

## CHAPTER 4

# The Environment in/of Visual and Popular Culture

Photofest/Twentieth Century-Fox Film Corporation



*Avatar* (2009) commonly is estimated to be the top-grossing film in the world. Writer and director James Cameron's self-declared goal was to create a film with a powerful environmental message inviting audiences to become warriors for the Earth. The unsustainability of the film industry from the massive carbon footprint of new technologies to the waste of disposable 3-D glasses remains a challenge that Cameron will attempt to address in his sequels, including using solar power (Braude, 2012).

*Climate change really is a made-for-TV story. It has all the drama of Hollywood, with real-life villains and heroes thrown in. We scientists struggle everyday to communicate the importance of climate change to the world. It is great to see communication experts come in and accomplish what scientists alone cannot.*

—John Abraham (2014)

*While images are often said to embody complexity (being worth the proverbial thousand words) media theory tells us that they also reduce complexity by providing interpretive frames or narratives that selectively blend fact and emotion.*

—Darryn Anne DiFrancesco and Nathan Young (2010, p. 518)

Communication about the environment, of course, is not limited to verbal communication. For most of us, it is challenging to separate our understanding of the environment from the images we associate with it. Since ancient times, across the globe from China to Greece to Egypt, initial art forms (such as pottery vases, stone etchings, and hieroglyphics) included depictions of animals, food, trees, and the places where people lived. Today, we continue to communicate about the environment explicitly and implicitly across a range of media, including but not limited to phones, computers, television, and films. How we interact with our environments and what we do as part of the environment, in other words, long have been and continue to be intertwined with sight. Like words, images can both enhance our imaginations and stifle them.<sup>1</sup>

**Chapter Preview**

The first section of this chapter on the environment and popular culture describes the ways in which dominant mass-consumed media about the environment might be analyzed. We highlight three approaches:

1. How audiences respond to environmental media through *dominant, oppositional, and negotiated* positions
2. How the environmental impact of communication technologies may include an assessment of how they are made, used, and disposed
3. How a *circuit of culture* approach helps provide a more nuanced environmental analysis of media than just what we see on a screen or page

The second part of this chapter moves into specific examples of communication technologies and what they do or do not "afford" or enable us to "see" about the environment. In particular, we look at two notable examples:

1. The ways in which the *visual rhetoric* of media such as paintings and still photographs can affect attitudes and behavior toward nature
2. How a range of media that show moving images teach us something about environmental embodiment and the witnessing of ecological disasters, in particular

The third section of this chapter moves into the fields of green art, marketing, and graphic design, respectively. We discuss the following:

1. The ways environmental artists use nature as a medium of expression and are inspired to respond poetically to environmental problems
2. Two competing metaphors to consider the ways digital technologies are transforming how we construct, send, and receive green messages
3. Finally, how graphic design (such as infographics and interactive maps) provides opportunities to communicate technical environmental information and data

Given the significance of sight and media technologies to how the environment is imagined and expressed in culture, in this chapter we introduce several key communication concepts of visual and popular cultures. Although we will address a range of technologies, media specificity is important to appreciating the communicative dimensions of these objects. That is, we do not believe a television show enables the same communicative experiences as a photograph, and so forth. Political economist Harold Innis (2008) argued that this is the bias of communication, the ways any given medium creates and limits conditions of possibility across space and time in a particular culture. Throughout this chapter, we'll attempt to underscore various constraints (limitations and possibilities) that various media enable without guaranteeing results. That is, while a television show is different than a photograph, watching a television show does not determine the environmental consequences of one's experience.

Further, we do not believe that focusing on visual and popular media means that our relationships with them solely are limited to our eyes. Borrowing from psychologist James Jerome Gibson's (1986) classic *The Ecological Approach to Visual Perception*, therefore, this chapter will describe which affordances are enabled by various media and which are not. "The affordances of the environment," Gibson explains, "are what it offers the animal, what it provides or furnishes, either for good or ill" (p. 127). Approaching visual and popular media communication through affordances entails considering both physical characteristics (a horizontal versus a slanted surface, stationary versus portable, et cetera) and how those characteristics interact with the person using it (a knee-high seat for an adult, Gibson points out, is not knee-high for a child). We explore a range of visual and popular culture in this chapter (although we address advertising in Chapter 11 and images are significant throughout the book).

Many media scholars study aesthetics, or the role of art or taste. Applied aesthetics of popular culture include but are not limited to the position of the camera, the use of light, the role of sound, design of costume and sets, the pace of a moving picture, and the application of special effects. We'll elaborate on the affordances various media provide aesthetically in the second part of this chapter, but first we want to provide context for thinking about how environmental communication is interpreted and circulates.

## The Environment and Popular Culture

Popular or mass media abound in the First World across more technologies than we almost can count and the environment is a frequent theme. Environmental communication does not just occur when two or more people converse on a hike in the woods with each other; it also happens through the radio, graffiti, posters, bumper stickers, phones, Skype calls, televisions, movie theatres, computers, and more. Further, any given medium may enable multiple messages, commercial film screenings open with advertisements, phones include texts, tweets, e-mails, and calls, et cetera. But, how do we navigate these mediums? And what can we assume is their communicative significance?

### Encoding/Decoding Environmental Media

In a seminal essay, "Encoding and Decoding in the Television Discourse," cultural studies scholar Stuart Hall (1973) provided a useful way to describe the way audiences (and users) interact with media. To begin, he helps remind us that any medium is both encoding, or created with a message, and decoding, or interpreted by audiences or receivers. Consider, for example, a popular show like the longest-running prime time show on television, *The Simpsons*. For any given episode, the writers of that show will create a storyline, *encoding* it with a plot, side jokes, and more. Yet audiences may interpret or *decode* that particular episode in divergent ways. While

some may laugh with the mischievous and self-centered Bart, others may identify with his vegetarian and environmentally conscious sister, Lisa. The intent of the authors, therefore, does not determine the reactions of audiences, though they can make certain responses more or less imaginable.

For example, a *Simpsons* episode like "Treehouse of Horror XXIV" (from Season 25, originally aired on October 6, 2013), introduces common environmental elements of the show, such as the nuclear plant where Homer Simpson works, toxic pollution, and kids playing outdoors. Afterward, one might expect that at least some viewers could become more skeptical about nuclear power as a safe energy option, worried about sources of toxic pollution in their lives, and curious about building a treehouse; yet if you finished watching it and launched into a debate about national parks, those watching with you might be surprised since the writers did not include anything about national parks in the episode. (For a more extended engagement with the series, see Todd, 2002.)

Any given popular cultural artifact might enable a range of responses. Hall (1984) identifies three ways a media consumer might decode a cultural text:

1. *Dominant position*: when the consumer agrees with the text's cultural biases
2. *Oppositional position*: when the consumer rejects the text's cultural biases
3. *Negotiated position*: when the consumer accepts some of the text's cultural biases, but rejects others

How do these different positions influence the communicative possibilities of popular culture? These positions are a useful way to consider a range of popular culture practices that exceed the visual. For example, eco-celebrity initiatives are announced regularly. In 2011, international musical artist and producer will.i.am and The Coca-Cola Company launched a new brand, *EKO CYCLE™*, that encourages zero waste through recycled fashion. A dominant position in relation to this news could be to believe that both partners genuinely care about environmental sustainability and, perhaps, to be excited that one can purchase clothes that might not only be hip, but also reduce waste. An oppositional position could be to act exasperated and cynical about this news, believing anything a celebrity does in the name of the environment is just another form of self-promotion and that a multinational corporation like Coca-Cola, known for water abuses and sugar promotion, could not possibly be initiating anything worthwhile. A negotiated position might believe that will.i.am is interested in self-promotion and that Coca-Cola is not the healthiest corporation to ever shape our planet, but also acknowledge that it is possible that their collaboration could reduce clothing waste.

As we provide popular culture examples throughout this chapter and you consider ones that you think have been most significant, try to identify not only the aesthetics and content of the cultural text, but also the values that you believe might enable someone to decode it from a particular position.

### Media's Lifecycle and the Circuit of Culture

In addition to studying what media technologies afford us to communicate or not and the ways that we respond to those communications, media have environmental impacts through the contexts in which they are made and disposed, as well as circulated. Let's now turn to two ways to think about that approach to the environmental impact of media.

Most of us were taught the life cycle of a species in our first biology course. The life cycle is the changes a species goes through in its life from birth to death. Usually, teachers choose frogs to illustrate this biological process, because their life cycles are pretty easy to see as distinct stages: frogs transform from an egg to a tadpole to a tadpole with legs to a froglet to an adult frog. Environmentalists sometimes refer to a life-cycle-assessment (LCA) as a way of studying how a product's "life" develops from cradle-to-grave. An LCA might include raw material extraction, production, distribution, use, and disposal. Something like an iPad, for example, is made from metals and chemicals, developed as components that then are combined and shipped, used through electric power for a few years, and then usually disposed of or recycled, as best as possible. Nevertheless, digital media often are promoted as a more environmentally sustainable way to communicate than printing on paper.

Another framework to study the various environmental impacts of media beyond aesthetics is called the *circuit of culture*, which initially mapped five elements and the relations between them: regulation, production, consumption, representation, and identity. The circuit of culture is a flexible framework that reminds us of three characteristics of media: (1) culture always is changing and moving as part of broader networks or contexts; (2) to study it, we must choose which elements will or will not be the focus of our analysis; and (3) people involved may or may not be involved in more than one element (Pezzullo, 2011).

This framework helps remind us that representation is only one way to assess visual media. The production, consumption, and disposal of communication technologies also have environmental impacts. Apple computers, for example, provide environmental reports of all of their products, none of which focus on green or antgreen representations shared on their devices but focus instead on four categories: climate change (focusing on the carbon footprint), restricted substances (use of toxic chemicals), energy efficiency (of use), and material efficiency (products used to make components and how they break down). (See [apple.com/environment/reports/](http://apple.com/environment/reports/).)

Once again, while an applied aesthetic perspective might focus on what one sees on a screen or a representation, a circuit of culture approach reminds us that environmental messages and values also are enabled and constrained throughout a medium's life cycle. Now that we have considered the environmental impact of visual media technologies, let us turn to some of the more popular uses of visual communication technologies to engage environmental topics.

## Looking at the Environment

The circuit of culture framework reminds us that visual images do not exist by themselves. They are not simply isolated images of something, such as an eagle, mountain, or polluting factory. Rather, a specific image may evoke other images and texts and, therefore, a multitude of associations and meanings. It is important then to understand "how that image fits into the larger ecosystem of images and texts" (Dobrin & Moroy, 2009, p. 10). Studying how various media interact with each other and people is called *intermediation*.

Now that we have established an aesthetic and cultural studies approach to media contexts, let us return to specific affordances of communication technologies and what they do or do not enable. How do the visual media both persuade and constitute our perceptions of environmental problems and possibilities?

### Visual Rhetoric and Nature

Given the prevalence of visual media in most of our everyday lives, rhetorical scholars have begun to look more closely at the significance of visual images in the public sphere. As communication scholars Lester Olson, Cara Finnegan, and Diane S. Hope (2006) point out in their study *Visual Rhetoric*, "public images often work in ways that are rhetorical; that is, *they function to persuade* [emphasis added]" (p. 1). Rhetorical scholars Sidney I. Dobrin and Sean Moroy (2009) also have called for the study of *Ecoese*, the "study and the production of the visual (re)presentation of space, environment, ecology, and nature in photographs, paintings, television, film, video games, computer media, and other forms of image-based media" (p. 2). As such, we can say that visual rhetoric functions both pragmatically—to persuade—and constitutively, to construct or challenge a particular "seeing" of nature or what constitutes an *environmental problem*.

While what we see firsthand in our environments surely affects us, our symbolic actions—including images—also affect our perceptions of the environment. All images, of course, are artifacts; they are human made. They select certain aspects of the world (and not others), certain angles of vision, frames, and ways of composing this larger reality. As a result, visual culture influences meanings; it suggests an orientation to the world.

Let's pursue this insight by looking at two ways visual rhetoric have had a significant influence on environmental communication in the United States: the 18th- and 19th-century paintings of the American West and 2003 photographs of the Arctic National Wildlife Refuge. What is seen in these paintings and photos, and what meaning or orientation do they suggest?

### Seeing the American West

In Chapter 2, we saw that 18th- and 19th-century artists such as Thomas Cole, Albert Bierstadt, and the Hudson River School painters were significant sources of the

public's awareness of the American West. Equally important were the photographers who followed military expeditions and surveyors into western territories and who were among the first to portray the West to many people who lived in eastern cities and towns. Photographs of Yosemite Valley, Yellowstone, the Rocky Mountains, and the Grand Canyon not only popularized these sites but, as they became broadly available in the media, "were factors in building public support for preserving the areas" (DeLuca & Demo, 2000, p. 245).

With such popularization, however, came an orientation and also ideological disposition toward nature and human relationships with the land. On the one hand, the paintings of the Hudson River School and, in the 20th century, photographs of environmental advocates like Ansel Adams aided in constituting natural areas as pristine and as objects of the sublime. Yet rhetorical scholars Gregory Clark, Michael Haloran, and Allison Woodford (1996) have argued that such portrayals of wilderness depicted nature as separate from human culture; the viewpoint of paintings distanced the human observer by viewing the landscape from above or in control of nature. They concluded that, although expressing a reverence for the land, such depictions functioned "rhetorically to fuel a process of conquest" (p. 274).

More recently, rhetorical critics Kevin DeLuca and Anne Demo (2000) have argued that what was left out of landscape photographs of the West may be as important as what was included. They gave the example of early photos of Yosemite Valley taken in the 1860s by the photographer Carleton Watkins. DeLuca and Demo (2000) wrote that when Watkins portrayed Yosemite Valley as wilderness, devoid of humans, he also helped to construct a national myth of pristine nature that was harmful. In a critique of the implicit rhetoric of such scenes, they argued that the "ability of whites to rhapsodize about Yosemite as paradise, the original Garden of Eden, depended on the forced removal and forgetting of the indigenous inhabitants of the area for the past 3,500 years" (p. 254). Writer Rebecca Soholt (1992) has pointed out,

The West wasn't empty, it was emptied—literally by expeditions like the Mariposa Battalion [which killed and/or relocated the native inhabitants of Yosemite Valley in the 1850s], and figuratively by the sublime images of a virgin paradise created by so many painters, poets, and photographers. (p. 56, quoted in DeLuca & Demo, 2000, p. 256)

Whether or not one agrees with DeLuca and Demo's claim about the impact of Watkins's photos, it is important to note that visual images often play pivotal roles in shaping perceptions of natural areas as well as our awareness of the impacts of pollution and toxic waste on human communities. As DeLuca and Demo (2000) have argued, visual portrayals often are "enmeshed in a turbulent stream of multiple and conflictual discourses that shape what these images mean in particular contexts"; indeed, in many ways, such pictures constitute "the context in which a politics takes place—they are creating a reality" (p. 242).



### Documenting the Environment

The U.S. Environmental Protection Agency (EPA) hired freelance photographers to document images of "environmental problems, EPA activities, and everyday life in the 1970s." This effort became known as the *Documenta Project* (1971–1977). Photographers chose to document a range of sites, including pictures of African Americans in Chicago enjoying parks, swimming outdoors, and music; European Americans working in a Tennessee coal plant; Navajo and Hopi reservations; power lines; birds; and much more. The collection includes over 15,000 images, which can be found today in its entirety at the National Archives (<http://arcweb.archives.gov/arc/action/ExternalSearch?rid=542493&script=true>) and partially on flickr ([www.flickr.com/photos/usnationalarchives/collections/77157620729903309/](http://www.flickr.com/photos/usnationalarchives/collections/77157620729903309/)). Many of these images might challenge assumptions about how narrowly some believe the word *environment* was imagined in the 1970s.

Today, Google Earth makes the Documenta Project archive appear incredibly small. Originally built by the U.S. Central Intelligence Agency (CIA) and bought by Google in 2004, it uses satellite imagery, aerial photography, and computer graphics to show cities, skies, oceans, the moon, and Mars. You can visually move laterally or zoom in or zoom out on more places than ever before. Such unprecedented visual access has ambiguous environmental impacts, from discoveries in biodiversity to military surveillance ([www.google.com/earth/](http://www.google.com/earth/)).

### Picturing the Arctic National Wildlife Refuge

In October 2000, a 33-year-old physicist named Subhankar Banerjee began a two-year project to photograph the seasons and the biodiversity of Alaska's Arctic National Wildlife Refuge. His project, which took him on a 4,000-mile journey by foot, kayak, and snowmobile through the wildlife refuge, culminated in stunning photographs, published in his book *Arctic National Wildlife Refuge: Seasons of Life and Land* (Banerjee, 2003). (For a sample of the photographs, see [www.subhankarbanerjee.org/](http://www.subhankarbanerjee.org/))

Banerjee hoped that his photographs would educate the public about threats to Alaska's remote refuge. The Smithsonian Museum in Washington, DC, had scheduled a major exhibition of Banerjee's photos for 2003. However, the young scientist-photographer suddenly found his photos and the exhibit caught in the midst of a political controversy. During a March 18, 2003, debate in the U.S. Senate about oil drilling in the Arctic National Wildlife Refuge, Senator Barbara Boxer of California urged every Senator to visit Banerjee's exhibit at the Smithsonian "before calling the refuge a frozen wasteland" (Egan, 2003, p. A20). The vote to open the refuge to oil drilling later failed by four votes.

Although Banerjee's photos were not the only influence on the Senate's vote, the controversy over his photos caused a political firestorm and helped to create a context for debate over the refuge itself. Journalist Timothy Egan (2003) reported that the Smithsonian told Banerjee "the museum had been pressured to cancel or sharply revise the exhibit" (p. A20). Documents from the museum give an idea of the revised exhibit. For example, Egan reported that the original caption for a photo of the Romanzof Mountains quoted Banerjee as saying, "The refuge has the most beautiful

landscape I have ever seen and is so remote and untamed that many peaks, valleys and lakes are still without names." However, the new caption simply reads, "Unnamed Peak, Romanzof Mountains" (p. A20). After the failed vote, the Smithsonian "sent a letter to the publisher of Banerjee's book, saying that the Smithsonian no longer had any connection to Mr. Banerjee's work" (p. A20).

The Smithsonian's criticism of Banerjee's photographs was revealing. Photographs can be powerful rhetorical statements. As DeLuca and Demo (2000) argued, they can constitute a context for understanding and judgment. Especially when accompanied by captions that encourage a particular meaning, photos can embody a range of symbolic resources that sustain or challenge prevailing viewpoints. Some observers felt that Banerjee's photos of Alaska's wilderness had this potential. A reviewer for the *Planet* in Jackson Hole, Wyoming observed, "Sometimes pictures have a chance to change history by creating a larger understanding of a subject, thus enlightening the public and bringing greater awareness to an issue" (Review, 2003).

Visual media do not always stand still. How does an advocacy organization or educational group decide to use photographs or video? What does looking at images that move tell us about the affordances provided by a medium that moves beyond a single moment?

### Witnessing Ecological Crises

Through various modes of media, more people appear more connected through communication technologies than ever before. Of course, these connections are not equal across the globe or even within the United States. Nevertheless, environmental



kangotraveler/Flickr

Former U.S. vice president Al Gore's and the Intergovernmental Panel on Climate Change's joint film and multi-media campaign *An Inconvenient Truth* remains an exemplar of an eco-cinema documentary and contemporary environmental advocacy. What fewer know is that Gore traces his own career-long belief in the importance of environmental communication as far back as his senior undergraduate thesis on visual rhetoric's impact on political debates (Gore, 2007).

### Moving Images of Disasters



advocates have used these interconnections to afford opportunities to witness ecological crises. In general, witnessing traditionally has been defined as an act of hearing and seeing oral and written evidence through firsthand experience. "Bearing witness," as visual communication and drama scholar Jan Cohen-Cruz (1998) points out, "uses heightened means to direct attention onto actions of social magnitude, often at sites where they actually occur, and from a perspective that would otherwise be missing" (p. 65). As such, social movements have found witnessing to be a persuasive mode of communication, either in the form of people "on the ground" bearing witness to their own situation and experiences or by inviting those who live farther away from particular sites and conditions to witness "a perspective that would otherwise be missing." At minimum, therefore, the potential rhetorical efficacy of providing opportunities to witness is to suggest alternative modes of viewing and acting in the world.

The goal of witnessing is to build communities and connections between people. As media scholars Bhaskar Sarkar and Janet Walker (2010) write in their collection, *Documentary Testimonies: Global Archives of Suffering*,

In our latter twentieth and twenty-first century "era of witness," media testimonial initiatives—be they official, grassroots, guerrilla, transitory, insistent, or any combination thereof—participate in the creation of ethical communities by bringing testers and testimonial witnesses together at the audiovisual interface. (p. 1)

The communicative goal usually is to hope that these "ethical communities" will be transformed through the experience and, after the viewing is over, take additional actions.

In the environmental movement, Greenpeace perhaps is best known for its use of links "green" concerns to a pacifist ethic of "peace." The landmark event that catapulted them into the international spotlight drew on the Quaker tradition of "bearing witness" by chartering a boat to protest a nuclear test site on the island Amchitka in the North West Pacific. This approach to social change involved "expressing opposition simply by turning up and being seen at the site of the activity to which they object."<sup>2</sup> There are risks to these acts of witnessing that are not risks taken by those who look at the images from the comfort of their homes. Greenpeace activists have been arrested in Russia, Japan, and elsewhere for these acts of witnessing. We discuss this communication tactic more in the next chapter.

Visual communication scholar Diane S. Hope (2009) reminds us that environmental perspectives sometimes are easily communicated through images, while others are not:

Visual reportage and photographic documentation of environmental degradation have been notoriously difficult. While individual instances of ecological crises such as large oil spills, heavy smog, and mountain-top removal are "photogenic," persistent deterioration of air, water, and land is largely invisible to the eye and to the camera lens. Although measures of climate change and levels of polluting toxins may be visualized through a variety of imaging technologies, such images need significant expertise to interpret. (p. 33)

Let's turn now to climate change and oil spills to consider how various crises pose rhetorical constraints—limitations and possibilities—for environmental advocates to visually portray exigency.

### Polar Bears as Condensation Symbols

As media scholar Anders Hansen (2010) explains, the significance we associate with a public issue such as climate change is the result of a great deal of communicative work. For example,

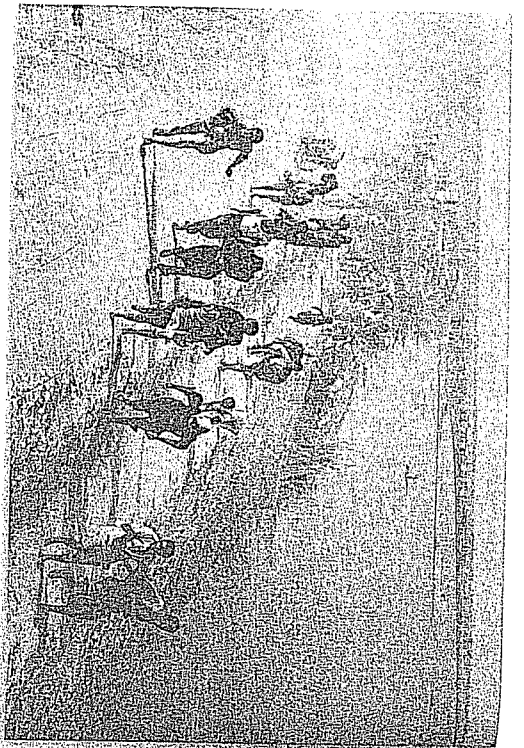
images of melting ice-floes, Arctic/Antarctic landscapes, glaciers, etc. become synonymous with—come to mean or signify—"threatened environments" and ultimately "global warming" or climate change where in the past they would have signified something quite different such as "challenge" or a test of human endeavour . . . or simply "pristine" and aesthetically pleasing environments, as yet untouched and unspoilt. (p. 3)

"If anything symbolizes the Arctic," writes Tim Flannery (2005), author of *The Weather Makers*, "it is surely *nanuk*, the great white bear" (p. 100). Seen on greeting cards, in environmental groups' appeals, and featured as Lorek Brynison, the great armored ice bear who aided *Lyra* in the 2007 film *The Golden Compass*, the images of the polar bear abound in popular culture. Recently, compelling images of polar bears struggling for survival have emerged as a powerful symbol of global warming. As early as 2005, scientists were finding evidence that polar bears have been drowning in the Arctic Sea due to the melting of ice floes from climate change. Polar bears feed from these ice floes, and as they drift farther apart, the bears are being forced to swim longer distances.

In the summer of 2008, observers flying for a whale survey over the Chukchi Sea spotted polar bears swimming in open water. The bears were 15 to 65 miles off the Alaskan shore, "some swimming north, apparently trying to reach the polar ice edge, which on that day was 400 miles away" ("As Arctic Sea Ice Melts," 2008, p. A16). "Although polar bears are strong swimmers, they are adapted for swimming close to the shore. Their sea journeys leave them vulnerable to exhaustion, hypothermia or being swamped by waves" (Iredale, 2005, para. 3).

News reports about global warming, therefore, constitute a very different context in which images of polar bears appear than do the contexts of greeting cards or a fantasy-adventure film. Within the context of images of melting ice and news of climate change, images of polar bears function as a visual condensation symbol. A condensation symbol is a word or phrase (or, in this case, an image) that "stirs vivid impressions involving the listeners' most basic values" (Grabar, 1976, p. 289). Political scientist Murray Edelman (1964) stressed that such symbols are able to "condense into one symbolic event or sign" powerful emotions, memories, or anxieties about some event or situation (p. 6). Images of vulnerable polar bears may be one condensation symbol for our anxieties about the planet's warming. As such, they also help to construct what we understand to be an environmental problem itself.

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Within the context of images of melting ice floes and news of climate change, polar bears function as a visual *condensation symbol* for climate crisis. Yet what difference would it make if an image of a climate change refugee became the new *condensation symbol*? Do you think polar bears on broken ice are more visually resonant than people walking through floods? As more humans are impacted by climate disruptions, do you think the *condensation symbol* will change?

### Pollution in Real Time

Visual media of disasters also move. Increasingly, international journalists are using drones to record large-scale ruins or hazardous places that are unsafe for humans to visit. After the 2013 Fukushima disaster in Japan, the Narnie city mayor invited Google Earth to take images of their community to which residents believe they may never be able to return.<sup>3</sup> People also are watching more real-time video of environmental disasters as they occur, whether provided through private citizens posting video online or corporations sharing videos of cleanup efforts.

The multinational corporation, BP, provides one notable example of moving images worth considering for its environmental implications. On April 20, 2010, a fiery explosion erupted on the *Deepwater Horizon* oil platform in the Gulf of Mexico, killing 11 workers. The collapse of the rig and failure of BP's "blowout preventer" allowed crude oil a mile beneath the surface to spew into the Gulf waters. The oil gushed for 87 days until BP temporarily blocked the wellhead. Although BP initially

claimed the rate of oil flow was low, U.S. government scientists determined as much as 1.5 to 2.5 million gallons of oil a day were spewing into the Gulf (CNN Wire Staff, June 16, 2010). By September 18, 2010, when BP permanently sealed the well, nearly 5 million barrels or 206 million gallons of oil had spilled into Gulf waters. Oil sheen and tar balls ultimately reached into wetlands, marshy bays, and onto beaches in Louisiana, Mississippi, Alabama, and Florida. The U.S. government declared a fishery disaster off the coasts of Louisiana, Mississippi, and Alabama, and hotels and restaurants reported that business had fallen off sharply for the summer season. The U.S. official in charge of overseeing the cleanup called it "the worst oil spill in U.S. history" (Hayes, 2010, para. 1).

From the day of the oil rig explosion, visual images framed the public's sense of the event as an economic and ecological problem: dramatic film showing the collapse of the *Deep Horizon* oil rig; satellite images of oil spreading over 40,000 square miles on the surface; interviews with unemployed Louisiana shrimpers; and emotionally gripping photos of oil-soaked seabirds, turtles, and dolphins. TV cameras showed oil-tainted wetlands and workers in white hazmat suits scooping up tar balls that had washed onto beaches.

Despite these compelling images, some worried they were not seeing the real extent of the problem. "I think there's an enormous amount of oil below the surface that unfortunately we can't see," one scientist told an oversight committee (quoted in Frommkin, 2010, para. 7). A partial answer to "seeing" the problem would come from the live video from BP's Remotely Operated Vehicles (ROVs) of the oil gushing from the underwater wellhead. Initially, BP had wanted to block this live feed to news outlets. Under intense pressure from federal officials, however, the company relented and agreed to "make a live video feed from the source of the leak continuously available to the public" (Frommkin, 2010, p. 1).

The real-time images of the oil gushing from the ruptured well were compelling: "The sight of an ecological catastrophe unfolding in real time has gripped the public more than the series finale of *Lost*" (Fermino, 2010, p. 1). Within days, millions of people had viewed the video, with at least 3,000 websites using the live feed (Jonsson, 2010). One reporter observed, "The glimpse into the deep has proved mesmerizing" (Jonsson, 2010, para. 2). The images had become so riveting that "when President Obama spoke about the historic spill, TV news channels showed a split screen of Obama and the gushing oil" (Fermino, 2010, p. 1).

### Green Art, Marketing, and Graphic Design

One of the relevant affordances of environmental media is how they enable or constrain humans to enable or constrain our agency or ability to act, respond, or make a difference. In this last section of the chapter, we want to highlight various metaphors used to think about the ways digital media enable agency, when they can fail, and how sometimes more abstract images make more powerful statements.

## Environmental Art

As we said previously, the environment has provided inspiration for humans' greatest fears and fantasy as long as humans have walked the Earth. Totem poles, tapestries, masks, baskets, sculptures, graffiti, and more have been made from and symbolized human interpretation of our environments. Some of the best-known art in the world focuses on nature, including Utagawa Hiroshige's *Mountains and River on the Kiso Road*, Claude Monet's *Water Lilies*, and Georgia O'Keeffe's *Summer Days*.

Today, environmental art usually references two types of artists: (1) artists who foreground particular materials in their work—such as sticks, stones, flowers, and mud—and whose work is displayed in the outdoors and (2) artists that aspire to communicate about environment problems through their work.

An exemplar of the former type of environmental artist is Bavarian Nils-Udo. For decades, he has been using locally found materials wherever he plans to create what he imagines as "potential utopias," such as giant nests. As such, his work resonates with the Romanticism we discussed in Chapter 2; yet Nils-Udo believes most of us have become disconnected from nature. Key to this type of art is inviting an embodied, sensuous site-specific experience to heighten our awareness of nature's poetics, as well as the work's ephemerality. As he (2002) notes in an artist's statement,

Natural space experienced through hearing, seeing, smelling, tasting and touching. By means of the smallest possible interventions, living, three-dimensional natural space is re-organized, unlocked and put under tension. Reorganisation, of course for a finite period of time. One day, the intervention is wiped away, undone by nature without leaving a trace. (greenmuseum.org)

Nils-Udo not only has made environmental art throughout Europe, but also in India, Japan, Israel, and Mexico.

While some environmental artists focus on nonhuman nature, others find inspiration in the often-fraught relationship between humans and the environment. Perhaps one of the best-known contemporary environmental artists in the United States who communicates on a number of environmental problems is Seattle-based Chris Jordan. He uses photographs and objects of mass consumption to visualize consumption. For example, on his webpage *Running the Numbers II: Portraits of Global Mass Culture* (2009–present), Jordan includes a 2009 image titled "Gyre" that at first appears to be three vertical panels of Japanese art of the ocean, but once one zooms in closer, one can see that it "[d]epicts 2.4 million pieces of plastic, equal to the estimated number of pounds of plastic pollution that enter the world's oceans every hour. All of the plastic in this image was collected from the Pacific Ocean" (Jordan, 2009–present).

Art, of course, need not be in a museum or a large-scale production. Contemporary environmental protests often include creative signs and puppets. Another relatively common environmental advocacy campaign is to paint trash cans. Seventy-five-year-old Lebanese Elie Saba launched the "Ana Ma Bkch" (I Don't Litter) campaign, which included the painting of metal barrels with trees, suns, and other natural

imagery to raise the profile of trash in the streets. Saba said, "People forget the street is a public place and belongs to everyone and must be kept clean so we can have a clean environment" (Topalian, 2013).

Act locally!

beehive design collective

FROM THE FIRST TOOLING & FORMING CAPABLE MACHINES LOCAL WOOD YARNERS HUNG CONVENT

THE TRUE COST OF COAL

DON'T BUY COAL

"Coal keeps the lights on." But at what cost? In 2008, the Appalachian region with communities fighting to stop mountaintop removal, an extreme form of coal mining that strips away the topsoil and forest, was the most mountainous, the poorest, and a multi-faceted for understanding the big picture, how were all part of the system that we live in, and how we can change it.

Courtesy of the Beehive Design Collective

Another exemplar of environmental art is the Maine-based Beehive Design Collective that draws complex environmental relations based on collaborative work with environmental advocates and artists. In 2010, for example, they launched the True Cost of Coal graphics campaign with Appalachian grassroots organizers.

Poet and author Susanne Antonetta (2012) wrote of them: "The visual power of the banner offers a clear and intricate story that draws the eye everywhere at once, fascinating in its detail... and overwhelming in its breadth. With its symbolism and visual density... I find my skepticism gone by the end of the presentation, replaced by the excitement of viewing artwork that feels more like an experience than an image, communicating time, change, story, and possibility" (otiomagazine.org).

You can visit the Beehive Design Collective's website to invite them to your campus and to download the poster (and this image) to use in your own campaigns.

## Viral Marketing

There are many metaphors people use to describe how digital media work. One that often is used for green advertising and campaigns is *viral*. To do so suggests the



nonlinear and accumulative way that digital media (and viruses) work. That is, the viral media metaphor suggests that communication spreads digitally in random patterns (will you share MisterEpicMan's *How Animals Eat Their Food* YouTube video from an acquaintance with one friend or ten or your cousin?) and exponentially (you send the Taylor Swift *Goat Duet* YouTube video to your friend who sends it to two friends who tweet it to one hundred, and so forth).

In advertising, viral marketing is increasingly popular. This approach to selling products and brands adopts a word-of-mouth campaign often through digital media, involves little or unpaid services, and often is targeted at an audience in a way to appear organic and grassroots rather than top-down. A common college town example is students who are paid to go to a bar to order a drink in the hopes on the part of a liquor company that they can create a buzz around a particular drink using their product and increase their sales. We revisit this concept in Chapter 9.

### Failed Persuasion

Digital media, obviously, sometimes fail. In 2010, the British climate campaign 10:10 (<http://www.1010global.org/>) commissioned the well-known comic screenwriter Richard Curtis (*Love Actually*, *Bridget Jones' Diary*, *Four Weddings and a Funeral*, *Nothing Hill*, etc.) to write and produce a mini-movie. Shot on 35 millimeter by a professional crew, the partnership showed the promise of adding a digital media component to the group's broader efforts. Yet when the mini-movie *No Pressure* came out, audiences felt they had gone too far.

In an attempt to be comedic, the film involved scenes congratulating those who were joining efforts to address climate change and literally blowing up those who are not with gory blood explosions. The controversy cause the organization to take the video down from its site (though it is available online if you search for it) and to issue an apology in which they wrote: "At 10:10 we're all about trying new and creative ways of getting people to take action on climate change. Unfortunately in this instance we missed the mark. Oh well, we live and learn" (Sorry, n.d.).

This example shows how the humor often championed by digital media as a contemporary affordance of media-savvy consumers can backfire when one is not in touch with one's intended audiences.

### Green Graphic Design

Most of the examples in this chapter show how visual media provide more detailed documentation of the world we live in or imagine. Yet one of the ways digital media is inventive is that it also has led to a proliferation of infographics, or visual interpretations of information or data such as a table or chart that explain something (like a report, concept, or set of connections). These images are not valued for their detail, but their abstraction. The assumption is that more people will be

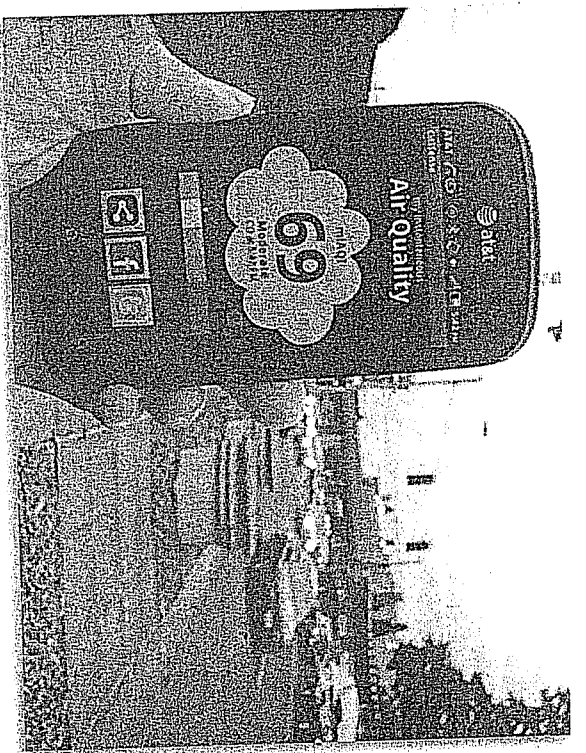


Photo 4.3

Given the increase of air pollution in certain cities and (the not unrelated) popularity of mobile communication technologies, more companies and governments are designing air pollution apps for people to monitor up-to-date and localized air quality information.

moved by information or data if it can be summarized in a single frame, with compelling connections and/or quantification illustrated quickly. They often use arrows to show how points are linked, clip art to simplify a point (of a dollar bill or a light bulb, for example), and bars or other objects to represent scale (like how many disposable diapers can be replaced with how many cloth ones—hint: the answer is in the thousands).

Data visualizations illustrate numerical data through an image. Examples include bar charts or three-dimensional representations. For example, Visually regularly updates an infographic about endangered rhinos that uses multiple data visualizations, such as graphs of rhinos killed and the overall reduction in population, numbers linked to particular species, a map of world demand, and various sizes of circles showing populations by country (Visually, 2013).

Given how technical a lot of environmental information can be, it is perhaps not a surprise that many of the most successful infographics today are focused on environmental communication. The technology magazine *Wired.com* lists the following topics among the top infographics of 2013: a U.S. population map, how 85 common dog breeds can be traced genetically to four kinds of dogs, where

tornados touch down in the United States, the most common travel paths in New York City based on geotagged Tweets, and the microbiome that exists in human bodies (Vanhemert, 2013).

Increasingly popular also are interactive maps, two-way electronic communications that synthesize complex data through a cartographic representation and respond to user activity. One exemplar is the World Resources Institute's Aqueeduct global water risk mapping tool. The self-declared goal of this interactive infographic is to help "companies, investors, governments, and other users understand where and how water risks and opportunities are emerging worldwide" (World Resources Institute, n.d., para. 1). The risks they map include physical quantitative risks, physical qualitative risks, and regulatory and reputational risks. By going to their website, one can click on any location in the world and find out more information about the water present, threatened, or lacking in an area (<http://www.wri.org/our-work/project/aqueeduct/aqueeduct-atlas>). Interactive maps such as this afford the producer to summarize a great deal of data, while allowing the user to interact with the information in a way that is more specific to her or his interests. (We elaborate further on how environmental activists use new media in Chapter 9.)

## SUMMARY

- Environmental communication increasingly involves images. This chapter offers an overview of the complicated and changing visual landscape we live in.
- We considered various approaches to assessing and studying the relationship between the environment and popular culture. Although some focus on aesthetics or representations encoded or decoded in media, we introduced three additional approaches: (1) studying how audiences respond to environmental media texts through "dominant," "oppositional," and "negotiated" positions; (2) analyzing the life cycle of communication technologies, including production, use, and disposal/reuse; and (3) mapping a "circuit of culture" approach that can account for environmental communication constituted through representation, as well as how that relates to broader contexts.
- Having established different approaches to popular culture, we then turned to how to analyze visual texts. First, we considered the ways visual rhetoric in paintings and still photographs can shape attitudes and behavior toward nature. Second, we explored how moving images afford particular relationships with environmental embodiment and the witnessing of ecological disaster, including constituting condensation symbols and real-time images.
- Finally, we turned to the fields of green art, marketing, and graphic design to reflect on what they do or do not afford. We described how environmental artists sometimes use nature as a medium of expression and, at other times, use art to respond poetically to environmental crises. For marketing, we focused on two competing metaphors to consider the ways digital technologies are transforming how we construct, send, and receive green messages. We also noted how graphic

design, particularly infographics and interactive maps, increasingly afford new possibilities for communicating technical environmental information and data. In the next chapter, we turn to how news media use images and words to communicate about the environment in the public sphere.

## SUGGESTED RESOURCES

- To see quintessential photographs of Yosemite National Park and other stunning places on Earth, you can visit the park or see the online Ansel Adams Gallery at <http://www.anseladams.com/>
- Krista Bryson's (2014) West Virginia Water Crisis blog shows how one student can develop a transmedia website in response to an environmental crisis: <http://westvirginiawatercrisis.wordpress.com/>
- Google Earth provides interactive digital maps of Fukushima, Japan, at [http://www.nationsonline.org/oneworld/map/google\\_map\\_fukushima.htm](http://www.nationsonline.org/oneworld/map/google_map_fukushima.htm)
- Louie Schwartzberg, founder of Blacklight films' TEDx talk (and 10-minute, time-lapse film of the natural world) is at <http://www.youtube.com/embed/gXDMoElyuQ>
- To further explore the creative choices of visual metaphors, art, and sustainability, see Brian Cozen (2013) "Mobilizing Artists: Green Patriot Posters, Visual Metaphors, and Climate Change Activism."
- For stunning art that looks like photographs, but is mostly pastels, see Zaria Forman's work. Her series on the Maldives, which are particularly vulnerable to sea levels rising, is notable: <http://www.zariaforman.com>
- On the 350.org "Do the Math" tour, environmental advocates take a "family photo" at every location to show how the movement to address climate change is growing. See, for example, <http://www.rollinestone.com/politics/pictures/bill-mckelben-and-350-org-on-the-do-the-math-tour-20121120/we-have-a-little-tradition-for-every-show-0347561>

## KEY TERMS

Aesthetics	71	Infographics	84
Affordances	71	Interactive maps	86
Bias of communication	70	Intermediation	74
Circuit of culture	73	Life-cycle-assessment (LCA)	73
Condensation symbol	79	Viral marketing	84
Data visualization	85	Viral media	84
Encoding and decoding	71	Visual rhetoric	74
Environmental art	82	Witnessing	78

## DISCUSSION QUESTIONS

1. Some climate scientists and journalists have complained that the public cannot “see” global warming. How would you solve this problem? Which medium do you think can most compellingly express the impacts of prolonged drought, rising sea levels, disease, and so forth?
2. How many phones have you owned in your life? What do you do with the old one when you buy a new one: trash, donate, or recycle it? Where do recycled phones go?
3. Find three environmentally focused photographs about animals online: one you share the dominant message with, one you resist completely, and one you think shows both persuasive and unpersuasive points. How do the images alter your opinion of the topic they are portraying, if at all? Are you more influenced by aesthetic choices of the photographer or something else?
4. What is your favorite movie with an environmental message? Why? Do you think films that show what you value and do not want harmed (such as beautiful sunsets at the beach or healthy children playing at a park) or document a problem (such as people walking through apocalyptic floods or dirty water coming out of someone’s faucet) or portray a fictional time and place motivate people more? Why?
5. Draw an infographic about climate change. How are numbers used, if at all? What choices did you make to have complicated data appear quicker and easier to understand? Why do you think it is a compelling interpretation?

## NOTES

1. Both authors of this textbook have been influenced by what we have seen or not seen in the world, though (and sometimes perhaps because) we long have worn glasses and contacts. Since we live in an oculareentric or seeing-centered culture, we think this chapter is important to include in this edition. Nevertheless, people who are severely seeing impaired or blind would not have the heavy reliance on sight that we underscore in this chapter.
2. Mark Warford (Ed.), *Greenpeace Witness: Twenty-Five Years on the Environmental Front Line* (London: Andre Deutsch, 1997). We are grateful to Kevin DeLuca for pointing out this connection. For an elaboration on the argument in this paragraph about witnessing as an environmental advocacy tactic of the past and present, see Pezzullo (2007).
3. We are grateful to Joshua Trey Barnett for first telling us of this invitation.