

The Wiring of Bhutan:

A Test Case for Media Ecology in the Non-Western World

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Media ecology arose as a means of exploring the consequences of new modes of communication in the Western world. Although it is premised on the universality of its central precept—that the introduction of a new medium has ecological consequences, leading to total social change—media ecology has rarely been used as a theoretical model for examining the interaction of media and culture in the Third World. Using the Kingdom of Bhutan as a test case, this paper explores the viability and usefulness of the media ecology model for describing, predicting, and controlling media effects in a non-Western, non-capitalist context.

A Test Case for Media Ecology in the Non-Western World

MEDIA ecology is the product of a particular place. It arose as a means of exploring the consequences of the emergence of new modes of communication in those areas of the globe that we refer to as the Western world. Although primarily concerned with social and psychological imbalances arising in the West, media ecology is, as a macro-level analysis, premised upon the universality of its central precept, which is that, like the rabbits set loose in the Australian outback in the mid-19th century, the introduction of a new medium leads to “total change”—change, in other words, which is not merely additive or subtractive but “ecological” (Postman, 1992, p. 18), profoundly altering the balance of life within a given culture. However, as a model for describing, predicting, and controlling the impacts of technology, media ecology has rarely been applied outside the Western (or “developed”) world. The purpose of this paper is to consider whether media ecology can serve as an appropriate theoretical basis for examining the interaction of media and culture in a non-Western, non-capitalist context—specifically, the Kingdom of Bhutan.

Bhutan is a small Himalayan monarchy with a population of approximately 750,000. Situated as it is between China and India, two large nations with imperialist tendencies, Bhutan has always been very protective of its unique culture and national identity, a policy of cultural isolationism that until recently included restricting access to foreign media and technology. The result was that, until well into the twentieth century, Bhutanese society was largely unchanged from the 1500s (Priesner, 1999, p. 25). In the 1960s, however, King Wangchuck’s government instituted the first of many five-year plans designed to guide Bhutan into the modern age. Telephone lines were laid in the most accessible areas of this mountainous nation, and steps were taken toward the creation of a nation-wide educational system. Then, in 1999, the Kingdom of Bhutan made the extraordinary decision to go on the air and online, offering both television and Internet communication to its citizens. In practice, the new media are available only to those few Bhutanese with access to the necessary infrastructure (telephone lines and electricity) and hardware (satellite dishes, televisions, and computers), but the government has committed to

working toward eventually extending Internet access to all citizens, beginning with hookups in high schools.

These developments in Bhutan prompt a question with clear ecological implications: What happens when an insular, agrarian society decides to adopt the full range of information technologies that originated in a disparate social milieu, bringing that society into sudden contact with an outside world it has strenuously avoided for centuries? After only five years of relatively slow, careful implementation in the kingdom's most populated areas, empirical data is of limited use in answering this question—although anecdotal evidence does suggest some interesting trends, such as a decreasing valuation of traditional knowledge among youth in the capital city of Thimpu.

Faced with a number of research approaches that are “woefully inadequate” (Slevin, 2000, p. 232) to the task of understanding the uptake and import of information technology in Bhutan and other developing nations, I am increasingly drawn toward media ecology as an alternative framework for my investigations. After all, media ecology has the potential to tell us a great deal about the implications of Bhutan's decision to import Internet and television technologies, since the work of media ecologists involves describing and predicting exactly how large-scale cultural shifts arise as a result of changes in the dominant mode of communication. But before using media ecology to examine Bhutan, I want to use Bhutan to consider media ecology—that is, to determine whether media ecology is in fact a viable and useful model for theorizing about the impact of new communication technologies in Third World nations as they attempt to modernize. Bhutan's culture provides a unique test case because it departs in several important ways from that of the Western world. First, Bhutan never underwent a period of what the Western world calls Enlightenment, with the consequence that the Bhutanese see no fundamental rift between culture and technology, art and science. Second, as a Buddhist nation, Bhutan's attempts to modernize are guided by a concern not with Gross National Product but with achieving and maintaining a state of social and individual well-being that the king has termed “Gross National Happiness” (GNH). Third, while the Western approach to technology is, in the words of McLuhan and Powers (1989), “to adopt anything that promises an immediate profit and to ignore all side effects” (p. 69), the Bhutanese take a much more cautious and conservative approach, which McLuhan further asserts is characteristic of oral, Third World, Asian cultures.

McLuhan's observation is a good example of the kind of uncanny prescience for which he and other media ecologists have an undeniable talent. Their insights always seem fresh and pertinent, even when coming to us from temporal distances of half a century or more. But does this enduring relevance over time also extend to space? Is media ecology a universal model for the collision of media and culture, or is it useful only in theorizing about the social and psychological impacts of technological development in the post-Enlightenment, capitalist, technology-obsessed, Western world?

II

BEFORE addressing this question, I want to clarify what I mean by a “media ecology model.” This is necessary because the perspectives on media and technology offered by McLuhan, Jacques Ellul, Lewis Mumford, Harold Innis, Neil Postman, and other media ecologists are in many ways quite divergent, particularly when it comes to the implications of innovation for developing nations. We have, at one end of the continuum, Ellul's (1954/1964) dire warnings that the traditional cultures of Third World countries cannot survive “the proverbial collision between the earthenware pot and the iron pot” (p. 124) for “technique, in all

the lands it has penetrated, has exploded the local, national cultures” (p. 130). At the other end of the continuum, we have McLuhan’s more sanguine vision of a world rendered interdependent by virtue of the simultaneity of electronic communication. Situated somewhere between these two extremes is Mumford (1934), who sees the immense “possibilities for both good and evil” arising from new technologies which allow for “instantaneous personal communication over long distances” (p. 241).

However, amidst this diversity of views and analyses can be gleaned a number of shared principles that form the basis of a media ecology model for describing, predicting, and controlling media effects.

Chief among these is the principle that, far from being mere neutral conduits of content, media should be regarded as forming in their totality an environment that surrounds us as completely and, as McLuhan often observed, as invisibly, as air. Working from this principle, the model becomes the basis for careful *descriptions* of the role this “enveloping element” (Ellul, 1977/1980, p. 161) plays in shaping the assumptions, values, and modes of organization of those who live within it: “Just as the physical environment determines what the source of food and exertions of labor shall be, the information environment gives specific direction to the kinds of ideas, social attitudes, definitions of knowledge, and intellectual capacities that will emerge” (Postman, 1979, p. 29).

A corollary principle of the media ecology model is that the introduction of a new medium into the information environment will always have ecological implications. That is to say, it will upset the existing cultural balance, promoting transformations, often radical, in social values and the institutions—governments, economies, educational systems—of which society is comprised. Working from this principle, the model becomes the basis for *predictions* about the kinds of changes that will occur. The question of what effects a particular medium will have in a particular place and time can be answered in part by discerning trends in media effects that “come into view through serious discussion of the history of technological change” (Postman, 1999, p. 49). However, while media ecologists tend to extend the predictive force of their macro-level analyses to the entire globe, their prognostications are ultimately constrained by the ecological understanding that, just as in the natural world, the precise nature of change is “wildly unpredictable” (Postman, 1992, p. 12) *because* it is ecological—that is to say, dependent upon the “cultural matrix within which the particular medium operates” (McLuhan, 1964, p. 11). The “bias” of rabbits may be to procreate rapidly, but rabbits doubtless impact the Arctic environment somewhat differently than they do that of Australia. Similarly, in the ecology of media, the effect of a medium is determined not only by its inherent biases but also by its interactions within “a complex web of interrelationships among society, culture, and individuals” (Barnes & Strate, 1996, p. 183).

It is because “unforeseen consequences stand in the way of all those who think they see clearly in the direction in which a new technology will take us” (Postman, 1992, p. 15) that the third dimension of the model, *control*, becomes so important. Given that new media unavoidably create a disequilibrium whose consequences to civilization can be “disastrous” (Innis, 1951, p. 76; Mumford, 1934, p. 372), media ecology emphasizes the importance of regaining that balance, of “bring[ing] together the mechanical and the personal, the objective and the subjective sides of our life, in order to establish them once more in an organic working relationship” (Mumford, 1952, p. 5). Many media ecologists further assert that the only way to achieve a personal and social balance between human ends and technological means is through a critical awareness of the media environment. However, as McLuhan and Fiore (1968) remind us, “one

thing about which fish know absolutely nothing is water” (p. 175). In other words, attaining a critical distance becomes increasingly difficult as we become increasingly immersed within our media environment. Education must therefore serve the very important role of helping students achieve an epistemological distance from the media environment. We must, contends Ellul (Vanderburg, 1981), teach our children “to live *in* technology” while at the same time helping them “to develop a critical awareness of the modern world” (p. 83).

Given this basic understanding of the media ecology model, I will now use the three key points of difference between Bhutan and the Western world identified above as a framework for exploring the usefulness of the model for describing, predicting, and controlling media effects in developing nations such as Bhutan.

III

IN *Building a Bridge to the Eighteenth Century*, Postman (1999) charts the rise of the Western world’s celebration of technological progress and its concomitant valuation of efficiency, measurement, and standardization to the emergence of rationalism in the mid-18th century: the period we now refer to as the Enlightenment. This period and its thinkers—including Voltaire and Diderot, Hume and Kant—were, as Postman eloquently describes, foundational in giving rise to our technological society.

Bhutan experienced no such radical shift in its thoughtworld and culture. Therefore, rather than perceiving science-technology and art as “two cultures” (Snow, 1965) aligned on opposite sides of a great divide, as the post-Enlightenment world is wont to do, the Bhutanese tend to seek a healthy balance between all such dichotomous concepts—including modernization and tradition, growth and well-being, the material and the spiritual—and to conceive of the world as they always have: in the holistic, balanced terms of Himalayan Buddhism, which emphasizes the importance of taking the Middle Way through extreme points of view (Prakke, 1999, p. 71).

The media ecology model arose as a means of describing how technological development comes to bear in a society where rationality is sovereign and science-technology and art are perceived as rigidly opposed concepts. Can the model then provide a useful basis for describing the role newly introduced information technologies play in a society where all ways of knowing are equally valued, and media and technology are perceived not as impinging upon other aspects of culture, but as part of an inseparable whole?

By way of addressing this question, it is useful to consider the ideology that underlies many descriptions of the role of media and technology within traditional cultures: technology transfer. “Technology transfer” refers to the process whereby a technique developed in one place is transferred wholesale to another place, the latter often a developing nation; but the term also refers to a way of conceptualizing and describing innovation and development that is characterized by a focus on tools and technological choices, and by a quest for theories, economic models, and conceptual frameworks to aid in quantifying the effects of technological innovations on the developing world.

The technology transfer perspective has at least two deficits when it comes to describing the role of new media in Third World nations. First, it is deeply rooted in a post-Enlightenment thoughtworld and value system—including an unquestioned celebration of technological progress, a privileging of rationalism and quantification, and a tendency to perceive the world in rigid dichotomies—that is fundamentally foreign to the developing world. Therefore, its inherent concerns tend to “[preclude] the possibility of understanding a . . . civilization concerned with balance and proportion” (Innis, 1951, p. 140). This disjunction leads one commentator to observe

that a major obstacle to the study of communication in the East “has always been the lack of an appropriate research methodology to study social phenomena holistically” (Kincaid, 1987, p. 332). Media ecology, which is predicated on the need to perceive media as part of a system of social and cultural forces, offers an appropriate basis for just such a holistic perspective.

A second downside to the technology transfer approach is that it tends to be based on a tacit representation of the developing world as a passive receiver of Western innovation, thereby predisposing researchers to “discover” that a medium’s manifestation in the society under study is more or less consonant with its role in the Western world. In this way, a technology transfer approach risks becoming a form of what Edward Said (1978) calls “Orientalism”: a process of investigation by which the Western world constructs, dominates, and silences cultures other than its own. Once again, I see media ecology as offering a more appropriate model for understanding and describing the role technology plays in Bhutan because it in no way denies the complexity of Bhutanese culture nor the uniqueness of its response to imported communication technologies. On the contrary, media ecology is predicated upon the fundamental assumption that a study of the role of technology must be contextual, for, far from being “isolated and self-contained,” technology “exists as an element in human culture” and “reacts to forces and impulses that come from apparently remote parts of the environment” (Mumford, 1934, p. 6). Technology transfer research tends to characterize media effects merely as a one-way, cause-and-effect process. By drawing attention to the potentially unique ways in which information technology might come to bear in this agrarian, Buddhist nation, a media ecology perspective has the potential to yield more fully rounded descriptions of the reciprocal relationship between communication technologies and Bhutanese culture.

IV

THE second important way in which Bhutanese culture diverges from that of the developed world is in its commitment to the premise that, as the king has proclaimed, “GNH [Gross National Happiness] is more important than GNP.” A concept that has “organically evolved from . . . a socio-economic system based on a Buddhist and feudal set of values” (Priesner, 1999, p. 28), GNH captures the Bhutanese government’s views about the principles that should guide modernization. It stipulates that technological development should support such basic human values as respect for life and the natural world, compassion, and social harmony. The GNP-fixated Western world measures social well-being in terms of economic growth—“The good life as the *goods* life” (Mumford, 1934, p. 105)—with the result that these important qualitative factors are often neglected. For example, irresponsible logging practices register only on the positive side of the ledger, since the Western economy benefits not only from the sale of the logs but also from the need to clean up landslides: “Nowhere in the calculations of this countries [*sic*] GNP will [there] be an entry reflecting the distressing reality that millions of trees are gone forever” (Tideman, 2001, p. 4). In direct contrast to this kind of thinking, GNH asserts that human well-being is more important than economic progress and that, while the latter can contribute to social and individual well-being, happiness is a spiritual state that cannot be achieved merely through material abundance and increased consumption. Hence, the government’s decision to place severe limits on the number of tourists allowed into the kingdom, a move that makes little sense to those bound by the imperatives of a market economy.

In fact, Bhutan’s is still a barter economy. Although monetary transactions are conducted with increasing frequency, the shopper who requires change back from a purchase is still more likely to receive a handful of bubblegum than coins. Is media ecology an appropriate model for

predicting the potential consequences of development for a society so disengaged from the spirit of capitalism and technological progress, a society in which the central ideology is not GNP but GNH?

Certainly, media ecologists' predictions about the consequences of technological innovation tend to be premised upon the fundamental connection between the imperatives of capitalism and the growth of media and technology in the West—although the precise nature of that connection is a point of some contention. Mumford (1934), for example, sees capitalism as “having prepared the way for modern technics” (p. 14); Ellul (1954/1964) counters that technology has given rise to a market economy (p. 5); while McLuhan has been criticized for more or less ignoring capitalism, which he is said to view as “the obsolescent content of the new era of the electronic simulation of consciousness” (Kroker, 1984, p. 81). But a concern with exploring the nature and consequences of the connection between media and a capitalist political economy is intrinsic to the media ecology model only insofar as it is a manifestation of an ecological perspective that regards media and other elements of the social system as mutually determining. In fact, when applied to an Eastern, agrarian nation with a barter economy, the model immediately brings into question the appropriateness of viewing social progress solely in terms of the profit motive and the maximization of economic growth. In other words, as a model for predicting media effects in the developing world, media ecology emphasizes the need to begin by placing words like “development” in quotation marks.

The concept of development emerged in 1949, when President Truman, as quoted by Ullrich (1992), announced that the United States would “embark on a bold new program for making the benefits of our scientific advances and industrial progress available for the improvement and growth of underdeveloped areas” (p. 275). Often used by scientists as a synonym for evolution, the term has come to denote the process whereby the acquisition of scientific and technological knowledge propels a “backwards” society toward an ever greater state of perfection, with the Western world as the apotheosis of development. Caught within the web of meanings the word contains are the assumptions that there is a single trajectory towards a higher state of civilization that all developing societies must follow, that technological change is always progressive, and that happiness is a natural byproduct of material and technological progress. Such assumptions leave us with only one possible outcome to predict for Bhutan: development as a process of “Westernization.”

As Bhutan attempts to modernize, it must cope with an “onslaught of mainstream development concepts delivered and advocated by scores of foreign professionals, experts and pundits” (Priesner, 1999, p. 36). The advice of these professionals is based on the Western world's largely unquestioned association of GNP with social progress and well-being. While also a product of the Western world, media ecology offers a more apposite model for predicting what will come of Bhutan's attempts to modernize because it compels a view of development much as the Bhutanese see it: not as a linear, ineluctable, evolutionary process driven by selfish individualism and a dog-eat-dog struggle to survive, but as an ecological process of “change in continuity” (Mathou, 2000) in which individuals work together to establish and maintain a healthy, balanced social life, which may take many forms.

As framed by Mumford (1970), the difference between the conventional view of development and a media ecology perspective is the difference between “a money economy” and a “life economy” (p. 433). The former “assumes that the main human impulses are competition and consumption” (Tideman, 2001, p. 9) and that change is therefore a function of what market forces decree. The latter insists that a society is much more than an economy and that other

impulses—those which give rise to art, language, ritual, ceremony, and a moral vision—also play important and sometimes unexpected roles in directing social change toward human rather than economic ends. The media ecology model therefore compels the researcher to look beyond quantitative economic indicators and to focus as well on the lived experience of the Bhutanese and the effects of the new media on the texture of their social life.

V

THE third important way in which Bhutanese culture diverges from that of the Western world is in its tendency to approach new technologies with caution—as evidenced, it would seem, in its naming of digital devices. When the first mechanical behemoths were developed in North America, they were personified as “computers,” a word which, until then, referred to people who performed mathematical calculations. When the computer first arrived in Bhutan, the Bhutanese also needed to coin a word for this new phenomenon. They did so by combining two existing words in Dzonghza, their national language: “knowledge” and “power.” Just as the North American naming revealed a great deal about its society’s paradoxical attitude to a technology viewed simultaneously as a neutral tool that can make its lives easier and an autonomous entity with its own intelligence and uncontrollable motive power, so the Bhutanese naming can be seen as reflecting that society’s awareness of what Innis (1951) tells us: that modes of communication “compel realignment” in social relationships of power (p. 4). The Bhutanese, in short, understand that the new technology is not merely a neutral tool.

Indeed, Postman’s (1992) insistence that “when we admit a new technology to the culture, we must do so with our eyes wide open” (p. 7) would seem to be the mantra guiding Bhutan’s approach to modernization. Although it has declared itself to be “keen [to embark] on the road of Information Technology with the vision to be a world-class user and provider of IT” (Division of Information Technology, 2001, p. 4), the Bhutanese government has by no means entered blindly into the project of modernization. The head of Bhutan’s information technology division sees it as his responsibility to ask, “Do we know enough about IT to avoid harm?”; the Chairman of the Council of Ministers insists, “We need to ask how the dramatic changes propelling us into the 21st century will affect prospects for happiness” (Thinley, 1999, p. 14); and the deputy minister of Communications admits to needing to “do some soul-searching” before formulating a media policy (Schell, 2002). While Bhutan may have succumbed to the notion that its survival is dependent on the adoption of advanced communications technologies, its leaders are well aware that those same technologies have the potential to compromise the kingdom’s survival as a unique cultural entity, as it has in other Asian countries—from China to Malaysia—that have imported high technology. “Coming late to the development scene,” the nation is “eager to avoid mistakes committed elsewhere” (Mathou, 2000, p. 234). Far from being discouraged by such mistakes, however, Bhutan is determined to learn from them and to do things differently. The Bhutanese believe that their strong culture and vigilance will allow them to assimilate the positive effects of Western media, such as better organized production, without also taking onboard less desirable consequences, such as “the inner distress and emptiness” (Prakke, 1999, p. 80) characteristic of the technologized world.

Media ecology emerged in reaction to a very different thoughtworld, a bandwagon attitude to technology that has its leaders hopping onboard (and pretending to steer). As Ellul (1954/1964) explains, this technological mentality seems to preclude critical thought: “In the collective passion created by technique (of which technique itself is sometimes the object), the critical faculty, which is peculiar to the intellectual organization of the individual, is excluded” (p. 369).

In a world where technology is sovereign, the ethical dimension of the media ecology model, which emphasizes the importance of providing individuals with guidelines for controlling media effects, is vital. But does it apply to a society whose leaders and citizenry already seem to be on guard against potential fallout from imported communication technologies?

While it is true that the Bhutanese are well aware of the disastrous consequences that technological innovation has had in the West and elsewhere, the steps they take to protect their society and culture from these effects seem to stop short when it comes to their educational system. The Bhutanese government's mandates with respect to the new educational system reflect a limited view of education as little more than the primary vehicle of modernization through the development of a technically skilled populace. For example, it is with modernization in mind that North American experts have been invited to help design a computer science program for Bhutan's high school students—a program that is seen as the means by which the kingdom can “overcome [a] techno-knowledge backlog” by ensuring that “Bhutanese students will learn computers and other services of information communications technology” (Pradhan, 2001, pp. 40-41).

Perhaps given the newness of its educational system, Bhutan does not yet understand the power of education to hasten or abate media-induced social transformations. Providing schooling that is an “extension of European-style education” will, according to Ellul (1954/1964), lead to “a kind of a priori adhesion to technical diffusion” (p. 121). Conversely, providing schooling that teaches students to make careful, informed technological choices within the context of a deep respect for traditional values is the best means of alleviating such an outcome. Media ecology therefore has a vital role to play in providing nations like Bhutan with a model for controlling media effects through the creation of the kind of technology education described by Postman (1995):

As I see it, the subject is mainly about how television and movie cameras, Xerox machines, and computers reorder our psychic habits, our social relations, our political ideas, and our moral sensibilities. It is about how the meanings of information and education change as new technologies intrude upon a culture, how the meanings of truth, law, and intelligence differ among oral cultures, writing cultures, printing cultures, electronic cultures. Technology education is not a technical subject. It is a branch of the humanities. (p. 191)

The tendency of researchers investigating Third World development is to construct the traditional culture as both an object of study and a passive beneficiary of Western innovation, and as such capable of contributing little, culturally or intellectually, to a deeper understanding of its own society's relationship with technology. Media ecology is more than a research model guiding description and prediction; it is also an ethical system that insists on the moral imperative of providing those studied with the tools to promote a questioning, vigilant attitude to technology. In the case of Bhutan, this means helping the Bhutanese to develop curricula which ensure that those learning to use the new media also learn to inquire into the personal, social, and cultural consequences of use.

VI

As an exploration of the applicability of media ecology principles to the non-Western world, this paper resembles, in one respect at least, a Buddhist koan. A koan is a statement or question intended to open the mind to new possibilities through the

dynamic conjunction of apparently antithetical constructs. Rather than asking, “What is the sound of one hand clapping?” I have posed the far more prosaic question, “Can a Western model be useful in understanding media effects in a developing Eastern nation?”

My topic is particularly koan-like in that it does not have a definitive answer. However, using Bhutan as a test case, I have suggested that media ecology has the potential to be a very appropriate and useful theoretical basis for studying the effects of new media in developing nations as they attempt to modernize. Whereas other approaches tend to begin by imposing Western views and values, there is a definite accord between the principles of media ecology and the attitudes and concerns of agrarian Eastern nations such as Bhutan. Both are founded on a profound concern with maintaining social balance, unity, and continuity; both share a view of development that emphasizes human ends; and both stress the need for vigilance and caution when it comes to technological innovation. Researchers from developing nations who wish to study the effects of new media in Third World nations such as Bhutan (I include myself within this group) may benefit from using a model whose underlying value system is in many ways consonant with the traditional culture being studied. Perhaps more important, developing nations in the process of importing new media may also find in media ecology a useful framework for implementing social controls that will help minimize the impact of information technology on their cultures.

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