

Mass Communication: Public Understanding of Environmental Problems

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Abstract

Public understanding of environmental problems, is treated here as an example of a mass communication problem that has yet to be adequately solved. It is seen that although people are aware of this problem in a general sense, understanding of particular causes, possible consequences, and solutions is more limited. Both mass media and interpersonal communication appear to make a positive contribution to understanding, as well as to perpetuating some popular misconceptions.

Keywords: Mass Communication, Environmental Problems.

1. Introduction

In the last 40 years, awareness of our impact on the Earth has grown to the point where environmental issues now are at the center of public discourse. For this to lead to informed decision-making on issues such as climate change, journalists must provide the public with timely, accurate and unbiased information, and society must better understand the nexus between media, environmental science, policy and politics. A survey found that although people are aware of this problem in a general sense, understanding of particular causes, possible consequences, and solutions is more limited. Both mass media and interpersonal communication appear to make a positive contribution to understanding, as well as to perpetuating some popular misconceptions. Simon reported some of the initial evidence for limited understanding of environmental problems.^[1] She found that although most people had heard about environmental problems such as air or water pollution, they often failed to make any connection between the problem and important causes, such as overpopulation. Similarly, Carter, Stamm, and Heintz-Knowles found that most people do not think of environmental problems in terms of either their causes or their effects (e.g., consequences on people). Instead, when asked about pollution, people tended to think about neither causes nor consequences of pollution, but rather of instances such as smog or garbage.^[2] When causes are not well understood, it is clearly difficult to devise effective solutions to a problem. Communication, both mass and interpersonal, holds the key to improvement in public understanding of environmental problems. However, previous research often holds mass media responsible for public inadequacies. Content analysts typically find gaps in media coverage due to episodic coverage of dramatic events, and to focusing superficially on human interest and economic impacts, while overlooking systemic concerns.^[3, 4] Despite these shortcomings, the extensive media coverage of environmental problems is not entirely a futile effort. Agenda-setting studies show that media coverage is at least partly responsible for focusing people's attention on environmental problems.^[5]

2. The Field of Environmental Communication

Along with the growth of environmental studies, educational and professional opportunities that stress the role of human communication in environmental affairs also have emerged. On many college campuses, environmental communication courses study a range of related topics: environmental news media, methods of public participation in environmental decisions, environmental rhetoric, risk communication, environmental conflict resolution, advocacy campaigns, “green” marketing, and images of nature in popular culture. And, a growing number of scholars in communication, journalism, literature, science communication, and the social sciences are pioneering research in the role and influence of environmental communication in the public sphere.

3. Growth of the Field

Communication scholar Susan Senecah has observed, “Fields of inquiry do not simply happen by wishing them into existence. The field of environmental communication is no different”.^[6] In the United States, the field grew out of the work of a diverse group of communication scholars, many of whom used the tools of rhetorical criticism to study conflicts over wilderness, forests, farmlands, and endangered species as well as the rhetoric of environmental groups.^[7] Christine Oravec's 1981 study of the “sublime” in John Muir's appeals to preserve Yosemite Valley in the 19th century is considered by many to be the start of scholarship in what would become the field of environmental communication. By the 1990s, a biennial conference on Communication and Environment began to attract scholars from a range of academic disciplines in the United States and other nations. Also, a new Environmental Communication Network and website were launched to provide online resources for scholars, teachers, students, and practitioners. And, new journals in communication and environmental topics have begun to appear, including *Environmental Communication: A Journal of Nature and Culture*. In 2011, scholars and practitioners established the International Environmental Communication Association to coordinate research and activities worldwide. Interest has grown not only in the United States, but Europe, particularly, has seen “ample signs that environmental communication has grown substantially as a field”.^[8] Professional associations linking communication or media with environmental topics now exist in China, Southeast Asia, India, Russia, and Latin America.

4. Areas of Study

Although the study of environmental communication covers a wide range of topics, most research and the practice of communication fall into one of six areas.

4.1 Public participation in environmental decision making. The National Research Council has found that, “when done well, public participation improves the quality and legitimacy of a decision and . . . can lead to better results in terms of environmental quality”.^[9] 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 scholars have scrutinized government agencies in the United States and other nations to identify both the opportunities for—and barriers to—the participation of ordinary citizens, as well as environmentalists and scientists, in an agency's decision making.

4.2 Environmental collaboration and conflict resolution. Dissatisfaction with some of the adversarial forms of public participation has led practitioners and scholars to explore alternative models of resolving environmental conflicts. They draw inspiration from the successes of local communities that have discovered ways to bring disputing 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 forest.^[10]

4.3 Media and environmental journalism. In many ways, the study of environmental media has become its own sub field. The diverse research in this area focuses on ways in which the news, advertising, and commercial programs portray nature and environmental problems as well as the effects of different media on public attitudes. Subjects include the agenda-setting role of news media, that is, its ability to influence which issues audiences think about; journalist values of objectivity and balance in reporting; and media framing or the way that the packaging of news influences readers' or viewers' sense-making and evokes certain perceptions and values. Studies in environmental media are also beginning to explore online news and the role of social media in engaging environmental concerns.

4.4 Representations of nature in corporate 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 or perceptions of nature and the environment. Scholars explore such questions by examining a range of cultural products — film; green advertising Hallmark greeting cards; SUV ads; and supermarket tabloids; and wildlife films and nature documentaries. Scholars in cultural studies also are mapping some of the ways in which images in popular media sustain attitudes of dominance and exploitation of the natural world. For example, a special issue of *Environmental Communication: A Journal of Nature and Culture* examined the idea of food in modern society, where food is “the thin end of environmental awareness—a site where fundamental questions can . . . be asked, questions that . . . lead to challenging re-conceptions of our environments, our societies, and ourselves”.^[11]

4.5 Advocacy campaigns and message construction. A growing area of study is the use of public education and advocacy campaigns by environmental groups, corporations, and by climate scientists concerned about global warming. Sometimes called social marketing, these campaigns attempt to educate, change attitudes, and mobilize support for a specific course of action. Scholars have used a range of approaches in the study of advocacy campaigns. For example, a growing number of communication scholars, scientists, and others are now studying the challenge of communicating the risks from climate change to the public as well as barriers to the public's sense of urgency.^[12]

4.5 Science and risk communication. Risk communication encompasses a range of practices—public education campaigns about the risks from eating fish with high levels of mercury; risk communication plans for use after a potential biological attack that unleashes the plague^[13]; or guides for scientists, journalists, and educators for communicating about climate change created by the Center for Research on Environmental Decisions at Columbia University (2009) are just a few examples. Since the late 1980s, scholars also have begun to look at the

impact of cultural understandings of risk and the public's judgment of the acceptability of a risk. For example, risk communication scholar Jennifer Hamilton found that sensitivity to cultural—as opposed to technical— understandings of risk influenced whether the residents living near the polluted Fernald nuclear weapons facility in Ohio accepted or rejected certain methods of cleanup at the site. Figure. Warnings of environmental dangers.

5. Defining Environmental Communication

With such a diverse range of topics, the field can appear at first glance to be confusing. If we define environmental communication as simply talk or the transmission of information about the wide universe of environmental topics—whether it's global warming or grizzly bear habitat—our definitions will be as varied as the topics for discussion. A clearer definition takes into account the distinctive roles of language, art, photographs, street protests, and even scientific reports as different forms of symbolic action. This term comes from Kenneth Burke, a rhetorical theorist. In his book *Language as Symbolic Action*, Burke stated that even the most unemotional language is necessarily persuasive. This is so because our language and other symbolic acts do something as well as say something. 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 information 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.



Defined this way, environmental communication serves two different functions:

5.1.Environmental communication is pragmatic. It educates alerts, persuades, and helps us to solve environmental problems. It is this instrumental sense of communication that probably occurs to us initially. It is the vehicle or means which 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.

5.2.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 about nature 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 and understanding. For example, different images or constructions 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). While a campaign to protect a wilderness area uses pragmatic communication for planning a press conference, at the same time, it may invoke language that taps into cultural constructions of a pristine or unspoiled nature. Communication as constitutive also assists us in defining certain subjects as problems. For example, when climate scientist 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”.^[14] 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.

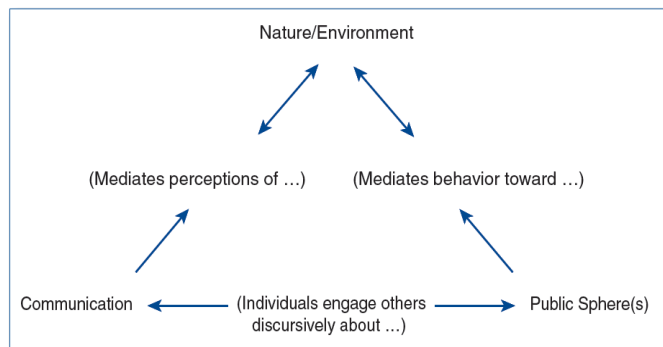
6. Diverse Voices in a “Green” Public Sphere

The landscape of environmental politics and public affairs can be as diverse, controversial, colorful, and complex as an Amazonian rainforest or the Galapagos Islands' ecology. Whether at press conferences, in local community centers, on blogs, or in corporate-sponsored TV ads, individuals and groups speaking about the environment appear today in diverse sites and public spaces.

Here, we shall describe some of the major sources, or voices, communicating about environmental issues in the public sphere.

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. Public officials.



These seven voices also include multiple, specific roles or professional tasks—writers, press officers, group spokespersons, information technology specialists, communication directors, marketing and campaign consultants, and other communication roles.

7. Conclusion

With nations throughout the world currently considering policy responses to emerging environmental problems, it appears many members of the public, despite some significant misconceptions, are poised to provide support for policy initiatives to deal with such problems. Most of the researcher srecognized negligence towards environment as a problem, many were significantly engaged with the topic, and many were communicating through mass media and interpersonal channels with significant effect on the breadth of their understanding. Despite their current shortcomings, our results suggest that the media are already making some contribution to

public understanding of environmental problems. Communication behavior was also linked to support for key solutions, such as driving less, reducing home energy use, and using more energy-efficient technology. Along with this positive beginning, the evidence also identified important areas for improved communication. Our findings suggest that the overemphasis on deforestation as a cause of the problem can be traced back to interpersonal sources, although a belief in the efficacy of halting this process and/or planting more trees is more strongly associated with television use. Perhaps more progress toward solving the problem would be made if the distinction between ozone depletion and global climate change could be introduced through interpersonal channels. In any event, it seems clear from this study that we need to be just as concerned about the content of public dialogue as we have been about the accuracy of media coverage. We also need to be concerned about the relationship between the two. The importance of interpersonal communication also suggests that it may also be useful for the designers of public education campaigns to consider ways of creating community involvement in solving the problem of climate change. At present, attempts to solve this problem tend to concentrate on individual actions or on national or international policy options. However, there is evidence suggesting that providing targets for a community to reach can be effective in reducing waste or energy consumption. This is another area in which communications research might make a useful contribution to engaging the public in solving environmental problems.

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