

Chapter I

A Contemporaneous Theoretical Profile of Ecological Communication and Some New Avenues

When I initiated this project in 1998, it was possible to review first-hand the majority of formal, documented efforts that declared themselves as having something to do with ecological or environmental communication (EC). Since then, however, the scenario has continued to change dramatically. A pointer to that change is found in the fact that I was not able even to go through all EC sites on the Internet on February 10, 2003, even though I spent one full night on surfing them: The URLs were easily in the upper hundreds! In light of this quick and massive proliferation of the EC enterprise (or popularization of the term anyway), I have had to quit believing that I could provide a complete, or exhaustive, account of it—which would also be clinically honest to its diverse constitutive particulars. A parallel irritating problem that has accompanied my research has to do with the expectation to define the topic of the research prior to undertaking or reporting the research itself. While a measure of this problem must be present in any research, in the case of EC the problem is perhaps compounded on account of EC's outrageously amorphous constitution and pluralistic, non-definitive origins as a discourse (in addition to the presence of its non-academic, and in that sense, extra-discursive and independent, specters).

1. The Definitional Conundrum

In short, I am faced with two co-dependent problems here: *scope* and *definition*. That said, there is also an accompanying source of relief through this linguistic and conceptual distress: To date, and to my knowledge, we do not have a single study that could be said to provide us with a comprehensive survey of EC literatures while also addressing seriously the issue of EC's definition.¹ On that count, I could say that when it comes to defining EC or outlining its purview, praxis has dominated theory within the discourse. Hence, academicians that *have* tried to define EC have mostly done so retrospectively and/or discursively: as a matter of catching up with, or taking stock of, the increasing focus on the (vast) theme of environment within the (vast) sector of communication. For example, Andrew Pleasant et al., the authors of the article “The

Literature of Environmental Communication,” candidly admit that “it is difficult to define the field without lapsing into a circular definition,” and then choose to define it anyway by “what it has done.”² However, for the sake of having a functional sense before presenting their research, Pleasant et al. adopt half a sentence from an official statement of the Environmental Communication Commission of the National Communication Association (NCA) of the US, and refer to EC as “the link between communication practices and environmental affairs.”³

In the above article, Pleasant et al. provide a citation analysis of peer-reviewed, English-language, EC related academic articles primarily published in the United States: They decide the topical scope of their analysis based upon keyword searches on selected electronic databases and statistical analysis thereof. The looseness of the definition of EC as a field of study is affirmed further in their plea to establish a journal devoted to EC, as follows:

This bibliography shows a lot of diversity, with articles on topics as disparate as risk communication, science communication, disasters, interpersonal communication, rhetoric, and much more. We ask the question: Would the existence of a journal titled “Environmental Communication” improve the growth, development, and dissemination of environmental communication research? The answer, inevitably, seems to be yes. How will a risk communication scholar become familiar with the work of the rhetorician? How will those interested in science communication learn about media effects research on the environment? Although any scholar interested in cross-disciplinary work will have to voyage around the indices to some extent, an environmental communication oriented journal does seem to us to be a missing piece.⁴

In their concluding remarks, Pleasant et al. also opine that EC literature “has grown phenomenally, and seems poised to continue this growth” despite the lack of internal coordination among the researchers; they also note that “[w]hile no single journal predominates, a few in risk, science, and some in communication are notable.”⁵ At its profoundest, Pleasant et al.’s report is a statistical lowdown on North American academic

publications that fall broadly under the rubric of EC; at its most practical, it is an appeal to found an independent journal exclusively dedicated to the theme.⁶

Pleasant et al.'s article apart, many efforts at defining EC appear only on the Internet, and typically occur as a casual paragraph or two descriptively introducing academic programs or bibliographies on EC (and environmental studies generally).⁷ This volume of “working” definitions is only upheld, as it were, by the adoption of the label of “environmental communication” by a wide variety of non-academic bodies to communicate about their organization- or business-specific activities that they believe are related to the environment.⁸ What that means in real terms is that most available academic definitions of EC are not, and were not, intended to lay down the law for what must constitute EC and what should stay out of it; on the contrary, they display a concerted effort at adopting broad frames of scholarly reference. As such, the definitions seem to have been driven by the twin realisms of communication as a social activity and of environmental activism, inherent interdisciplinarity of the academic disciplines of environmental and communication studies, and ethic of inclusiveness that has traditionally characterized those disciplines. That said, one could discern in the definitions specific professional orientations of the definer in reference to the phenomenon. Let me provide a quick cross-section below:

- Northern Arizona University's Environmental Communication Resource Center (ECRC), established in 1996, defines EC

as the communication of environmental messages to audiences by all means and through all channels. Environmental Communication may be considered a process which involves both communicators and audiences and is achieved through effective message delivery, interactive listening, and public discussion and debate. We envision such communication as the foundation for establishing relationships between people and the environment and as a means for enhancing environmental literacy and sustainable environmental practices.⁹

Notably, *environment* is an implicit entity, a given, in ECRC's definition, which makes the practical dimension of the process of communication about the environment as the institutional focus. As such, EC is the process, read mechanism and infrastructure,

through which humans can sensitively and sensibly relate to the environment. While both “communicators” and “audiences” of necessity exclude anything other than humans, the real communication, as far as ECRC’s definition goes, is between nature and humans. Moreover, nature is not so much a product of a transaction *internal* to the social system as it is a party in its own right; more likely it is the significant—often the endangered—Other of the human “communicator-audience combine.” Accordingly, questions related to environmental ethics, sustainability, and eco-hazards are the central take-off points for ECRC, and EC is not just *any* process of communication: It is the process that must be discussed within the implicit normative parameter of “effectiveness.” Hence: “Communication about environmental issues should be a priority for all societies in a collective effort to address issues such as overpopulation, resource depletion and pollution, all of which are leading to widespread ecological degradation.”¹⁰ On the whole, then, ECRC’s definition betrays an activist slant.

- Many other definitions, however, take a broad, open view of the field, stopping short of locating themselves within any particular organizational agendas. An example here is Mark Meisner’s definition, given on behalf of the Environmental Communication Network (ECN):

Environmental Communication is communication about environmental affairs. You know, things like how the media cover environmental issues, the rhetoric of environmental debates and decision making, the discourse around how to solve environmental problems. Environmental communication is all of the many forms of communication (interpersonal, group, public, organizational, mass, etc.) that are engaged in that they intersect with the social debate about environmental issues and problems. Studying environmental communication means studying the communication processes involved in environmental affairs.¹¹

Apparently, while becoming an effective communicator of ecological issues is an objective for its participants, the chief objective for ECN—a forum that originated from a 1991 Conference on the Discourse of Environmental Advocacy—is to account for the quality and nature of environmental rhetoric generally.

- The Rutgers University’s Center for Environmental Communication (CEC), established in 1986, stresses more of an empirical approach to the study of EC in its goal “to bring together university investigators to provide a social science perspective to environmental problem-solving.”¹² The aspect of communication, in this case, is focused on the *problems* of the environment—whereby communication, based upon empirical research, is understood to provide solutions.

- The University of Cincinnati’s Center for Environmental Communication Studies (CECS), established in 1998, seeks to link EC more narrowly with health related issues and to balance research with political and scientific activism. The CECS describes itself “as an interdisciplinary research and service organization dedicated to the study of communication processes and practices in environmental and health policy contexts.”¹³ Focusing on the public-relations aspect of environmentalism with respect to human health, the CECS’s agenda

includes the design, analysis, and evaluation of informational and persuasive messages and campaigns produced by and addressed to individuals and institutions which pertain to environmental and human health risk contexts and controversies; the analysis and evaluation of communication processes within environmental and health-related organizations; and the design, facilitation, and evaluation of processes of stakeholder involvement in risk-based decision-making.¹⁴

2. EC as a Field of Study Versus as a Conceptual Phenomenon

In light of the above definitional variety and the previously-mentioned sense of situational or pragmatic realism behind it, I do not see much point in making an elaborate intervention myself in this definitional conundrum. For the theorization of EC, however, I would like to distinguish between defining something as a *field of study*—or, better still, a field of interest (which would then include efforts of non-academic sectors as well)—and as a *conceptual phenomenon*. In reality, both of the above styles of defining overlap or at least open themselves to be interpreted interchangeably; hence, it is in theory that I persuade the reader to accept the distinction. On the premise that the above distinction exists, I am willing to say that most available institutional definitions of EC,

having emerged from a retrospective view of practical initiatives, seem to respond primarily to the role and status of EC as a field of interest (either as a course of study, as in the case of academic definitions, or as a course of action, as in non-academic ones).

Perhaps the lone, but most certainly the notable, exception to the above genre of definitions is the definition given by Niklas Luhmann, which deems EC “as *any communication about the environment* that seeks to bring about a *change in the structures of the communicative system that is society* [original italics].”¹⁵ As one must notice, Luhmann’s definition captures EC on the level of epistemology (or as a universalistic conceptual phenomenon) instead of attempting to capture the scope of what has been written on it, who is writing about it, or how and why it should be performed. Since I discuss Luhmann’s communicative systems theory in detail in the ensuing chapter, I shall only briefly mention here that what makes his otherwise broad definition *specific* is its resolute social focus on one hand, and understanding of society as a system of communications, on the other. Luhmann deems EC “a phenomenon...exclusively internal to society,” and goes on to elaborate that

[it] is not a matter of blatantly objective facts, for example, that oil-supplies are decreasing, that the temperature of rivers is increasing, that forests are being defoliated or that the skies and the seas are being polluted. All this may or may not be the case. But as physical, chemical or biological facts they create no social resonance as long as they are not the subject of communication.¹⁶

Evidently, Luhmann definition views “nature” to be rather dependent on communication to be socially effective. For all that, EC is *the* way through which nature can present itself to society meaningfully; communication, the only way available to the society to create an effective social platform for nature. Either way, EC turns out to be the society’s way of internalizing nature, or making nature its own, for the purpose of (specific) social effects. Underlying the above definition is Luhmann’s attempt at addressing the theme of social/nature dichotomy on the philosophical level (something that is neglected in the pragmatic, institutional definitions of EC). Also to note here is the fact that Luhmann’s broader theory of social systems by and large discredits the role of individual humans, and rejects *consciousness* as an important factor to (the theory of)

communication generally, even as it views communication as something that occurs strictly among humans (with nature implicated and hence produced). As such, and as I explain in the next chapter, Luhmann's idea of EC translates into communication among social systems, whereas each social system by default presents itself, and is perceived as, a communicative constituent of the environment for every other equally communicative social system.

3. Redefining EC?

I enter this definitional conundrum as a humbled and reluctant participant: Humbled by the sheer array of available, largely appropriate definitions; reluctant, on account of my considered view that the business of defining—in the narrow sense at least—is far too purist to be effective or be taken seriously on the field, especially in such a practically-oriented field that EC is. Another necessary dimension to my view on defining EC has to do with myself being as yet an outsider to the discourse of EC, which has been dominated by folk from the departments of communication studies. In the backdrop of the above conditions, I approach EC *politically*, and shall define it in a manner that responds both to the levels of *field of interest* and *conceptual phenomenon*.

On the level of conceptual phenomenon, I mean *ecological communication* to refer to any (mass or public) communication whose immediate and vital focus is a non-human biospheric entity (or a set or sets thereof) that may or may not have a direct or indirect relevance to immediate or long-term human interests. Unlike Luhmann's definition, which relies upon the distinction between the broad, abstract, and ultimately interchangeable categories of *system* and *environment*, and which roots EC self-reflexively within the anthropocentric realm, my definition accepts the established centrality of humans and human interest and then goes on to mandate that for a communication to qualify as EC, it must show a measure of interest in non-human entities. In short, the defining feature for EC, as far as I am concerned, cannot lie in who communicates (for I assume it is the humans), but what it is that a given piece or process of communication is about, and what it is that it stands to affect, and how. On that count, to define EC as “any communication about *environment* [...],” as Luhmann does, perhaps gives too much undue space to humans and anthropocentric interests *qua* communicative

target insofar as *environment* of necessity includes humans. So, my own definition is not necessarily truer than Luhmann's, but I have designed it according to a felt political need on my part to undercut the breadth of the term *environment* by focusing on non-human biospheric entities as the necessary thematic ingredient of any ecological communication.

Another point of divergence from Luhmann lies in my rejection of inter-systemic communication as *the* central point of interest. While Luhmann's systemic framework has its benefits (some of which are duly revealed in Stephen Fuchs' social theory of objectivity), for the theory of EC I find it unrealistic and impractical to let go of the importance of individual humans and human consciousness *to* communication (as Luhmann obliges us to do).¹⁷ For all that, Luhmann's attitude toward *environmentalism* can be accused of being cavalier, and his understanding of *communication* of being too idealistic to be accurate. In relation to the above, his peculiar sidelining of individual humans and consciousness from the communicative framework erroneously dilutes the factors of human *responsibility* and *agency* with respect to the non-human sphere.

On the level of *field of interest*, there are, once again, a number of ways of by which to define EC. One would be to locate it with only a requisite regard for the academic investment in the field. In which case, EC could be divided into: (1) Academic study of all kinds of communication of environmental issues; (2) Focused communications about environmental issues that are released to the public by mass media channels, corporations, NGOs, governments, scientific bodies, research groups, or public interest groups; (3) Cultural, literary, artistic, folk, and religious expressions involving environmental themes; (4) Oral or written interpersonal communication about environmental issues.

Another way to classify EC as a field of interest would be to focus primarily on its academic discourse in the main (as in #1 above), and secondarily also to include field samples of communicative practices involving other possible sectors. As such, EC is a *field of study* that cuts across the interdisciplinary academic areas of: risk, hazard, disaster, and health communications, on one hand, and science journalism, on the other.¹⁸ (An even more general list would probably include such other, broader categories as: media studies; environmental rhetoric; ecological literature; and, cultural and environmental studies.) As the reader must know, most of the above are burgeoning

fields of inquiry in their own right; many of them, such as risk and health communications, can even claim sufficiently long traditions of critical research. Because the central concepts of several of the above, such as *risk*, *hazard*, *disaster*, *health*, *science*, and *media* do not necessarily have to include a focus on non-human biospheric phenomena, these fields of study are to be included in EC only selectively: i.e., only when the studies done under their banners happen to include a focus on non-human biospheric phenomena. (This is consistent with my conceptual definition of EC.)

4. *EC and its Inhibitions*

Perhaps because EC has been brought together as an academic field of study by a minority of North American and European departments of communication studies, its ruling ethos appears to be overwhelmingly journalistic, field-centered, and empirical. In relation to the above, I would like to point out below some of the broadest assumptions and hopes that underpin the contemporary discourse of EC and thus allow it to identify and uphold *communication* as a positive value in general (with only occasional or contextual fallibilities). Those assumptions can be said to serve as EC's juridical loci: i.e., as the theoretical and analytical centers regulating its internal constitution and inertia. I am not claiming here that all authors writing about EC depend upon all of the following assumptions, nor am I claiming that any single author carries each of the following assumptions. What I am claiming is that these assumptions constitute some of the stronger beliefs underlying the rationale of the discourse of EC as a whole, and can thus be understood as its central tenets.

A. **The Aboutness Problematic.** As a *mechanism*, EC is being generally understood and approached in terms of the dynamics and problematic of communicating *about* the environment. In this scenario, and on the plane of rhetoric, *environment* exists as an almost extrinsic entity, followed by considerations of the effect, accuracy, or propriety of its *communication*. Given this logic, EC ignores the majority of the occasions in which *environment* and *communication* inhabit the same social and political pace, and thus bypasses a variety of relevant political and social units other than forms of the media.¹⁹ Eco-sensitive critiques of the media are not immune from this problematic insofar as they focus on (the shortcomings of) the media rather than also examining the roles of other

political institutions *qua* institutions that may have directly affected the representation of a given environmental issue.²⁰

B. The Refining-Representing Nexus. In conjunction with the *aboutness problematic*, the discourse of EC includes plentiful attempts advocating and encouraging *refining* of communication about the environment. Refining communication has variously meant (1) a stricter adherence to hard facts; (2) a firmer grasp of scientific elements relating to the environment; (3) non-distorting simplification of environmental science for the better understanding of the average audience or readership; and, (4) unbiased and more “direct” reporting of specific events. Sustaining these ideals, it is widely believed, would refine ecological communication well enough for it to be useful, understandable, prone to quicker and larger dissemination, and closer to truth. As such, the discourse of EC privileges a predominantly pragmatic and utilitarian approach toward ecological communication.

This pragmatic notion of forever refining or perfecting (environmental) communication privileges a mimetic view of *environment* and reserves a *representative* role for the communicator and communication. For all practical purposes, this view maintains that the environment (or its *disfiguring*) can and should be truthfully represented, and that it is such a representation that ought to be the motive and content of serious communication.²¹ It is possible that this discursive disposition has by default prevented EC scholars from acknowledging (and possibly encouraging) the possibility of a constitutive and participatory role for the media and other communicative channels within environmentalism.

C. The "Communicator-Audience" Modality

The dominant structure of the prevalent EC framework hinges not only on the separation between *environment* and *communication*, but also between the communicator and the audience or readership. However, positions taken typically speak, as it were, on behalf of the communicator such that facilitating communication effectively means facilitating the communicator, discussing problems in environmental reporting means discussing problems of the environmental reporter, celebrating victories or accomplishments of such reporting means celebrating those of the reporter. In other

words, a place of articulation precedes the above positions. As such, many authors have tended to identify themselves with the “communicator” from the beginning to the end, thereby preventing themselves from imagining ecological communication as a polyphonic field.

This strand is strongly noticeable, for example, in Richard Beamish, *Getting the Word Out in the Fight to Save the Earth* (1995), Mark Neuzil & William Kovarik, *Mass Media and Environmental Conflict: America’s Green Crusades* (1996), and Michael Frome, *Green Ink: An Introduction to Environmental Journalism* (1998). As Beamish provides us with rhetorical and mechanical guidelines for mass communicating environmental issues with effectiveness, Neuzil and Kovarik detail and uphold the proactive role of the mass media through the history of environmental conflict in America from the mid-19th century to the 1960s. In a similar vein—of zealous embrace of one’s environmental prerogative—Frome outlines the role of environmental journalists as follows:

[W]e ought to be advocates for the health and safety of the planet, professionally and personally concerned with global warming, acid rain, destruction of tropical and temperate forests, loss of wilderness and wildlife, toxic wastes, pollution of air and water, and population pressures that degrade the quality of life.²²

The above trends are confirmed in Lee Wilkins’s futuristic profile of research on communication of catastrophes. Wilkins points out that “the paths for further research...center on three basic questions:”

- (a) What is the optimal role of the mass media in warning and mitigations;
- (b) how do the mass media convey information about risks, and how might they be employed in both natural and technological disasters; and
- (c) how might the mass media, at least in a democratic society, more accurately reflect the series of choices that disasters and technological accidents pose both to individuals and the social and political systems.²³

The privileging of the professional communicator within the analytical framework (of EC) is also witnessed in literatures related to science communication or journalism, except that the scientist here shares the podium (sometimes competes for it), so to speak,

with the reporter.²⁴ Rather predictably, the literature of EC is rife with lines of inquiries such as the following: How best to communicate (presumably complex) concerns relating to the environment to the public at large? What problems are encountered in the process of this communication? What politics or scientific disputes does an environmental journalist or reporter get caught into while discharging his or her duties? How to determine empirically public's awareness of a particular environmental issue—what methodologies to employ, how to draw conclusions from such a study for improving a given environmental communication?, etc.

5. New Avenues

Fresh avenues for the mainstream discourse of EC are to be located in those efforts and possibilities where the professional communicator—the journalist, or the scientist—does not have to be the hero. Ecological communication also needs to be understood and located in its moments of denial, repression, and hijack—rather than merely in its positivistic presences or their specific distortions.

Some of the above alternatives are found in the formulations and observations of an otherwise neglected report produced by Centre d'Estudis d'Informació Ambiental (for the benefit of the European Environment Agency) on one hand, and in the communication systems theory of EC furnished by Luhmann, on the other.²⁵ While the European report is notable for its innovative twist to almost all of the erstwhile orthodoxies within EC, its linking of ecological communication with *development*, and for its overtly global focus, systems theory is pertinent for its effective marginalization of the media. Because the European report is of immediate interest, I shall introduce it first below, and devote the next chapter to the implications of the systems theory. My subsequent chapter focuses on the role and status of technological forms in relation to ecological communication, while the last one is on the 1998 Indian nuclear tests as an episode in dubious ecological communication orchestrated by the Indian nation-state. Both the last two chapters demonstrate ways out of EC's claustrophobic focus on the mass media, and as such are to be considered as early steps toward its political philosophy.

6. Global Development, New Information Technology, and Ecological Communication: Centre d'Estudis d'Informació Ambiental's "A New Model of Environmental Communication for Europe: From Consumption to Use of Information"

Released in 1999, and prepared by the Centre d'Estudis d'Informació Ambiental (CEIA), the European Environment Agency's report #13 is a comprehensive attempt at re-orienting Europe's eco-communicative practices. The report is important for the following reasons: (1) It is one of the first formal policy statements prepared in behalf of a regional, intergovernmental agency on the future of ecological communication (another one seems to have been prepared by the government of Vietnam);²⁶ (2) It presumes a direct linkage between *development* and EC, while viewing *information* for its possible role in *sustainability*; (3) It is very clearly rooted in the ethos of the 1990s globalization and information revolution, and is informed by the intellectual and populist discourses that have emanated from it; (4) Because it targets a regional block of nations, the report by default retains relevance for the issue of the role of nation-states in EC, something that I believe needs to be addressed in the discourse.

Before discussing its contents, I would like to mention that the English version of the report is rather poorly edited—and/or is a poor translation; wherefore, on occasions, and for the sake of clarity, I have had to take the liberty to substitute some words from the original account with their more appropriate counterparts in my direct quotations from the report below. (I have put such changes within the customary parenthesis.)

a. What the Report Rejects: Linearity; Consumption of Information; Institutionalized Media; Info-elitism and Seclusion; Information/Action Disconnect; and Technological Primitivism

The CEIA critiques and rejects the "traditional model"—which is really another name for what it views, based upon its research, to be the mainstream framework of mass communication generally, of mass communication of environmental issues specifically, and of mass communication of environmental issues within Europe even more specifically. As such, the traditional model

is characterized by its partiality, sensationalism, and...inability to transform information into decisive, meaningful, and rational action.

Communication processes linked to this model have a non-specialised, general character, and are defined by production routines of daily news and by generation and transmission of information (knowledge) in a fragmented and linear way. At the same time, the criteria adopted for selection of the news are directly related to the impact value.²⁷

We should not brush aside the above as yet another rehash of the critique of commercial media: The CEIA has unique findings, explanations, and interpretations to provide in support of the above characterization (which I shall outline further below). I would like first to underline that the point of departure for the report is the desire to go beyond a mere provision of information, environmental or otherwise, to environmental activism. That is because “[t]he increase in information in the last decades has not been able to stop environmental degradation, and...has even [accelerated the degradation].”²⁸ The question, then, that the CEIA poses to itself is not necessarily about how to add to existing information, but how to transform it into “meaningful knowledge” about the environment and the prospect of its improvement.²⁹ In the second instance, what concerns the CEIA in the end is how to go beyond the older way of looking at environmental communication (in Europe) that has been based upon a “traditional division between supply/demand” for environmental information “among expert communicators”—and to evolve a composite and internally complementary view of groups and people at large that may be involved in a given environmental event.³⁰

The traditional model of information and communication, which the CEIA has sought to reject, is understood to exhibit the following features (or lacunae):

- a general shortage of environmental information (within the overall sphere of mass communication);³¹
- a prevalence of reporting and communicative approaches that neither integrate nor interact with the variety of social groups that may be related to a given environmental issue;
- ineffective channelling of environmental information;³²
- an over-reliance on the “written word” despite the evidence to suggest that audio-visual media have more way with the (European) public,³³ and the fact that it is risky to rely heavily on just one communicative means for (mass) communication;³⁴

- a prevalence of institutional journalism *within* environmental communication, which prioritizes political leaders and public administrators over scientists, NGOs, or private bodies *as sources of (environmental) information*;³⁵
- insufficient training of reporters at covering environmental news, with all its “uncertainties and assumptions,” and a resultant journalistic “[d]ependence on scientific and official interpretations of environmental issues as sources;”³⁶
- generation and dissemination of “fragmented and partial information”—owing to journalists’ space and time constraints relative to the environmental events;³⁷
- prioritization of the national over the local in environmental news business;³⁸
- journalistic neglect of the power and possibilities of the Internet, on one hand,³⁹ and usurpation of the Internet by the traditional media, on the other, for linear delivery of information;⁴⁰
- a focus on the “the effects of environmental problems” at the expense of an equal focus on “their causes;”⁴¹
- perhaps an inadvertent marginalization or eclipsing of environmental news by journalistic usage of conventional communicative frames;⁴²
- constraining and straining of (environmental) reporters by institutional and corporate (or market-driven) demands placed upon them, and because of their “weak interaction with the public;”⁴³
- European Community’s neglect of mass communication of issues related to the environment and “sustainability,” and its targeting of “specialised groups of producers and users of environmental information” as part of erstwhile efforts at improving “environmental information and education;”⁴⁴
- a complete neglect of the mass media from the purview of the objective of environmental information dissemination enshrined in the Fifth Environmental Action Programme, known as “Towards Sustainability,” approved on February 1, 1993;⁴⁵ and,
- constraining of environmental mass communication in Europe “by...sharp national and regional differences.”⁴⁶

b. What the Report Proposes: Access; Democratic Action; and, Usage

In order to address each one of the above deficiencies, the CEIA proposes for environmental communication “a “new model...based on interactivity, participation, plurality of sources and opinions, [variegated] representations of reality, and elimination of space, time, and variability constraints.”⁴⁷ *Information*, of course, has a very important role to play in this model; however, what is even more important are the ways through which it is disseminated and received, and whether and how it is accessed and put to use. The dynamics of information channelling are deemed significant to the protection of the environment in a very fundamental way insofar as “life can be thought to depend on the consumption of external resources and on the information that [an] organism needs to obtain those resources.”⁴⁸ As such, *development* is viewed as a “function of...energy and information,” and “sustainability” as the way to minimize the use of energy and resources through the maximal “use of information and knowledge.”⁴⁹ In the backdrop of the above, the CEIA declares “adequate, fast, and accessible communication networks” to be essential for “the improvement of the environment and sustainability standards.”⁵⁰

On the macroeconomic level, the CEIA rests its optimism upon the above linkage between information and development by arguing that

better information should allow economic agents located in different places to produce their outputs with a more environmentally sound use of natural resources, to improve their access to more efficient technologies, and to implement the latest standards of environmental quality.⁵¹

Hence, the report also advocates “indicating the means by which markets can improve their performance simultaneously in relation to their economic, social and ecological goals.”⁵² On the most general level, the CEIA argues for transforming “information for consumption to information for use,” which it believes can happen only if information is clearly linked to action and is thus turned into “powerful knowledge.”⁵³ Such a transformation is also necessary because ordinarily “[m]ore information can augment one’s capability to escape individually and result in more opportunities ‘to flee rather than fight.’”⁵⁴

1. Action, Interaction, Utility, Participation, and...well, the Internet!

Interactivity, participation, and plurality of sources through the production of news or information are expected to reorient the public's conventional (and perceived) role as *consumers* to *users* of environmental information. As such, the CEIA also places a high value on the hitherto neglected utilitarian aspect of information provision, strongly advocating linking of "information to options, and contexts to action," and involving "all the social agents (communicators, public, and decision-makers) in the generation and transmission processes of environmental information."⁵⁵ The information revolution of the 1990s is one of the very conditions of possibility for the proposed new model, and the CEIA's trust in the prospect of Internet's progressive and canny usage is very strong: In fact, it lies at the heart of its advocacy for interactivity and participation in mass communication. Wherefore:

In the new model, communication is found in the form of virtual communities, newsgroups, electronic information platforms, telematic networks or digital systems where all the actors of environmental information meet, interact and participate to generate and transmit information that responds to their needs and induces action-taking.⁵⁶

In view of the report's strong insistence upon using the Internet and associated new media technologies, some might wonder whether it was not already a little outdated at the time of its publication (given that those technologies had already become fashionable within the global information sphere). In response to that hypothetical prospect, I would like to mention that the novelty of the report in the above respect lies in its promotion of those technologies in specific reference to environmental communication; plus, there is a lot more to the report, as should be obvious from the forgoing discussion, than its centralization of multimedia and the Internet.

2. Whither the Communicator?

The CEIA takes the above vision of mass communication of environmental issues to appreciable philosophical heights by redefining the roles for both the (environmental) reporter or journalist and the environmental activist: In a sense, the CEIA's advice is that the two become a little more of each other in order to foster a healthier, more useful, and action-oriented environment for environmental communication. In the new model, the

information professional—typically the journalist or reporter—“is not the protagonist of the news anymore.”⁵⁷ Instead:

He or she must mediate a dialogue between the real generators and transmitters of the news: the different social actors involved that participate in the news [on the basis of] their own and personal identities and interpretations of reality.⁵⁸

Conversely, “the new environmental worker” should be prepared and willing to develop “methodologies to spread environmental information, by combining interpersonal and informal means of communication with new developments in information technologies.”⁵⁹ “These methodologies and techniques,” the report goes on to argue, “should aim at the integration of the plurality of environmental information, understanding, and knowledge [for the sake of general intelligibility].”⁶⁰

The new environmental journalist, per CEIA suggested criteria, should also be close to their audiences, sources, the news, the event, and even decision-making—instead of having to “interpret the facts or data through the reports of other actors close to the event.”⁶¹ The proximity so desired is meant in both spatial and temporal terms; actually, it is also meant in the human terms—insofar as “[h]ow close and personal the contact is to the audiences will greatly determine the possibility of understanding and quality of environmental information.”⁶² As such, the CEIA’s view of objectivity is also rather unconventional: Its research and surveys suggest that the “notion of objectivity...depends on the assumptions about the production of knowledge and the beliefs and meanings attached to it by the institutions and the professionals who work in it.”⁶³ Therefore, the “objective content of environmental information” at “the level of mass communication...can only be validated by the interaction of different and visible ‘truth sources’ with their attendant audiences.”⁶⁴ This is because “[e]ach audience and context claims its own legitimate sources of truth and expresses in a particular language of motives.”⁶⁵

For all that, the report seems to shift the focus from *objectivity* to *adequacy* of environmental information, which it believes “can be evaluated by [measuring] the degree to which [a given piece of information] integrates the diverse points of view at stake, in each social context by an open procedure.”⁶⁶ The report goes even further in

undercutting orthodox views about both objectivity and (environmental) communication by underlining the practical dimension of this whole issue, whereas

the amount of information to deal with a given environmental problem might be sufficient, but the human resources and social structures necessary to understand and transform this information into practical knowledge and action might not be enough.⁶⁷

The CEIA thus lays emphasis on *integration* attainable through *interaction*—especially through the use of the new Internet and multimedia technologies and a mastery of their idiom, as it were. That is because those technologies “[confer] to communication processes a horizontal, hyper-medial, and hyper-textual capacity, while increasing levels of diversity of sources and empowering social stakeholders in the informative dynamics.”⁶⁸ Moreover, the above technologies positively affect the proposed drives for localization of the news, communicative speed, contextual proximity, and enhancement of the layperson’s participation in the communicative process.⁶⁹

In such a scenario, *interpretation*, otherwise a negative ideal within mainstream journalistic community, comes through as an enlightened democratizing tool:

It is only by a context-oriented social selection and interpretation of environmental information that knowledge and understanding about these kinds of issues could be shared adequately among large sectors of society, instead of being [restricted] to only a technical elite of environmental specialists and corporations.⁷⁰

In line with the above spirit—of democratization, activism, and encouragement of public usage of information—the report also floats the idea of developing “new professions and institutions [that would be invested in translating] complex information into intelligible, discussible, and attractive issues[...].”⁷¹

3. **Integration**

The CEIA’s stress on integration does have something to do with the well-known democratic argument, but it also has as much to do with its penchant for an efficient, result- and action-oriented information sphere operable as a connected system. Integration is deemed important in light of erstwhile disconnect between information

strategies and action-plans of public agencies invested in dissemination in Europe. Whereas, the report laments that many media campaigns were “launched before the necessary institutional and technological arrangements” had been “sufficiently set up”—leading to “public disappointment and distrust.”⁷² That said, the CEIA seeks the integration not only between the bureaucrat and the citizen, or the journalist and the activist (as mentioned previously), but also between corporations and the public:

An integrated approach to environmental information means that corporations would work with citizens to achieve common sustainability goals while citizens would be allowed to enter into corporate decisions for the same reason.”⁷³

Such a close cooperation is sought and promoted between the two traditional aliens because “[p]ublic understanding and intervention in corporate risky decisions is essential to avoid the worst of the outcomes of large-scale potential accidents.”⁷⁴ And for that reason, the CEIA also promotes “[p]ublic debate and accountability...as a basis for the improvement of safety and sustainability”—rejecting their perceived status or role “as a threat to corporate power.”⁷⁵

4. Practical Steps: Media Labs; Innovative Social Communication Methods; New Information Technologies; Public Forums; and Regional Directories

The CEIA concludes by advocating to “integrate different strategies from different institutions through interactive, open, interpersonal, and democratic procedures between producers and consumers of information.”⁷⁶ This general objective brings environmental communication even closer to the goal—and, in some sense, ideology—of sustainability in that integration is expected to “help individuals and social groups define and express more closely what sustainability and environmental information mean to them in their own personal contexts.”⁷⁷ The prospect of a chaotic pluralism therein is diluted by the hope that as “abstract issues such as ‘sustainability’...acquire a deeper meaning in personal experiences, new ideas in relation to remedial and preventive societal actions might also...arise.”⁷⁸

The report attests to some of the above effects by detailing the achievements of such early European and global initiatives as the Global City Platform, the Association

for the Progress of Communications (APC), and the Earth Negotiations Bulletin of the International Institute of Sustainable Development (IISD).⁷⁹ For the future, the report recommends

- establishing locally operated “media laboratories”—or environmental communication research centers—that would “study, develop, test and implement new communicative systems that fit the requirements” of the model of environmental information exchange that the report proposes.⁸⁰
- “promoting the use [and accessibility] of New Information Technologies and specialised media products on sustainability and environmental issues;”⁸¹
- “building and promoting...regular (virtual) forums for discussion, assessment and dissemination of environmental information between formal and non-formal sectors of society;”⁸²
- publishing “local and regional directories” on “professionals working in the field of environmental information and communication.”⁸³

5. A Note of Reflection

On the whole, what sort of a role does the European report accord to EC? There are a number of layers to the context of the report’s origin, which need to be reminisced briefly in order to allow me to answer the above question. Coming as it did at the end of the 1990s, the report can be seen as an attempt at capitalizing the twin forces of the Internet revolution and ecological sensibility for the unification of Europe: in the backdrop of the continuing enhancement of the European Union to the former Eastern bloc. Given the image and status of Eastern European countries as both under-developed and polluting, and the secondary status of Europe behind the United States, Japan, and South Korea on the front of global Internet connectivity and usage, it should come as little surprise to find an articulate attempt that addresses the above issues all at once in the form of EC.

As such, EC comes off as the most promising and potent way to connect the new, old Europe: It appears to pluck the best from both the post-industrial mode of industrialization (in the form of all that goes with the *virtual* revolution) and the conventional mode of development (by way of underlining the idea of a pan-European

sustainability). Insofar as the report projects future EC as a participatory mode of mediated informationalizing about the environment/development, it also shows the way to putting eco-reporting, as it were, into the hands of the citizen (or, better still, *mouse!*). However, while this participatory aspect does give us a view that is different from the dominant framework within the academic discourse (and even within the journalistic practice) of EC, the report itself retains a problem-solving, activist approach that is generally consistent with the ideology of economic development.

A curious contrast to the above, and hence a neglected alternative to the dominant discourse of EC, is found in Luhmann's theory of EC. Luhmann's overriding purpose is to theorize or philosophize about EC, in which case he serves as an exception (especially since he does not give the media any more than it is its due); however, he also upholds strong, positivistic ideals about the future of humanity. In the following chapters, I discuss and evaluate Luhmann's theory in connection with Gregory Bateson's ideas linking ecology and communication, and as part of the larger ethos of the early origins of information theory, cybernetics, systems research, and computerization. The forthcoming discussions shall be helpful in deciding what paths to pursue for the future theorization and analysis of EC.

Notes

¹ Niklas Luhmann's *Ecological Communication* (1986) can be understood as a lengthy definition of EC as a phenomenon; however, few can be persuaded to call it a comprehensive survey of EC literatures. See Luhmann, *Ecological Communication*, tr. John Bednarz, Jr., The University of Chicago Press, 1989. First published 1986.

² Andrew Pleasant, Jennifer Good, James Shanahan, and Brad Cohen, "The Literature of Environmental Communication," *Public Understanding of Science*, 11: 2002, p. 197.

³*Ibid.*

⁴ *Ibid*, p. 205.

⁵ *Ibid*, p. 204.

⁶ Such a journal has since been established, and is titled *Environmental Communication Yearbook*. A previous related journal is the *Applied Environmental Education and Communication*, which is partly supported by the United States Agency for International Development. In a sense, however, some older environmental magazines such as the *Ecologist* (UK), *Down to Earth* (India), *Sanctuary* (India), *National Geographic* (USA), and *Discovery* (USA) can be said to be fulfilling the purpose of environmental communication in the non-academic realm.

⁷ See, for example, the homepages of: Northern Arizona University's Environmental Communication Resource Center's (ECRC): <http://www.comm.nau.edu/ecrc/philo.htm>; Environmental Communication Network (ECN): <http://www.esf.edu/ecn/whatisec.htm>;

the Rutgers University's Center for Environmental Communication (CEC): <http://www.aesop.rutgers.edu/~cec/home.html>; University of Cincinnati's Center for Environmental Communication Studies (CECS): <http://uc.edu/cecs/cecs.html>.

⁸A Google search for "environmental communication" on the Internet leads one to a large number of corporate sites, the majority of them, as of 2003, belonging to Japanese corporations. Many North American, South East Asian, and European firms have also put up links specifically devoted to environmental communication relating to their products and services, and have also created administrative units dealing specifically with EC. Other non-academic bodies that have put up EC sites include: consulting and investment firms (such as Anthonissen & Associates, or ; NGOs; associations (such as the Associated British Ports); IGOs (such as the European Environment Agency); media and advertising firms (such as *envision* environmental communication, Greenbrae Environmental, MUST, Vox Bandicoot, or *eco*); governmental units (such as the National Water Commission of Mexico, or the Environmental Protection Department of Latvia); journalistic networks (such as the Asian Federation of Environmental Journalists, or the Environmental Communication Asia Network), etc.

⁹ Visit: <http://www.comm.nau.edu/ecrc/philos.htm>

¹⁰ *Ibid.*

¹¹ Visit: <http://www.esf.edu/ecn/whatisec.htm>

¹² Visit: <http://www.aesop.rutgers.edu/~cec/home.html>

¹³ Visit: <http://uc.edu/cecs/cecs.html>

¹⁴ *Ibid.*

¹⁵ Niklas Luhmann, *Ecological Communication*, p. 28.

¹⁶ *Ibid.*

¹⁷ Stephen Fuchs, "A Social Theory of Objectivity," *Beyond the Science Wars: The Missing Discourse about Science and Society*, Ullica Segerstrale (ed.), Suny Series in Science and Society, State University of New York Press: Albany, New York, 2000, pp. 155-177.

¹⁸ See, for example: Peter M. Sandman, David B. Sanchsman, Michael R. Greenberg, Michael Gochfeld, *Environmental Risk and the Press: An Exploratory Assessment*, Transaction Books: New Brunswick, USA & Oxford, UK, 1987; Renne J. Johnson & Michael J. Scicchitano, "Uncertainty, Risk, Trust, and Information: Public Perceptions of Environmental Issues and Willingness to take Action," *Policy Studies Journal*, 28: 3, 2003, pp. 633-647; Paul Slovic, *The Perception of Risk*, Risk, Society, and Policy Series, ed. Ragnar E. Lofstedt, Earthscan Publications: London & Sterling, Virginia, 2000; Sharon Dunwoody, *Science Journalists: A Study of Factors Affecting the Selection of News at a Scientific Meeting*, PhD Dissertation, School of Journalism, Indiana University, December 1978; Sharon M. Friedman, Sharon Dunwoody, Carol L. Rogers (eds.), *Scientists and Journalists: Reporting Science as News*, Issues in S&T Series, The American Association for the Advancement of Science, The Free Press: New York, 1986; David Jarmul (ed.), *Headline News, Science Views*, National Academy Press: Washington, D. C., 1991; David Jarmul (ed.), *Headline News, Science Views*, National Academy Press: Washington, D. C., 1993; Marcel C. La Follette, *Making Science Our Own: Public Images of Science (1910-1955)*, The University of Chicago Press: Chicago & London, 1990.

¹⁹ Important exceptions to this tenet include cultural studies of EC, such as: Stuart Allan, Barbara Adam, & Cynthia Carter (eds.), *Environmental Risks and the Media*, Routledge: London & New York, 2000; Graham Chapman, Keval Kumar, Caroline Fraser, & Ivor Gaber, *Environmentalism and the Mass Media: The North-South Divide*, Routledge: London & New York, 1997;

²⁰ See, for example: Conrad Smith, *Media and Apocalypse: New Coverage of the Yellowstone Forest Fires, Exxon Valdez Oil Spill, and Loma Prieta Earthquake*, Greenwood Press: Westport, CT, USA, 1992.

²¹ See, for example: Bernadette West, Peter M. Sandman, Michael R. Greenberg, *The Reporter's Environmental Handbook*, Rutgers University Press: New Brunswick, New Jersey, 1995; M. Granger Morgan, Baruch Fischhoff, Ann Bostrom, Cynthia J. Atman, *Risk Communication: A Mental Models Approach*, Cambridge University Press: Cambridge, UK, 2002.

²² Michael Frome, *Green Ink: An Introduction to Environmental Journalism*, University of Utah Press: Salt Lake City, 1998, p. ix.

²³ Lee Wilkins, "Conclusion: Accidents will Happen," *Bad Tidings: Communication and Catastrophe*, eds. Lynne Masel Walters, Lee Wilkins, and Tim Walters, L. Erlbaum: Hillsdale, New Jersey, 1989, p. 171.

²⁴ See, for example, Sharon M. Friedman, Sharon Dunwoody, Carol L. Rogers (eds.), *Scientists and Journalists: Reporting Science as News* (1986). Inherent valorization of scientists and technologists as communicators is found in David Jarmul (ed.), *Headline News, Science Views*, 1991 & 1993. See also Susan L. Allen's rather unusual appeal to fellow anthropologists to become more active as public communicators and media educators: "The Anthropologist as Media Anthropologist," *Media Anthropology: Informing Global Citizens*, Susan L. Allen (ed.), Bergin & Garvey: Westport, Connecticut & London, England, 1994.

²⁵ Centre d'Estudis d'Informació Ambiental, "A New Model of Environmental Communication for Europe: From Consumption to Use of Information," *Environmental Issue*, Report # 13, European Environment Agency: Barcelona, Spain, July 21, 1999, pp. 1-64. Available at: http://reports.eea.eu.int/92-9167-125-8/en/page001.html/index_html_RLR

Notable, also, is Mercedes Escamilla's policy essay "Communication as Part of an Environmental Strategy on Water," Oficina de Comunicación del Lago de Chapala." Visit: <http://www.iwrn.net/mexescam.htm>. The document does not indicate when it was written or published (it is also not paginated on the Internet); the internal references suggest that it might have been published in or after 1996. Escamilla situates the politics of water management within the context of sustainable development and communication, arguing that

sustainable development cannot be achieved exclusively through campaigns or slogans, but complementary efforts are need in terms of communication, provision of information, and peoples' participation.

Escamilla also argues:

Communication should be considered...an essential requirement in terms of coordinating and forging the interrelationships and linkages between water professionals, users, organizations, media, and the general public as

a whole. It should be viewed as an important means of interaction between all the different parties associated with the total water management process.

I have chosen not to discuss the above essay in detail because Escamilla by and large carries an educative view of communication: i.e., communication as a way to educate the public about health issues related, let us say, to water supply. As such, Escamilla's approach retains the positivistic stance of most EC approaches.

²⁶ See Vietnam National Environment Agency, "Environmental Communication in Vietnam," <http://www-scf-usc.edu/~msilverm/vn-envimmasscom.htm>

²⁷ "A New Model of Environmental Communication for Europe: From Consumption to Use of Information," p. 5.

²⁸ *Ibid*, p. 4.

²⁹ *Ibid*.

³⁰ *Ibid*, p. 6.

³¹ The report cites the findings from its "Environmental Barometer performed between October 1997 and June 1998, based on the daily study of 10 Spanish newspapers," which demonstrated that the average percentage of surface devoted to environmental issues in the studied newspapers during those nine months—was 2.3%, (with a variation of 0.7), of the total surface of printed information. This figure was only surpassed in specific moments, such as the celebration of the Climate Summit in Kyoto or the impact provoked by wastewater spills in the National Park of Donana.

Ibid, p. 8.

³² *Ibid*, p. 18.

³³ *Ibid*, p. 12.

³⁴ Whereas:

The labelling of processes and events as environmental issues and the words used to convey importance of those issues, can amplify, disguise or even completely manipulate the content and the context of the information provided. The representation of the issue is mostly dependent on the specific use of words than can be finally identified by the audiences or readers as their own language.

Ibid, pp. 23-24.

And, so: "Language has to be supported by other elements such as graphics, images, video and audio," *Ibid*, p. 24.

³⁵ *Ibid*, pp. 9, 10.

³⁶ *Ibid*, p. 25.

³⁷ *Ibid*, p. 18.

³⁸ *Ibid*, p. 16.

³⁹ Whereas:

only 7% of those polled by the CEIA choose Internet as the main communication route to be promoted for supply of environmental information. The majority continues to think that efforts should be directed towards increasing the number of environmental articles in general press (29%), the number of discussions with experts in audio-

visual media, television or radio (20%), or the number of specialised programmes (19%).

Ibid, p. 13.

⁴⁰*Ibid*, pp. 26, 27.

⁴¹*Ibid*, p. p. 22.

⁴²“For instance, production indicators and prices on main prime resources come under “economic information”; the construction of a new highway or the expansion of a harbour appear in the “transport” news; while urban pollution from private vehicles is under the label of “environment,” *Ibid*, p. 23.

⁴³*Ibid*, p. 29.

⁴⁴ Those efforts include

among others, the Directive on Environmental Impact Assessment of 1985, the 1988 Resolution on Environmental Education, the CORINE programme of 1985-1991, the creation of the European Environment agency agreed in 1990, and the Directive on Freedom of Access to Environmental Information of 1990.

Ibid, p. 30.

⁴⁵*Ibid*.

⁴⁶*Ibid*.

⁴⁷*Ibid*, p. 1.

⁴⁸*Ibid*, p. 32.

⁴⁹*Ibid*, p. 32.

⁵⁰*Ibid*.

⁵¹*Ibid*, p. 33.

⁵²*Ibid*, p. 32.

⁵³*Ibid*, p. 32.

⁵⁴*Ibid*, p. 41.

⁵⁵*Ibid*, p. 39.

⁵⁶*Ibid*, p. 40.

⁵⁷*Ibid*, p. 39.

⁵⁸*Ibid*.

⁵⁹*Ibid*, p. 43.

⁶⁰*Ibid*.

⁶¹*Ibid*, p. 36.

⁶²*Ibid*, p. 36.

⁶³*Ibid*, p. 35.

⁶⁴*Ibid*, pp. 35-36.

⁶⁵*Ibid*.

⁶⁶*Ibid*, p. 36.

⁶⁷*Ibid*, pp. 36-37.

⁶⁸*Ibid*, p. 5.

⁶⁹*Ibid*, p. 21.

⁷⁰*Ibid*, p. 42.

⁷¹*Ibid*, p. 43.

⁷²*Ibid*, p. 40.

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- ⁷³ *Ibid*, p. 33.
⁷⁴ *Ibid*, p. 33.
⁷⁵ *Ibid*, pp. 33-34.
⁷⁶ *Ibid*, p. 40.
⁷⁷ *Ibid*.
⁷⁸ *Ibid*.
⁷⁹ *Ibid*, pp. 44-45.
⁸⁰ *Ibid*, p. 56.
⁸¹ *Ibid*.
⁸² *Ibid*.
⁸³ *Ibid*.