Introduction: Media Permaculture

by Antonio Lopez

You are a part of the earth, and the earth is a part of you. You did not weave the web of life, you are merely a strand in it. Whatever you do to the web, you do to yourself.

Chief Seattle

Failure to understand the organic character of electric technology is evident in our continuing concern with the dangers of mechanizing the world. Rather, we are in great danger of wiping out our entire investment in the preelectric technology of the literate and mechanical kind by means of an indiscriminate use of electrical energy.

Marshall McLuhan, *Understanding Media*

Though most media literacy practitioners are probably not conscious of this, I now believe the goal of media education is to help people find a sense of place, buttressing the argument that the Western pathology is the consequence of individuals having no stable center. The process of the capitalist enclosure to uproot people from the land, to dislocate their center, and to reconfigure their consciousness into an abstraction is just the latest symptom of a much more ancient design flaw in our particular model of civilization. As Naomi Klein (2007) argues in her tome, *The Shock Doctrine*, the way for people to recover from displacement and shock is to know where they are, to be oriented. Trouble is, if you are sleepwalking, how is that possible? The visual evidence of our collective fugue abounds. Increasingly, hotels that are way stations for the international business traveler have created palatial beds with ridiculous pyramids of pillows and comforters that serve as props for larger televisions with expanding content delivery networks. Americans appear to wander in a trance state, with our daily dress more and more resembling pajamas. News programs are framed by advertising for psychoactive medications for maladies such as "Social Anxiety Disorder," as in alienation, but we're now too screwed up to even be alienated. On the surface this reality progressively resembles a frightening dystopia, and my sense is that most media literacy educators I have come into contact with are trying to provide an

orientation device to ground people who are lost in this decentered reality of somnambulant mediation.

Curiously, more than a hundred years ago there was an institutionally created pathology called "mad traveler's fugue," in which people overcome by a possessed state found themselves in new, unknown locations when their lucidity returned. Ian Hacking's (1998) study of this strange phenomenon has a lot of parallels with the work of media scholars who examined the shifts of consciousness taking place in the nineteenth century. He uses an "ecological niche" metaphor to explain the rise and fall of the diagnosis of the fugue pathology in Europe. Hacking says that two conditions in particular make the ground fertile for the concept: travel and disassociation caused by trauma. Mary Ann Doane and Jonathan Crary have both addressed these elements in their study of nineteenth-century media. Both agree that modernity was a kind of shock to society, one key element being the speed by which people could travel, mainly by train. Crary discusses the problem of attention. Industrialization required workers to focus on repetitive, focused tasks, yet new urbanization, mass media, and travel created a kaleidoscope of sensory experience that required a mental kind of multitasking. The requirements of the division of labor came into conflict with new sensory input, thereby causing a state that is not unlike schizophrenia. It's no wonder that Freud's concept of an unconscious would arrive around the same time: there needed to be a way to explain dueling realities and modes of perception.

Hacking also discusses the "double consciousness" diagnosis that predated the concept of schizophrenia. "Doubling," in relation to Doane, was a by-product of recorded media. It may seem trivial to us now because we are accustomed to it, but the ability to record time with photography, film, and wax cylinders was a conceptual shock. Some early reactions to the new technology were to apply a "spiritualist" approach: records and photographs were believed to capture spirits. The concept of electricity and telegraphy, which separated communication from geography (that is a message could be delivered instantaneously rather than by horse, human, or train), was also believed to have supernatural components. Doane's novel study of early cinema also makes the argument that technological catastrophe had become a social anxiety, symbolized by train wrecks and maintained today through our fixation on plane accidents (which are minor social problems in comparison to AIDS and smoking). New media of that era was a way of containing "time" and "contingency," and hence "catastrophe," all elements that were fast escaping social control and the mental order that had defined European civilization since the Greeks. The lost time of the fugue and its relationship to travel has an eerie resemblance to these other anxieties. Travel coupled with

new media meant that time was being "lost," and that there was a kind of mental and social disorder resulting from the rupture. Though the fugue diagnosis did not take off in the United States, it may have manifested in other forms, such as the alien abduction phenomena that later came about as a delayed response to the social anxiety of time and space disruptions, or in their antecedent embodied by Indian abduction novels. The shock of modernity and emerging electrically powered media certainly contributed to the ecological niche that made fugues vogue in Europe, and now we are confronted with a similar kind of disturbance with new digital media challenging our conceptions of reality.

Obviously the psychoactive drugs marketed these days are not the solution. But what about media literacy? The problem has become that many of the tactics and strategies of media education are also caught up in the ecological niche of the Western intellectual mindset; so though the tools of media literacy are supposed to center us in some kind of objective reality where truth is clear and corporations suck, the techniques may in fact reinforce the same reality construction they purport to fight. Unfortunately, we may have become victims of our own metaphors. By focusing on media as a kind of "conduit" that transports information objects, we are failing to grasp how deeply our perception influences the manner by which we frame information, communication, and the world. The danger is that media literacy threatens to become just a vogue pedagogy grasping for a way to diagnose the mass malaise of our current civilization's trajectory. What is necessary is to turn our own deconstruction tactics on themselves in order to design a better pedagogy—one that enables us to gain an authentic sense of place and to transform the alienating thought process that has led to the creation of the mediated world that most of us rail against.

The solution requires going outside our discipline. Media Studies is an amalgam anyway, combining such areas as sociology, economics, communications, history, psychology, and gender and culture studies. What has not happened up to this point is running media education through the filter of ecological design. Yes, there is such a thing as media ecology, which views communication systems as environments, but this movement is not necessarily ecological in the sense that we conventionally think about "ecology." Media ecologists draw on the literal concept of "ecology," which at its core is a system of systems, to examine how communications technology impacts human perception. According to Postman (http://www.media-ecology.org/media_ecology/), who coined the phrase: "Media ecology looks into the matter of how media of communication affect human perception, understanding, feeling, and value; and how our interaction with media

facilitates or impedes our chances of survival." Although sustainability is implied by the insertion of the word "survival," the core concepts of sustainability from environmental activism are not included in the definition. For people who study media—academics and advertisers alike—"ecology" has become one of those one-size-fits-all terms that can encompass many ideas (for example, MySpace and Facebook are called "ecologies" by marketers). Other catch phrases like "viral media" and "memes" fit in with popular biological descriptions of media, yet when you examine how these concepts are actually utilized, they rarely reflect true ecological principles.

My goal is to move toward some ethical position in which sustainability is a core value of our pedagogy. Thus, there is an innate conceit in my argument that ecology as a value means deep ecology: the promotion of a systems paradigm that is emotionally and spiritually connected within the Web of Life. If this sounds flaky, it's too late. The network economy is making sure we're linked whether we like it or not; we just need to extend the form to our thinking and broaden it to all living systems. In media studies we pay lip service to connectivity all the time when we talk of the Internet and the electronic "global village," yet do we use the correct tools to actually achieve a perspective that is based on connectivity with things beyond the realm of synthetic communications? Visionary architect Soleri (1973, p. 29) puts the matter this way:

> The validity of information is not so much measured by weight, time or space extension, but by the threads it offers for connections within the condition of man. If information offers these connections, I call it environmental information, if it is incapable of them, I call it synthetic information. The psychosomatic structure of man himself defines these two kinds of information: The synthetic or abstract, on the one hand, and the environmental or "ecological," on the other. The synthetic tends to be the monopoly of the brain and is stored in its archives, whereas the environmental acts pervasively and is experienced.

By finding "threads" to that which is truly underlying the human condition, our work then becomes of a profound service to the world.

The necessary change in our pedagogy is quite simple, but incredibly profound. To quote graphic designer Bruce Mau (2004, p. 11), our work is not "about the world of design; it's about the design of the world." In a nutshell this encompasses the tension between an old world approach to media literacy versus one that is ecological, because most education efforts focus on the world of designed *products*, meaning advertising or commercial media, but not the *design* of the system itself; by design I don't mean an analysis of the economic power structure of multinational media corporations or the ideology of liberal capitalism, which are what I consider to be symptoms of deeper

issues. Here I want to consider what environmental educator David Orr (1994) calls "ecological design arts," which he defines as a "set of perceptual and analytical abilities: ecological wisdom, and practical wherewithal essential to making things that 'fit' in a world of trees, microbes, rivers, animals, bugs, and small children. In other words, ecological design is the careful meshing of human purposes with the larger patterns and flows of the natural world and the study of those patterns and flows to inform human purposes" (p.104). Orr proposes that we need "biologic": "When human artifacts and systems are well designed, they are in harmony with the larger patterns in which they are embedded" (p.105).

In this context it is important to consider Wendell Berry's (2005, pp. 33-4) concept of "designing for pattern," which argues that design solutions should not create more problems, but on the contrary, should solve other problems as well:

> A bad solution is bad, then, because it acts destructively upon the larger patterns in which it is contained. It acts destructively upon those patterns, most likely, because it is formed in ignorance or disregard of them. A bad solution solves for a single purpose or goal.... A good solution is good because it is in harmony with those larger patterns— and this harmony will, I think, be found to have the nature of analogy. A bad solution acts within the larger pattern the way a disease or addiction acts within the body. A good solution acts within the larger pattern the way a healthy organ acts within the body. But it must at once be understood that a healthy organ does not —as the mechanistic or industrial mind would say—"give" health to the body, is not exploited for the body's health, but is a part of its health. The health of organ and organism is the same, just as the health of organism and ecosystem is the same. And these structures of organ, organism, and ecosystem—as John Todd has so ably understood—belong to a series of analogical integrities that begins with the organelle and ends with the biosphere.

A good example of this principle in action is the Center for Ecoliteracy's School Lunch Initiative (see Briggs, 2005). The center set out to design an ecological program that could maximize as many solutions as possible. When the Berkeley-based organization completed its investigation, it discovered that one of the major issues facing northern California was the disintegration of family farms, which appeared to be the source of many social problems. They concluded that an organic foods program in area public schools would not only create a market for family farms, but it would also improve the life of students and their ability to learn. It turns out that students who eat nutritious food learn better, are happier, and are less demoralized. The organization also found that after the pilot program was implemented at Berkeley High School, the cafeteria workers were happier because instead of microwaving prepackaged foods that were no better than TV dinners, the meals they now

prepared improved student morale, and that made the workers feel good. This is an example of a well-designed ecological solution because it solved for pattern by supporting families, schools, students, and workers, all the while promoting ecological farming practices. As a result of the program's success, several schools around the United States are adopting its model.

Though on the surface this project may seem unrelated to media, we can say that in many respects it is related. For one thing, media influence many of our beliefs surrounding food, nutrition, and farming. Moreover, the project's pedagogy has design principles embedded into it that enable participants to see the relationships between various activities. The chief lesson for media educators is that conventional media literacy practices should not look at mass media without building a community-based solution as well. Community-based media supports local needs because it is designed for shared communication, storytelling, and community building. Most importantly, one of the most powerful tools for social change is to reclaim the moral authority of authenticity, which is best done at the local level: the "... power of the institutions of economic and political domination depends on their ability to perpetuate a falsified and inauthentic cultural trance based on beliefs and values at odds with reality. Break the trance, replace the values of an inauthentic culture with the values of an authentic culture grounded in a love of life rather than a love of money, and people will realign their life energy and bring forth the life-serving institutions of a new era. The key is to change the stories by which we define ourselves" (Korten, 2006, p.18). This doesn't mean trying to compete with corporate media at their game; but it does mean leveraging the game when possible, or flowing around or through it. For example, rather than fund a project to put a public service announcement on television (which is what many grants are designed to fund), the alternative is to build a local infrastructure or to create media that are distributed and shared locally through events that include food and sharing via local libraries and film festivals or virtually through online social networks. Other examples include community radio "barn raisings" where volunteers come together to build and train locals to create community stations. But most importantly, *how* we think is just as significant as broadcasting *what* we think.

Finally, rather than fix *causes*, the Center for Ecoliteracy designed a solution. The difference is subtle but intrinsic: in media education and activism, we largely focus on analyzing effects with the intention to find causes, as in uncritical war reporting is the result of the corporate consolidation of media. But in response do we have a design solution? Often media critics are just critical, considering their ultimate goal to be "independent," and by virtue of independence they have created a solution. The strategy of the so-called

media reform movement, aside from changing laws and regulatory policies, has at its core the goal of more independent media. A design response is to work toward "interdependence," because the concept of independence reinforces nineteenth-century notions of mechanistic and dualistic reality filters that have led to the industrialization of media in the first place. This is not to deny the need for independent media and regulation of corporate media—that goes without saying—but the movement's pedagogy needs to be reframed with the intention of designing an interdependent understanding of the world. Rather than promote an epistemology inhabited by autonomous subjects consuming autonomous information objects, the new paradigm signifies that we are all connected and that we exist in an environment of systems, including those outside the realm we normally conceive of as "media."

Orr (1994, p.106) suggests that "poor design results from poorly equipped minds":

> Good design can only be done by people who understand harmony, patterns, and systems. Good design requires a breadth of view that leads people to ask how human artifacts and purposes 'fit' within the immediate locality and within the region. Industrial cleverness, however, is mostly evident in the minutiae of things, not in their totality or in their overall harmony. Moreover, good design uses nature as a standard and so requires ecological intelligence, by which I mean a broad and intimate familiarity with how nature works. For all of the recent interest in environment and ecology, this kind of knowledge, which is a product of both local experience and stable culture, is fast disappearing.

Looking at nature for workable patterns might seem utterly impossible given the general prejudice that media represent all things false, but that attitude prevents us from designing sustainable media education solutions. Some leading ecology activists think electronic media are so dangerous that teaching people how to read them just makes them more interesting and therefore should be avoided. This is a non-solution and is reminiscent of the tendency to focus on effects/causes—a type of duality that dominates our pedagogy—without considering design. Again, Orr (p. 108) argues that, "Design focuses on the structure of problems as opposed to their coefficients." As K.O. Berge (1989, p.12) notes, "Technology, data, information, media all become more approachable if we can see them as parts of a living organism— not as the cold, heartless products of hardware. A Gaian [Earth centric] view of the Information Age may help us deal with the current phenomenon by reducing our fears of technology— fears that are abundant and, I believe, symptomatic of failure to come up with a workable model for understanding the new systems we're bringing into being.". Finally, we are far from this stage, but

ultimately in our media literacy practices, we can work to detoxify media— not just from our minds, but the physical world as well, because information technology has a very concrete toxic by-product, be it from the waste and dumping of old computer systems or the discarding of televisions or CRT monitors in developing nations where poor people salvage them for precious metals under very dangerous conditions (Parks, 2004, pp. 48-54).

One of the first steps toward harmonizing our pedagogy with the principles of ecology is to understand how the difference between modes of reality construction and learning pertain to the left and right brains, two hemispheric modes of consciousness I call GridThink and HoloGrok. In short, print literacy is a type of GridThink that dominates the current education model, which is largely based on left-brain functions that are rational, abstract, and linear. New media primarily requires right-brain processing that is spherical, musical, multi-sensory, and nonlinear. I call this mentality HoloGrok because it is something that is more easily "grasped" than taught. "Holo," from "holograph," is at the root of the word "holistic," and "grok" is a nod to Robert Heinlein's classic science-fiction tale, *Stranger in a Strange Land.* In it the main protagonist, a human raised by Martians, has a completely different set of perceptual tools than his fellow Earthlings. His ability to comprehend instantaneously, "grok" in Martian, was an important buzzword of the Dionysian culture of the 1960s that symbolized a major breakdown of the GridThink mentality. In terms of education, I believe the GridThink frame of mind is about teaching us *what* to learn, whereas the HoloGrok approach is about teaching *how* to learn. And because our standard educational model approaches the world from the GridThink perspective, it's as if we are driving forward by using the rearview mirror (to barrow a McLuhan metaphor).

If the structural design of our media can be simplified to their essential quality, then a good place to start is with the concept of paradigms. As Thomas S. Kuhn (1996) famously argues, paradigms frame:

- What is to be examined and studied
- The types of questions asked
- The formation of the questions
- How to interpret the answers

Though it would be difficult to say definitively that there is a "media literacy" paradigm, because media literacy practitioners are quite diverse, some core assumptions of the media literacy movement can be deduced by looking at how "media basics" are defined by various influential organizations. What

becomes apparent is that many media literacy practitioners are operating with a mass media model that emerged during the period of modernity (roughly the 100-year period from the mid-1800s to the mid-1900s) and is viewed with a mentality that emerged from the printing press. The cost of mass media production has required the business model of advertising to deliver audiences to big business. Most of us agree that this has been a fundamental fault in our media system, and given the necessity of shifting into a new paradigm of sustainability, we need to develop new models of production and consumption. Scholarship has also noted that the rise in mass media coincided with the rise of the "public sphere." This entailed a new constituency of a leisure and educated class (mostly white males) who share public forms of communication supplied by the rise of mass media, first in the form of newspapers, then radio, film, and finally television. In each case, with some exceptions of course, the model existed as a one-to-many distribution network. A single media company (in competition with others on a similar scale) would broadcast or print its informed voice assembled by educated professionals (under hierarchal, factory-like production modes learned in trade schools) to a large audience that shared the same mode of language and communication. The ability to "talk back" was historically limited to letters to the editor, or paid advertisements, or by creating a small, adversary press.

Though books took power away from kings and Popes, they also made us silent, isolated readers who abstract the world according to the form of print. A great visualization of this occurs in the last scene of Francois Truffaut's *Fahrenheit 451*. In order to evade the wrath of the totalitarian thought police, the print-loving rebels choose to memorize one book each in order to save humanity's literary heritage. In the end we see a group of disconnected people wandering through the forest reciting books to themselves without interacting with each other. The "book people" look decidedly unhappy. Print also biases our perception to see the world as concrete and divisible into discreet pieces. Consider how the page is laid out with its neat columns and letters breaking every sound into bits of information; or someone who articulates opinions is a "columnist" as if she or he is a pillar holding up a particular architecture of thought.

The basic principles of most media literacy organizations have internalized the mass media model. A common approach to this media model has been created by the Canadian organization, Media Awareness Network, which developed a set of core media analysis concepts that have been replicated many time over in variation by other media literacy organizations:

1. All media are constructions.
2. The media construct reality.
3. Audiences negotiate meaning in media.
4. Media have commercial implications.
5. Media contain ideological and value messages.

(http://www.media-awareness.ca/english/index.cfm)

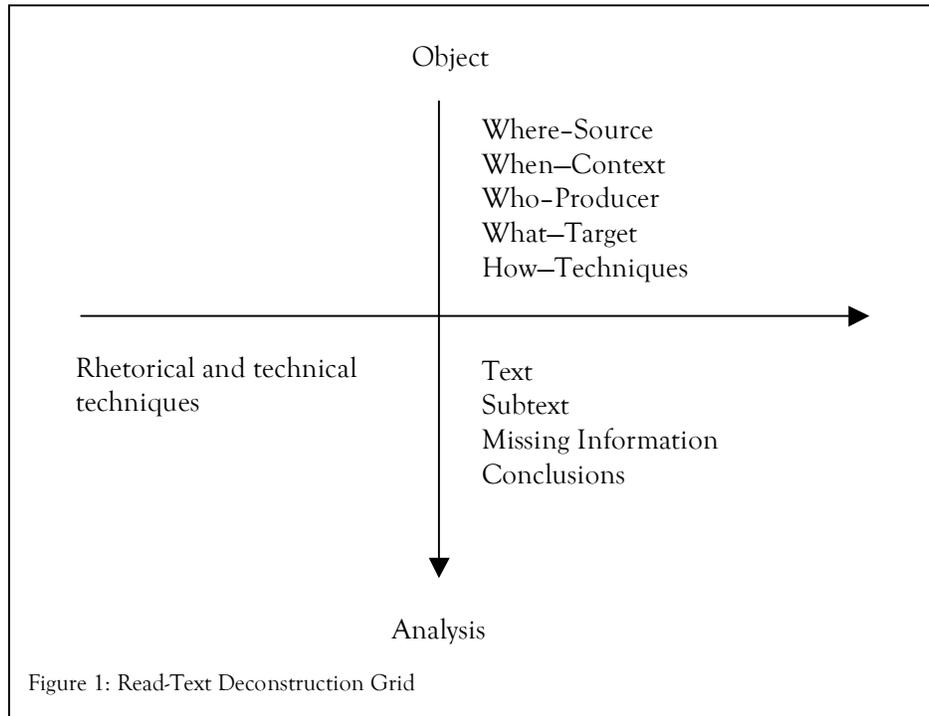The Center for Media Literacy deviates slightly:

1. All media messages are constructed.
2. Media messages are constructed using a creative language with its own rules.
3. Different people experience the same messages differently.
4. Media have embedded values and points of view.
5. Media messages are constructed to gain profit and/or power.

(http://www.medialit.org/)

There is an inherent assumption made by both these lists that messages are being delivered via a one-to-many platform. This leads to an analytical approach that I call the "Read-Text" model (see Figure 1). Typically it means deconstructing a media artifact by "reading" and responding in some analytical fashion with a set of questions modeled on the Four-W and an H rule of journalism (Who, What, Where, When, Why, and How). This is a variation on the common generic definition of media literacy, which is the capability "to access, analyze, evaluate, produce and communicate a variety of media texts and forms." The work of this approach heavily emphasizes critiquing television and print, and treats both media as the same rather than as different forms. Using Kuhn's criteria, this means:

- What is observed and scrutinized are autonomous objects produced by mass media corporations, commonly referred to as Big Media;
- The kinds of questions that are asked in relation to this subject are the five W's and an H;
- How these questions are to be structured is to ask the individual to analyze *what* something means;
- The results of the analysis should create an independent-minded individual who can make informed choices as an information consumer.

The mass media approach breaks down substantially when applied to Henry Jenkins's (2006) model of *Convergence Culture*, which argues that new

Object

Where–Source
When—Context
Who–Producer
What—Target
How—Techniques

Rhetorical and technical techniques

Text
Subtext
Missing Information
Conclusions

Analysis

Figure 1: Read-Text Deconstruction Grid

media practices are characterized by the following:

- collective intelligence;
- affective economics;
- transmedia storytelling; and
- participatory culture.

Some key points of this transformation include consumer-as-producer ("prosumer"), open source code, creative commons, barter economics, a decentralized media infrastructure, networked knowledge communities, and the change from traditional labor to knowledge work. This doesn't mean the end of "Big Media" and their impact on people's beliefs, but what is transpiring is a radical reconfiguration that even the advertising business is having difficulty modeling when it uses nostalgic terms like "old world" and "traditional" media to describe how things used to be, meaning the good ol'

days. Media production and media users are becoming far more sophisticated than the media literacy model can bear.

Just as euclidean geometry works perfectly well on a flat surface but fails when applied to spheres, these traditional core principles function fine if we are only working with the mass media construct. However, applied to convergence media, the model breaks down very quickly because one of the key changes in our networked economy right now is the emergence of the "prosumer," a creature that is audience, consumer and producer. Under the conditions of so-called knowledge work, consumers increasingly are producing the content for corporations. For example, Google is dependent on user input, as is MySpace and the various other user-generated social network sites. But it's not just on these grounds that I find objectionable the assumptions of the core principles: again they replicate the same GridThink paradigm that got us in this mess in the first place by promoting clearly defined reality realms, with the media world being "false" in contrast to something that is "real." I empathize with the general sentiment of the core principles, because I think the complaint is really against manufactured communications versus organic, self-organized communications that arise from vibrant, living human relationships. Given this awareness we can point out how corporate media translate self-organized media (such as folk culture) into imitative packages. The most obvious example is Disney, which basically pirated folk tales from the public domain and made them into copyrighted property assets. This process is repeated in other realms when the intellectual commons of Native American medicinal knowledge is converted into patented pharmaceuticals.

With the following adjustments, I think it is possible to achieve a more holistic understanding of media. To reiterate, it is best to avoid absolutes. I think it is useful to incorporate Gregory Bateson's (2000) concept of the "budget of flexibility." His analogy is the person who walks a tightrope and whose balance bar gets continually shortened when biological diversity is reduced; in our case, when we become inflexible with our thinking we threaten to fall off our intellectual tightrope. So please consider these guidelines as a long balance bar as opposed to rules. This kind of maneuverability gives us ample space to make adjustments as the environment warrants.

1. "All media/messages are constructions" changes to "Media messages are reconstructions of other media that comprise mediaspheric niches."

As the work of Jay David Bolter and Richard Grusin (1999) has demonstrated very effectively, media "remediate"; that is, they build on older communication methods, codes, signals, and techniques: "As a digital network, cyberspace remediates the electric communications networks of the past 150 years, the telegraph and the telephone; as virtual reality, it remediates the visual space of painting, film, and television; and as a social space, it remediates such historical places as cities and parks and such nonplaces as theme parks and shopping malls. Like other contemporary mediated spaces, cyberspace refashions and extends earlier media, which are themselves embedded in material and social environments" (Bolter and Grusin, p. 183). This is contrary to the view that new media forms obliterate older ones (though they go to war with each other as I argue in the case of GridThink going to war against HoloGrok in the "Cross and Circle" chapter). Consider the Roman Empire's strategy for empire building: incorporate the cultures and beliefs of the conquered territories. Thus, media don't construct—they reconstruct the known into new configurations. Furthermore, one of the key principles of ecological sustainability is "nested systems." Put simply, a tributary is a nested system of a larger river's watershed complex. I call these nested systems "mediaspheric niches," which is explained in more detail in the chapter of the same name, but can be described here as a complex of codes and communication techniques.

2. "The media construct reality" changes to "Media reconstruct and emulate reality and/or belief systems."

Media favor and reconstruct biased ways of perceiving the world. Media do not invent or generate reality, but merely extend and amplify previously existing perceptual predispositions. It is true that media can overemphasize and disrupt those tendencies that are considered more "natural," but they do not invent anything from scratch. You do not live in a simulation, although it's worth considering the original concept of simulacra which is to distort something to make it look more real, such as slightly curving Greek pillars so that they appear straight instead of bending as light normally does in our eyes. In this case we can say that media deploy illusory techniques.

3. "Audiences negotiate meaning in media" changes to "Audiences and individuals negotiate meaning in media."

Fair enough. I would say that meaning is negotiated in groups *and* as individuals. The term "audience" is ambiguous and amorphous and disempowering to the individual reader because it assumes that he or she only has a group opinion or point of view. This may or may not be true. We have to leave room for variation and diversity. It is worth noting here that demographics, the study of people by marketers, does not make a community, nor can it account for zeitgeist, something that usually comes about via discovery, accident, or cross patterning. Communication is a complex relationship between producer and audience. Rarely is there a unidirectional (or syringe model) trajectory of any message. Society's values are both reflected and directed by media. This does not mean there is an equal power relationship between producers and consumers of media, but feedback does factor into the relationship between producer and audience.

4. "Media have commercial implications" changes to "Sombunall media have commercial implications and sombunall are done for pleasure."

Here the rephrasing by Center for Media Literacy is more enlightened than the Media Awareness Network's statement that media "have embedded values and points of view." If you suggest that "sombunall"—"some but not all," a term created by philosopher trickster Robert Anton Wilson (1986)—media have commercial implications, it's inclusive of alternative media that are open source and made and distributed freely. "Sombunall" media are folk or fan culture, such as Harry Potter-fan fiction or *Star Trek* and *Star Wars* fan movies.

5. "Media contain ideological and value messages" changes to "Media are a map."

This depends on how one defines ideology. Ideology in the Marxist sense means that media contain invisible relations embodied in the commodity fetish. I would take it to a deeper level to say that media contain brain hemispheric tendencies that can favor modes of perception. As for the CML statement that media are constructed to gain profit and/or power, this is flat-out misdirected and is really a reflection of the concept's own bias that media are only produced in the mass media model. I believe this is by far one of the most misleading and wrongheaded arguments that media literacy

advocates can make. Just as art produced by ancient cultures informs us of their values and perceptions, media have a similar capacity to inform us of the belief systems of their producers. "Media as maps" allow us to understand the territory of values and beliefs related to the cultural, spiritual, and/or economic system that creates media. Additionally, TV is not a box that contains information objects; it is a *structure*. Commercial media should be viewed in the context of power, economics, and the inherent value in the belief in technology, including electricity.

In summary, my central core principles are:

1. Media messages are reconstructions of other media that comprise mediaspheric niches.
2. Media reconstruct and emulate reality.
3. Audiences and individuals negotiate meaning in media.
4. Sombunall media have commercial implications, and sombunall media are done for pleasure.
5. Media are a map.

In keeping with the principles of critical media pedagogy that is intended to also challenge the assumptions of hegemonic power, I would like to include these additional concepts:

6. Media are Composed of a System of Symbols

Symbols are signs of cultural meaning that enable us to understand media messages. Brands, logos, and text convey messages that are interpreted according to individual belief systems, education, conditioning, and domestication.

7. Commercial Media Put a Familiar Face on Abstract Legal Entities

Media translate abstract legal entities, such as corporations, into symbolic worlds. We begin to identify models, actors, and spokespeople as real people within the symbolic world of media-generated realities. People such as the Verizon man or Shakira are characters in a story told by the media.

8. The Symbolic World of Advertising is the Dream Life of Corporations

Rarely does advertising represent the aspirations and desires of real people, but rather it projects desires and ideals of body types, attitudes, and beliefs upon artificial entities (such as corporations represented by brands). Because our system of mass media is driven by the commercial imperative to entice product sales, "brands" and products become the most highly prized components of media messages. They have the power to grant love, happiness, and esteem. Their lack is nearly always portrayed as a cause of misery. Human
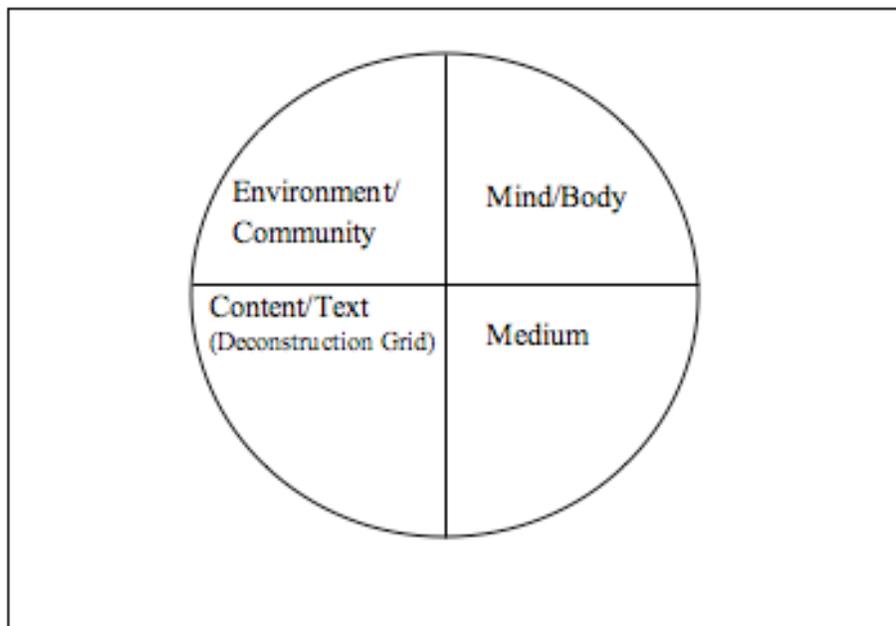

Figure 2: Media Wheel

relations are almost always secondary to products.

I now want to draw on a very useful sustainability concept, permaculture. Coined by ecologists Bill Mollison and David Holmgren, "permaculture" is "'Consciously designed landscapes which mimic the patterns and relationships found in nature, while yielding an abundance of food, fiber and energy for provision of local needs.' People, their buildings and the ways they organize themselves are central to permaculture. Thus the permaculture vision of permanent (sustainable) agriculture has evolved to one of permanent (sustainable) culture" (Holmgren, 2002, p. xix). As a farming and gardening

technique, permaculture leverages the strength of the local ecology so that it can maximize available resources. So in the desert, for example, you design a system that can sustain itself within the natural capacity of the environment, which means minimizing water usage. In this case, grass lawns are most definitely not appropriate, but desert meadowlands are. But as Holmgren's definition indicates, the idea is not just agricultural; it's cultural because as a design solution it goes beyond being a technique for gardening and instead is a principle for organizing society (see Table 1).

Table 1. Cultural systems

Mode	Gridthink: Independent–Industrial Culture	Hologrok: Interdependent - Permaculture
Organization	Centralized	Distributed network
Energy Base	Non-renewable	Renewable
Material Flows	Linear	Cyclical
Scale	Large	Small
Movement	Fast	Slow
Feedback	Positive	Negative
Focus	Center	Edge
Activity	Episodic change	Rhythmic stability
Thinking	Reductionist	Holistic
Gender	Male	Female
Nature	Biophobia	Biophelia
Byproduct	Waste	Compost
Mediacology	Mass Media	Networked Media
Communications	Selling	Stories
Information flow	Push	Pull
Core emotion	Fear	Love
Resources	Scarcity	Sufficiency
Ownership	Intellectual Property	Creative Commons
Perception	The "Real"	Open Reality
Analysis	Object/Thing	Relationship/Event
Representation	Illusion	Magic

Note: Rows 1-7 are from Holmgren (p. xxvii).

If permaculture is a design solution for the biosphere, then "mediacology" is a design solution for the "semiosphere"—the "synchronistic semiotic space which fills the borders of culture" (Lotman, 2001, p.3). Mediacology achieves these permaculture principles by applying cybernetic thinking and paradigm

mapping. Cybernetics takes the view that our information environment is inherently a feedback system. As such, mediacology uses natural models based on systems thinking to map and reconfigure media education pedagogy by applying a circular inquiry process called the "Media Wheel" (see Figure 2). It is my sense that media literacy represents a "sick" pedagogy, so mediacology is meant to "remediate," using both senses of the term. On the one hand remediation means mending troubled ecological niches, and on the other the media theory concept that newer media forms incorporate older media forms with the contradictory purpose of having immediacy and opacity. Mediacology "remediates" (fixes) the industrial model of mass media literacy and its print literate perspective, and it also remediates (incorporates) alternative epistemologies to become more fluid.

As a design solution, mediacology promotes sustainable human cultural and economic practices in its approach to content by revealing patterns of thinking that underlie the forms of media systems. Intrinsic to this approach is a multicultural view that recognizes perceptual and semiological border worlds called "mediaspheric niches." These zones are the mediacological equivalent of bioregions, which are ecologies defined by watersheds. As such, mediacology is an approach that can be flexible according to particular community needs, just as sustainable agriculture needs to be practiced according to the particular characteristics of a bioregion. To extend the cultivation metaphor, synthetic communication produced by corporate mainstream media can be likened to industrial agricultural, whereas community media is akin to organic farming and permaculture. This means integrating the local with the global, thereby "glocalizing" our practices.

At some point the culture at the foundation of Western civilization decided that the internal world is separate from the outer world, something broadly known as duality. This concept of separation, in my view, has not served us well, and ultimately is at the crux of our self-destructive path because the prevailing power structure doesn't value community or nature, but focuses rather on individualism and codified greed. This is a really dangerous thought process, a maladapted cultural trait that requires serious reevaluation. Why is it so popular? Why does it keep replicating itself to the point that it will destroy everything in its environment, thereby inhibiting its very own survival? It's as if a parasitic thought process is about to kill its host. This is a test of the evolutionary idea of cultural transmission. If we have a propensity to assimilate and learn behavior that enhances our chance for biological survival, surely it will happen. But somehow I don't take this as a given. Will the process of natural selection once and for all reject the concept of civilization?

According to most media activists from both the Left and the Right, our historical moment is one of pure tragedy. But it's also possible to see the situation as an opening, as in the New Age trope that the Chinese word for crisis means danger and opportunity. We cannot simply survive by attacking the system, but we need to go as deeply as possible to comprehend the values it emanates and to design a solution. Doing so is to change the fundamental operating system of our ideological global technomedia system from a mentality of "separation" to one of "connection," not in just in the rhetoric of the global village but in action and deeds. It is my view that the fundamental root of our environmental crisis (as manifested in climate change) is a belief that our actions have no consequences because we as individuals live in mental isolation from the world outside our bodies and hence the broader biosphere. When we believe on a fundamental level that harming someone else or damaging the environment also changes our internal condition, then our behaviors will change. It is not so cynical to say that until people understand they are fouling their nest that they will stop polluting and toxifying their bodies and minds; but humans have a quality of self-interest, so let that be a leverage point. There is a benefit to that mindset, which is survival. The challenge is whether or not our strategies are based on competition or cooperation. Is individual prosperity necessarily in conflict with the communal? Such a dichotomy has dominated the Industrial Age "isms," and it has become so normalized that it is an invisible ideology, one so pervasive that simply pointing a finger at it is to be labeled a heretic.

In a globally connected world, a sense of place is cultivated simultaneously with our ecological niches and also through the extension of our senses on a global scale. We are at a unique point in time when we can actually look at the universe while pointing the cameras back at ourselves. Some day you may actually see yourself while viewing Google maps and wonder, how did I get here/there? Thus, I concur with Derrick De Kerckhove's (1997, p. 217) argument that the reproduced image of planet Earth has made us into a new species:

> Thanks to this photograph, I am the Earth and so is everybody else. This is a new psychological experience with immense implications. The best revenge against psychotechnologies that would turn us into extensions of themselves is to include them with our personal psychology. A new human is in the making.

It is my hope that the new human is properly equipped to survive that which seems impossible.

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