and environmental journalism.* In many ways, the study of environmental media is its own subfield. Research in this area focuses on ways in which news, advertising, and commercial programming portray nature and environmental problems as well as the effects of media on public attitudes. Subjects include the **agenda-setting** role of news media (media's ability to affect the public's perception of the importance of an issue); journalist values of objectivity and balance; and media frames—the central organizing themes that connect the different elements of a news story (headlines, quotes, etc.) into a coherent whole.

Studies in environmental media also explore online news and social media in engaging environmental concerns. These studies range widely, from interviews with the editors of *Inside Climate News* (insideclimatenews.org), a small website that won a Pulitzer Prize in 2013 for its reporting on the dangers posed by poorly regulated oil

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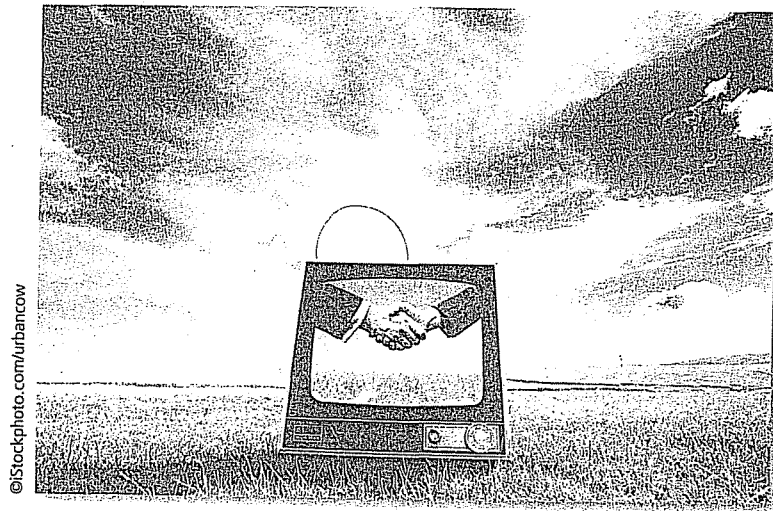
How do news, advertising, and other media affect our perceptions and attitudes toward the natural world or our understanding of environmental issues?

pipelines in the United States, to study of activists' uses of Twitter profile feeds, hyper-links, and community-generated hashtags at a recent United Nations climate summit (Segerberg & Bennett, 2011). (We describe environmental journalism and uses of new/social media in Chapters 5 and 9.)

5. *Representations of nature in advertising and popular culture.* The use of nature images in film, television, photography, music, and commercial advertising is hardly new or surprising. What is new is the growing number of studies of how such popular culture images influence our attitudes about the environment. Scholars explore a range of cultural products—film, green advertising, SUV ads, wildlife films, super-market tabloids, and more.

Scholars also are mapping some of the ways in which popular media sustain attitudes of cultural dominance or exploitation of the natural world. For example, Todd (2010) examines how the photographic images and travel narratives in *National Geographic* magazines depict Africa's landscapes through "anthropocentric distance," as "a wilderness theme park, and a part of the global scenery" (p. 206). (We'll look at the role of images in Chapter 4.)

6. *Advocacy campaigns and message construction.* A growing area has been the study of public information and advocacy campaigns by environmental groups, corporations, and scientists informing the public about climate change. These campaigns attempt to educate, change attitudes, and mobilize public audiences—for example, campaigns to educate homeowners about energy savings from "smart" thermostats, campaigns to mobilize support for a wilderness area, or a corporate accountability campaign to per-suade building supply stores to buy lumber only from sustainable forests.

In this area, media and communication scholars have documented the challenge of communicating the dangers from climate change as well as barriers to the public's sense of urgency (Moser, 2010). And others have found that, as environmental groups turn to new/social media, their visibility and effectiveness have changed (Lester & Hutchins, 2012). (We'll look at a range of campaigns, including uses of digital media, in Chapters 8, 9, 10, and 11.)

7. *Science and risk communication.* How effective are signs warning that fish caught from a lake may be contaminated with toxic chemicals? Did regulators ignore warnings about the risks from deep water oil drilling in the Gulf of Mexico? How are consumers to judge the risks of the chemical BPH in plastic water bottles? Such questions illustrate the study and practice of environmental science and risk communication—the ways environmental risks can be communicated to affected publics.

Science and risk communication includes a range of practices—from news media reports of the risk of pollution from hydraulic fracturing ("fracking") to government reports of the likelihood of developing cancer from exposure to the spraying of pes-ticides on agricultural fields. (We'll describe case studies of science and risk commu-nication in Chapters 6 and 7.)

Defining Environmental Communication

With such a diverse range of topics, the field can appear at first glance to be confus-ing. If we define environmental communication as simply *talk* or the transmission of information about environmental topics—water pollution or grizzly bear habitat—our definitions will be as varied as the many topics.

A clearer definition takes into account the distinctive roles of language, visual images, protests, music, or even scientific reports as different forms of **symbolic action.** This term comes from Kenneth Burke (1966), a rhetorical theorist. In his book *Language as Symbolic Action,* Burke stated that even the most unemotional language is necessarily persuasive. This is because our language and other symbolic acts *do* something, as well as *say* something. Language actively shapes our under-standing, creates meaning, and orients us to a wider world.

The view of communication as a form of symbolic action might be clearer if we contrast it with an earlier view, the **Shannon–Weaver model of communication.** Shortly after World War II, Claude Shannon and Warren Weaver (1949) proposed a model that defined human communication as simply the transmission of informa-tion from a source to a receiver. There was little effort in this model to account for meaning or for the ways in which communication acts on or shapes our awareness. Unlike the Shannon–Weaver model, symbolic action assumes that language and sym-bols do more than transmit information. 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).

If we focus on symbolic action, then we can offer a richer definition. In this book, we use the phrase **environmental communication** to mean *the pragmatic and constitutive vehicle for our understanding of the environment as well as our relationships to the natural world*; it is the symbolic medium that we use in constructing environmental problems and in negotiating society's different responses to them. Defined this way, environmental communication serves two different functions:

1. *Environmental communication is pragmatic.* It educates, alerts, persuades, and helps us solve environmental problems. It is this instrumental sense of communication that probably occurs to us initially. It is the vehicle or means that we use in problem solving and is often part of public education campaigns. For example, a pragmatic function of communication occurs when an environmental group educates its supporters and rallies support for protecting a wilderness area or when the electric utility industry attempts to change public perceptions of coal by buying TV ads promoting "clean coal" as an energy source.

2. *Environmental communication is constitutive.* Embedded within the pragmatic role of language and other forms of symbolic action is a subtler level. By constitutive, we mean that our communication also helps us construct or compose representations of nature and environmental problems as subjects for our understanding. Such communication invites a particular perspective, evokes certain values (and not others), and thus creates conscious referents for our attention. For example, different images of nature may invite us to perceive forests and rivers as natural resources for use or exploitation, or as vital life support systems (something to protect). A campaign to protect a wilderness area may educate and rally supporters (pragmatic), but at the same time, its advocates may also tap into cultural resonances that invite us to perceive "wilderness" as a pristine or unspoiled nature, thus constructing or composing nature in new ways for our understanding.

Communication as constitutive also assists us in defining certain subjects as "problems." For example, 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.

Act Locally!

Pragmatic and Constitutive Communication in Messages About Climate Change

Examples of communication about climate change occur daily in news media, websites, blogs, TV ads, and other sources. Select one of these that interests you. It might be a news report about rising sea levels, food scarcity, or acidification of oceans; a YouTube video about the impacts of climate change on the Arctic; or a TV ad about coal or natural gas as a form of "clean energy."

The message or image you've chosen undoubtedly uses both pragmatic and constitutive functions of communication; that is, it may educate, alert, or persuade while also subtly creating meaning and orienting your consciousness to a wider world. After reflecting on this message, answer these questions:

1. 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?

2. Does this message draw on constitutive functions, as well, in its use of certain words or visual images? How do these words or images create referents for your attention and understanding, invite a particular perspective, or orient you to a set of concerns?

Environmental communication as a pragmatic and constitutive vehicle serves as the framework for the chapters in this book and builds on the three core principles:

1. Human communication is a form of symbolic action.

2. Our beliefs, attitudes, and behaviors relating to nature and environmental problems are mediated or influenced by communication.

3. The public sphere emerges as a discursive space in which diverse voices engage the attention of others about environmental concerns.

These principles obviously overlap (see Figure 1.1). As we've noted, our communication (as symbolic action) actively shapes our perceptions when we see the natural world through myriad words, images, or narratives. And when we communicate publicly with others, we share these understandings and invite reactions to our views.

Nature, Communication, and the Public Sphere

Let's explore the three principles that organize the chapters in this book. We'll introduce and illustrate these briefly here and then draw on them in each of the remaining chapters.

Human Communication as Symbolic Action

Earlier, we defined environmental communication as a form of symbolic action. Our language and other symbolic acts *do* something. Films, online sites and social media, photographs, popular magazines, and other forms of human symbolic behavior act upon us. They invite us to view the world this way rather than that way to affirm these values and not those. Our stories and words warn us, but they also invite us to celebrate.

Language that invites us to celebrate also leads to real-world outcomes. Consider the American gray wolf. In 2010, a federal judge restored protection to gray wolves in the Northern Rocky Mountains under the nation's Endangered Species Act. But it was not always this way. Wolves had been extirpated from the region by the mid-20th
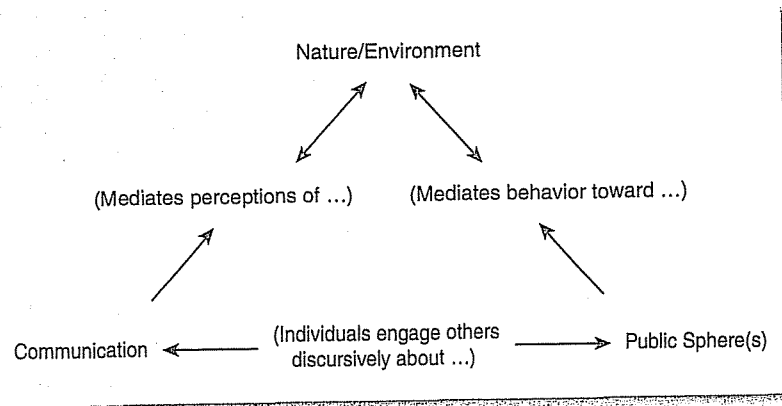
Nature/Environment

(Mediates perceptions of ...)   (Mediates behavior toward ...)

Communication ◄———— (Individuals engage others ————► Public Sphere(s)
                          discursively about ...)

Figure 1.1 Environment, communication, and the public sphere.

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 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 her down, Babbitt 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, under attack in the Congress at the time. In recalling the biblical story of the flood, Babbitt evoked a powerful narrative for revaluing wolves and other endangered species. In retelling this ancient story, he invited the public to embrace a similar ethic in the present day:

> And when the waters receded, and the dove flew off to dry land, God set all the creatures free, commanding them to multiply upon the earth.
> Then, 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, paras. 34–36, 56)

Photo 1.2 Secretary of the Interior Bruce Babbitt, releasing the first American gray wolf into Yellowstone National Park in 1995.

Communication enables us to make sense about our world; it orients us toward events, people, and yes, wildlife. And, because different individuals (and generations) may value nature in diverse ways, we find our voices to be a part of a conversation with others about this world. Secretary Babbitt invoked an ancient story of survival to invite the American public to appreciate anew the Endangered Species Act. So, too, our communication mediates or helps us make sense of our own relationships with nature, what we value, and how we shall act.[1]

Human communication, therefore, is symbolic action because we draw upon language and other symbols to construct a framework for understanding and valuing and to bring the wider world to others' attention. (We explore this aspect of communication more closely in Chapters 2 and 3.)

Mediating "Nature"

It may seem odd to place "nature" in quotation marks. The natural world definitely exists: Forests are logged or remain standing; streams may be polluted or clean; and large glaciers in Antarctica are calving into the Southern Ocean. So what's going on? As one of our students asked, "What does communication have to do with nature or the study of environmental problems?" Our answer to her question takes us into the heart of this book.

Simply put, whatever else the environment may be, it is deeply entangled with our very human ways of interacting with, and knowing, 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 and the same applies to the meanings of these words" (p. 335). At a basic level, our beliefs, attitudes, and behaviors toward nature are mediated by human ways of representing the world—through our language, television, photos, art, and contemplation. *Mediating* is another way of saying that our acts of pointing to and naming something are our means for recognizing and understanding it. "Pointing and naming generate certain kinds of ecocultural knowledge that constitute aspects of nature as considered, unique, sorted, or marked" (Milstein, 2011, p. 4).

When we name the natural world, we also orient ourselves in this world. We become located or interested in it; we have a view onto this world. 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, but it 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? Or is it something else? Early settlers in New England viewed North American forests as forbidding and dangerous. Puritan writer Michael Wigglesworth 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 natural world, writers, citizens, conservationists, poets, scientists, and business lobbyists have fought for centuries over whether forests should be logged, rivers dammed, air quality regulated, and endangered species protected.

Consider the weather (and climate):

Periodically, winters in the United States and other parts of the world are bitingly cold, with record low temperatures and blizzards. For some, cold, snowy weather invites sarcastic remarks: "Where's that global warming?" In fact, after a recent cold winter, the percentage of Americans who believed global warming was occurring "dropped 7 points" from the previous fall ("After Cold Winter," 2013, para. 1). During cold winters, you're very likely to hear competing claims in the media or online about the reality of global warming. One skeptic, for example, quipped, "Um . . . if the globe is warming why is my car buried under all this snow?" (Beck, 2011, para. 1).

Climate scientists, on the other hand, distinguish *weather*—changing every few days—and *climate*, measured in longer, 20-year periods. For example, during the winter of 2013–2014, the Intergovernmental Panel on Climate Change (IPCC)—a body of

over 2,000 scientists from 154 countries—issued a summary of recent research. It concluded: "Warming of the climate system is unequivocal, and since the 1950s, many of the observed changes are unprecedented over decades to millennia" (IPCC, 2013, p. 3). In their own ways, climate scientists, news reports, and climate change deniers offer differing views or constructions of weather/climate and what they mean. This is what we meant earlier in saying our beliefs, attitudes, and behaviors relating are mediated by communication.

Our point is that, although nature invites different responses from us, it is, in itself, politically silent. Ultimately, it is we—through our symbolic actions—who invest its seasons and species with meaning and value.

Public Sphere as Discursive Space

A third theme central to this book is the idea of the public sphere or, more accurately, public spheres. Earlier, we defined a public sphere as a realm of influence that is created when individuals engage others in communication—through conversation, argument, debate, or questioning—about subjects of shared concern or topics that affect a wider community. The public comes into being in our everyday conversations as well as in more formal interactions when we talk about the environment. And the public sphere is not just words: Visual and nonverbal symbolic actions, such as marches, banners, and photographs, also have prompted debate and questioning of environmental policy as readily as editorials, speeches, and TV newscasts.

The German social theorist Jürgen Habermas (1974) offered a similar definition 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 concerns into public matters and thus create circles of influence that affect how we and others view the environment and our relation to 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 on 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, proprietary files of corporations, or other private sources. Therefore, it is important to note that two other spheres of influence exist parallel to the public sphere. Communication scholar Thomas Goodnight (1982) named these areas of influence the *personal* and *technical* spheres. For example, two strangers arguing at an airport bar is a relatively private affair, whereas the technical findings of biology that influenced Rachel Carson's (1962) discussion of the insecticide dichlorodiphenyltrichloroethane (DDT) in *Silent Spring* were originally limited to technical journals. Yet Carson's book presented this information in a way that engaged the attention—and debate—of millions

of readers and scores of public officials. In doing this, *Silent Spring* gave rise to a sphere of influence as she translated technical matters into subjects of public interest.

The idea of the public sphere itself, however, can be misunderstood. Three misconceptions occur—the beliefs that the public sphere is (a) only an official site or forum for government decision making, (b) a monolithic or ideal collection of all citizens, and (c) a form of "rational" or technical communication. Each of these ideas is a misunderstanding of the public sphere.

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 official sites do not exhaust the public sphere. In fact, discussion and debate about environmental concerns more often occur outside of government meeting rooms and courts. The early fifth-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.

Second, the public sphere is neither monolithic nor a uniform assemblage of all citizens in the abstract. As the realm of influence that is created when individuals engage others discursively, the public sphere assumes concrete and local forms: They include calls to talk radio programs, blogs, letters to the editors of newspapers, or local meetings where citizens question public officials, for example, about risks to their health from contaminated well water. As Habermas (1974) reminds us, the public sphere comes into existence whenever individuals share, question, argue, mourn, or celebrate with others about their shared concerns.

Third, far from elite conversation or "rational" forms of communication, the public sphere is most often the arena in which popular, passionate, and democratic communication occurs, as well as reasoned or technical discourse. 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 Voices in a "Green" Public Sphere

The landscape of communication about environmental concerns is diverse, complex, and often colorful, like an Amazonian rainforest or the Galapagos Islands' ecology. Whether in local community centers, on blogs, at rallies, or in corporate-sponsored TV ads, individuals and groups speaking about the environment appear in diverse sites and public spaces.

In this final section, we describe some of the voices you may hear in the public sphere communicating about environmental issues. These include the voices of

1. Citizens and community groups

2. Environmental groups

3. Scientists and scientific discourse

4. Corporations and lobbyists

5. News media and environmental journalists

6. Student and campus groups

7. Anti-environmentalist and climate change critics

Individuals in these seven 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.

Citizens and Community Groups

Residents who complain to public officials about an environmental problem in their community—such as air pollution, asbestos in their children's school, or contaminated well water—and who organize their neighbors to take action are the most common sources of environmental change. Some are motivated by urban sprawl or development projects that destroy their homes as well as green spaces in their cities. Others, who may live near an oil refinery or chemical plant, may be motivated by noxious fumes to organize resistance to the industry's lax air quality permit.

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. Gibbs also had read 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).

Despite an initial denial of the problem by state officials, Gibbs and her neighbors sought media coverage, carried symbolic coffins to the state capital, marched on Mother's Day, and pressed health officials to take their concerns seriously. Finally, in 1982, the residents succeeded in persuading the federal government to relocate 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). As a result, Love Canal became a symbol of toxic waste sites and fueled a citizens' antitoxics movement in the United States.

Lois Gibbs's story is not unique. In rural parishes in Louisiana, in inner-city neighborhoods in Detroit and Los Angeles, on Native American reservations, and in communities in India, China, Europe, the Philippines, Latin America, Africa, and

throughout the world, community groups have launched campaigns to protest smog and pollution, halt toxic runoff from mining operations, and stop illegal logging of community forests. As they do, activists and residents face the challenge of finding their voice and overcoming barriers to express their concerns and persuade others to join them in demanding accountability of public officials.

Environmental Groups

Environmental organizations are among the most visible sources of communication about the environment. These groups come in a wide array of organizational types and networks, online and on the ground. They range, in the United States, from grassroots groups in local communities to nationwide organizations like the Nature Conservancy (nature.org), Sierra Club (sierraclub.org), Environmental Defense Fund (edf.org), and National Wildlife Federation (nwf.org). And there are similar groups in almost every country working for environmental protection, biological diversity, and sustainability— groups like *Navdanya*, meaning "nine seeds" (navdanya.org) in India, a women-centered movement for protecting native seeds and biological diversity, and the African Conservation Foundation (africanconservation.org), a continent-wide effort to protect Africa's endangered wildlife and their habitats. Other groups, such as Conservation International (conservation.org) and Greenpeace (greenpeace.org), are organized on an international scale, while global networks like 350.org and Avaaz.org link groups worldwide in the fight against climate change and other concerns.

These groups address a diversity of issues and often differ in their modes of advocacy. For example, the Sierra Club and Natural Resources Defense Council (nrdc.org) focus on climate change through their advocacy campaigns and lobbying the U.S. Congress on energy policy, while the Nature Conservancy and local conservancy groups protect endangered habitat on private lands by purchasing the properties themselves. Other groups such as Greenpeace and Rainforest Action Network (ran.org) use "image events" (DeLuca, 1999) to shine the spotlight of media attention on concerns as diverse as climate change, illegal whaling, and destruction of tropical rainforests.

Scientists and Scientific Discourse

The warming of the Earth's atmosphere first came to the U.S. public's attention when climate scientists testified before Congress in 1988. Since then, scientific reports, such as the periodic assessments of the Intergovernmental Panel on Climate Change (IPCC), have prompted spirited public debate over appropriate steps that governments should take to prevent what the United Nations Framework Convention on Climate Change (1994) called a "dangerous anthropogenic interference" with the global climate (para. 37). As we shall see in succeeding chapters, the work of climate scientists has become a fiercely contested site in today's public sphere, as environmentalists, public health officials, ideological skeptics, political adversaries, and others question, dispute, or urge action by Congress to adopt clean energy policies.

As with climate change, scientific reports have led to other important investigations of, and debate in the public sphere about, environmental problems affecting

human health and Earth's biodiversity. From asthma in children caused by air pollution and neurological illnesses from mercury poisoning by eating contaminated fish to an accelerating loss of species of plants and animals, the early warnings of scientists have contributed substantially to public awareness, debate, and corrective actions. In Chapter 6, we'll describe the importance of science communication as well as the ways in which climate and other environmental sciences themselves have become a site of controversy in some quarters.

Corporations and Lobbyists

Environmental historian Samuel Hays (2000) reported that, as new environmental sciences in the 1960s began to document the environmental and health risks from industrial products, the affected businesses challenged the science "at every step, questioning both the methods and research designs that were used and the conclusions that were drawn" (p. 222).

Corporate opposition to environmental standards has developed for two reasons: (1) restrictions on the traditional uses of land (for example, mining, logging, or oil and gas drilling) and (2) perceived threats to the economic interests of industries such as petrochemicals, energy production, computers, and transportation. Worried
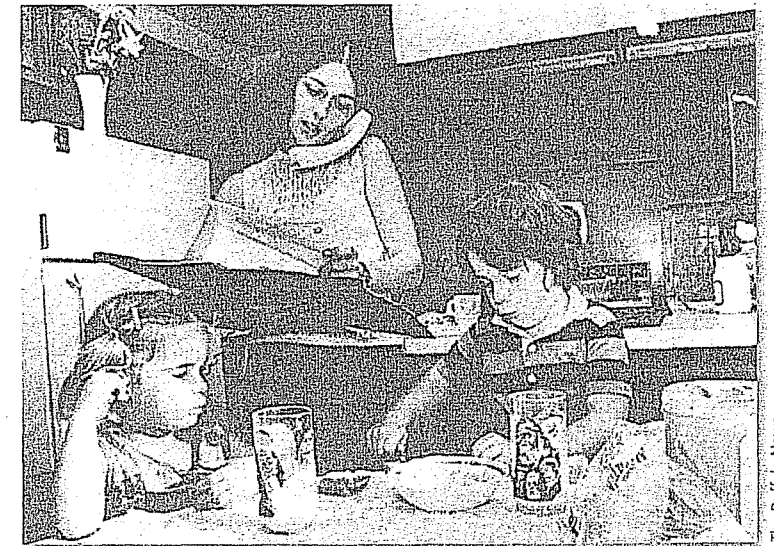
Photo 1.3   Local residents like Lois Gibbs of Love Canal, New York, who complain to public officials about pollution or other environmental problems and who organize their neighbors to take action are the most common and effective sources of environmental change.

by the threat of tighter limits on air and water discharges from factories and refineries, affected corporations formed trade associations such as the Business Round Table and the Chemical Manufacturers Association to conduct public relations campaigns and lobby Congress on behalf of their industries.

On the other hand, some corporations recently have begun to go "green"—improving their operations and committing to standards for sustainability (lower energy use and lower impact on natural resources) in their operations. (We explore some of these efforts in Chapter 11.) Others, however, have skillfully adopted practices of "greenwashing," misleading advertising that claims a product promotes environmental values.

News Media and Environmental Journalists

It would be difficult to overstate the impact of news media—both "old" and new—on our understanding of environmental concerns. News media not only report events but act as conduits for other voices—scientists, public officials, corporate spokespersons, environmentalists—seeking to influence public attitudes. Media also exert influence through their agenda-setting role—that is, the ability to influence the public's perception of the salience or importance of an issue. As journalism scholar Bernard Cohen (1963) first explained, the news media filter or select issues for attention and therefore set the public's agenda, telling people not *what* to think but *what to think about*. For example, the public's concern about tropical contagious diseases soared after extensive news coverage of the Ebola outbreak in West Africa in 2014.

The Ebola news stories focused on a single, dramatic event that was newsworthy, but many environmental topics, such as toxic poisoning or species loss, may be less visible. As a result, the environment is often underreported by traditional news media. In Chapter 5, we'll look at the ways that news media shape our awareness of environmental problems.

Student and Campus Groups

Since Earth Day 1970, when interest in the environment first exploded on U.S. campuses, students and campus groups have been at the forefront of environmental reform. Today, students and campus groups are starting sustainability programs, opposing coal-burning power plants, and organizing forums on global environmental justice—urging responsibility to those who will bear the worst impacts from climate change. And in late 2014, student groups were in the forefront of the estimated 400,000 individuals attending the People's Climate March in New York City; others marched in cities globally.

On many campuses in the United States, student environmental activists are coordinating with wider networks and environmental organizations like the Sierra Student Coalition's "Beyond Coal" campaign (ssc.org) and 350.org's push for divestment from fossil fuel companies. (In Chapter 11, we'll look at recent student-led initiatives for sustainability on college campuses.)

Anti-Environmentalists and Climate Change Critics

Although it may be difficult to conceive of groups that are opposed to protection of the environment (clean air, healthy forests, safe drinking water, and so on), a backlash against government regulations and even environmental science has arisen, particularly, in the United States This is often fueled by the perception that environmental regulations harm economic growth and jobs.

One expression of this opposition, beginning in the 1990s was Wise Use groups or *property rights* groups. These groups objected to restrictions on the use of their property for such purposes as protection of wetlands or habitat for endangered species. They include groups like Ron Arnold's Center for the Defense of Free Enterprise (which is opposed to environmental regulations generally). Arnold, a controversial figure in the anti-environmentalist movement, once told a reporter, "Our goal is to destroy environmentalism once and for all" (Rawe & Field, 1992, quoted in Helvarg, 2004, p. 7).

More recently, climate change deniers have questioned whether global warming is occurring at all, or whether human activities (such as burning of fossil fuels) are a contributing cause of warming. Using online sites, talk radio, conservative think tanks, and films like *The Great Global Warming Swindle*, such skeptics have fueled debate and sometimes stalled government action on climate change in the United States.

Global Study of Environmental Communication

The many diverse sources we've identified (above) are speaking about environmental concerns in nearly every country in the world. In 2011, scholars and practitioners established the International Environmental Communication Association (theieca. org) to coordinate research and other activities 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 in China, Southeast Asia, India, the Middle East, Australia, Russia, Korea, Africa, and Latin America. We will return to some of these voices and the practices of environmental communication by diverse interests in the following chapters.

SUMMARY

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

- The field of environmental communication includes several major areas: environmental rhetoric and the social–symbolic "construction" of nature, public participation in environmental decision making, environmental collaboration and conflict resolution, media and environmental journalism, representations of nature in corporate advertising and popular culture, advocacy campaigns and message construction, and science and risk communication.

- The term *environmental communication* itself was defined as the pragmatic and constitutive vehicle for our understanding of the environment as well as our relationships to the natural world; it is the symbolic medium that we use in constructing environmental problems and in negotiating society's different responses to them.
- Using this definition, the framework for the chapters in this book builds on three core principles:
  1. Human communication is a form of symbolic action.
  2. Our beliefs, attitudes, and behaviors relating to nature and environmental problems are mediated or influenced by communication.
  3. The public sphere emerges as a discursive space for communication about the environment.

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 and about the environment. And along the way, we hope you'll feel inspired to join the public conversations about environmental concerns happening today.

SUGGESTED RESOURCES

- Depoe, S., & Peeples, J. (2014). *Voice and Environmental Communication*. New York, NY: Palgrave. Explores how people give voice to, and listen to the voices of, the natural environment.
- Hansen, A. (2010). *Environment, Media and Communication*. London, England, and New York, NY: Routledge.
- Henry, J. (2010). *Communication and the Natural World*. State College, PA: Starta.
- Follow or subscribe to an environmental daily news site like Environmental News Network (enn.com), the Grist (grist.org), and huffingtonpost.com/green.

KEY TERMS

Agenda setting   13

Constitutive   16

Environmental
   communication   16

Pragmatic   16

Shannon–Weaver model of
   communication   15

Symbolic action   15

Wise Use groups   27

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?

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" (p. 46). Does this mean we cannot know "reality" outside of the words we use to describe it? What did Burke mean by this?

3. In our society, whose voices are heard most often about environmental issues? What influence do corporations, TV personalities, and partisan blogs have in the political process? Are there still openings for ordinary citizens to be heard?

NOTE

1. There is an update to the story of the gray wolf. Since 2011, U.S. Fish and Wildlife Service has begun removing the American gray wolf from the endangered species list and its protections and turning over management to the Western states in the wolves' territories. Since 2011, these states have permitted hunting of the wolves, resulting in a decline in wolf populations (UPI, 2013) and fueling renewed debate over viable populations of the wolf.