

Ecomedia: The metaphor that makes a difference

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Abstract: Media is an ambiguous metaphor that changes meaning depending on how it's used by educators. Typically media are only characterized by how they represent reality and communicate ideas. Consequently, the metaphor assumes a taken-for-granted meaning that media are immaterial with no environmental impact. Instead, the term ecomedia signals media's inherent environmentality. This essay introduces our special issue on ecomedia literacy by exploring how the ecomedia metaphor affords a deeper awareness of media's environmental footprint.

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For the past dozen years I have been working on strategies to green media education. In an effort to drill down to the core issue, my PhD research performed through Prescott College's Education for Sustainability program (which founded the *Journal of Sustainability Education*) focused on interviewing key media literacy practitioners and critically analyzing the discourses of the North American media literacy movement. I focused on the types of metaphors used in media literacy as a way of understanding the particular worldview of practitioners, for as the important work of neurolinguistics and ecolinguistics demonstrate, the metaphors we think with quite literally shape how we perceive the world (Lakoff & Johnson, 1980; Stibbe, 2015). What surprised me the most by my findings was the broad range of the use of "media" as a metaphor. As a metonym for a variety of concepts, it changes meaning depending on the practitioner's particular focus. The most common usage is how it generally stands in for mass media, especially visual forms of media (advertising, TV, film). To borrow a visual metaphor, these uses implicitly frame out all kinds of media that are important to explore, such as audio (radio and music), written text (discourses in print media or online media such as Twitter), art, and alternative media.

But in terms of my main inquiry, this pointed to a fundamental problem of how media have been historically conceived of as something immaterial, reflecting Western culture's mind/body duality in which the realm of ideas is considered disconnected from the physical world. Media theorists and educators consistently overlook the material reality of media. So, when I'm asked how to change media literacy practices to incorporate environmental issues, my immediate response is that it starts with how we conceive media. Drawing on the work of one of my mentors, environmental educator and scholar C.A. Bowers (2012), it's the metaphor that's the message. The language we use determines the kinds of practices we engage in. Thus, re-imagining media as ecological in nature and critically understanding metaphor usage in our own practice as media educators is the most important step we can take. Borrowing from Gregory Bateson's (2000) definition of information—a difference that makes a difference—we need a media metaphor that makes a difference in how we teach. The rest will follow from there.

But first, how does Earth materialize in media? Take our most common media gadget, so-called smartphones. Typically, they have at least 30 elements that are extracted from our planet. Wiring requires copper, gold and silver, and batteries depend on lithium and cobalt. Displays use yttrium, terbium, and dysprosium. Most of these are mined in lower income regions of the world, devastating local ecologies and corrupting political processes. The struggle over who has rights to lithium in Bolivia has contributed to its political crisis, and in the Congo wars and ecosystem devastation have led many of these elements to be labeled as conflict minerals. The infrastructure that delivers electricity and the internet depend heavily on minerals and chemicals, and the source of energy that powers our information exchange is largely powered by coal. Packaging,

which requires paper pulp, is resource intensive, while shipping and manufacturing also add to greenhouse gas emissions. The massive amount of energy required to make silicone chips is another major impact. Then we have to consider the end of our gadget lifecycle and e-waste. A toxic brew of chemicals, plastic, glass, and metal devastates the health of workers and local ecosystems as our electronic trash gets tossed away and shipped across the world. All of this is just the tip of the melting iceberg. Consider the impacts of filmmaking, TV production, book manufacturing, and so on. And we haven't even touched on server farms that make up the digital "cloud" used for our streaming services, data, and social networks. Much of the energy they consume comes from non-renewable resources like coal and natural gas.

So, what can we do to incorporate this awareness into how we teach media? Until recently, we didn't have a common vocabulary to describe the intersection between media and the environment. But now media scholars are settling on a term that is more precise and to the point: *ecomedia*, a "historically situated, ideologically motivated, and ethically informed approach to the intersections of media, society, *and* the environment" (Rust, 2016, p. 87 emphasis original). Renaming media as *ecomedia* addresses media's ecological opacity (in the sense of unseen, unrecognized, ephemeral, hiding in plain sight, and taken-for-granted). *Ecomedia* reframes media as ecological media; that is, media are a material reality that are in, and a part of, our environment in the broadest sense(s). There are no media that are inseparable from their material conditions and the environment that produced them. Just as we cannot have thoughts without a body, we cannot have communication without a physical means to communicate: all communication is sensory experience. Light is composed of photons that stimulate the photoreceptors in our eyes and our voices (produced by the solar plexus, lungs, throat, tongue and mouth) make sound waves that physically touch eardrums. Our very atmosphere and Earth's surface are the primary medium through which all communication must pass. As Parikka (2015) asserts, "it is the earth that provides for media and enables it: the minerals, materials of(f) the ground, the affordances of its geophysical reality that make technical media happen" (p. 13). Earth is integrated into our gadgets and batteries, making the planet's geology a necessary part of any medium. As we move around with our cell phones, all of us have a piece of Africa, China, or South America in our pockets.

A contraction of ecology and media, the concept of *ecomedia* is on the surface not obvious or universally defined. A parallel problem exists with the term *ecocinema*. To some practitioners "ecocinema" means any film that advocates an environmentalist perspective (i.e. documentary or feature films highlighting ecological problems), whereas "environmentalist" films are products of popular culture meant to entertain. To others "eco-films" are primarily avant-garde cinema that challenge the conventions of Hollywood visual language and spectacle to promote

environmental awareness (Willoquet-Maricondi, 2010). *Keywords for Environmental Studies* defines ecomedia as “shorthand for representations of and communication about the human and natural environment in media beyond traditional print” (Ziser, 2016, p. 75). Relatedly, eco-criticism is one of the primary projects of ecomedia literacy, which maintains a “triple allegiance to the scientific study of nature, the scholarly analysis of cultural representations and the political struggle for more sustainable ways of inhabiting the natural world...” (Brereton, 2016, p. 215).

“Ecomedia” as a term is inherently reflexive in a way that “media” is not. Whereas media is often used either in the singular (as in mass media) or as the plural of medium, ecomedia is indexical of media’s inherent ecological condition as materially and physiologically embedded within a complex global ecology. By countering the pernicious ideological environment that obscures this awareness, ecomedia names the interrelationship and materiality of media with the physical environment inhabited by humans and non-humans alike. From this perspective, all media are ecomedia, but there is a difference between explicit and implicit expressions of ecomedia. Explicit forms would be those media openly advocating environmental themes, whereas implicit ecomedia are inherently ecological by their very nature as being materially embedded in the environment and global economic system. They can also be implicit in the ways they subtly frame out or decenter environmental concerns.

More than a mere intellectual exercise, defining ecomedia is part of an urgent agenda. Our planet—the one and only planet we depend on for survival—is suffering ecological breakdown. Climate chaos, biodiversity loss, ocean acidification, drought, soil degradation, deforestation, water contamination, and so on are generating “threat multipliers” like economic crises, war, famine, contagions, and forced migration, and hence a manifold, global political, economic, and social crisis (Laybourn-Langton, 2019). To the youth, best exemplified by teenage climate striker Greta Thunberg, the global system’s oligarchs (1%) are engaging in something akin to intergenerational theft of their future. With every iteration of the global system’s boom and bust cycle, each subsequent crisis is paid for by a future ecological crisis.

To quote Greta, “Our house is on fire.” We know this intuitively. Rarely a day goes by without a major headline about catastrophic weather events (hurricanes, floods, droughts, etc.), new scientific studies raising the alarm of dangerous climate temperatures, the decline of regional ecosystems (deforestation, topsoil loss, permafrost thawing, melting glaciers, fires, new diseases, animal die-offs, biodiversity loss, extinction, etc.), or human-made ecological disaster (oil spills, plastic pollution, nuclear contamination, toxic algae blooms, etc.). It’s hard not to be shell-shocked by pervasive, catastrophic news about the environment.

So, you would be forgiven if you mistook the world for a dystopian science fiction film (see our issue's article by Isaijah Johnson, "Solarpunk and the Pedagogical Value of Utopia"). But environmental communication scholars warn that apocalyptic rhetoric causes people to shut down. As a defense mechanism many experience a kind of denial that comes in different forms. In the scholarly world it manifests as disciplinary NIMBYism: it's not in my backyard so someone else should deal with it. When it comes to the environment, this is especially true in domains that concern technology, information, and media. Anti-technology bias among environmentalists is also not helpful.

To be fair, many of those who teach media or sustainability have difficulty seeing the relationship between media and the environment. Aside from the way that the media and the forces of capitalism obscure the environmental toll of our globalized economy, there is a historical reason for a lack of understanding. In 1866 biologist Ernst Haeckel coined the term "ecology," which was based on the Greek root *oikos*, meaning "dwelling" or "household." It's also the linguistic root for economics. Combined with *logos* (study of), ecology is the study of life's household; combined with *nomos* (rule or law), economy is the rules for household management. With the rise of mechanism during the Scientific and Industrial Revolutions—a worldview that posits the universe (and hence Earth) is a machine that can be reduced to its parts and exploited for its raw materials—ecology was conceptually separated from economy as something disconnected from humans to be manipulated and controlled. Those charged with designing how future generations will "manage" the economy—essentially neoclassical economists, business schools, and the entrepreneurial class—have not apprenticed with living systems to understand or appreciate how we are part of a living planet.

Rather, the global economic system is based on a radical dogma of competition and scarcity that is disembedded and abstracted from living systems: "We have invented an economic system that goes utterly against the basic rules for long-term survival of any long system" (Wahl, 2016, p. 27). As Vandana Shiva (2008, p. 43) puts it,

The climate crisis signifies a clash between the laws arising from the workings of the universe, the planet, and sustainable human communities and the laws of capital accumulation shaped by those who own and control capital. These are the so-called laws of the market, the laws imposed by the IMF and World Bank through structural adjustment, the laws embodied in the WTO and other "free trade" agreements.... The solution to climate chaos is not an energy shift—from fossil fuels to nuclear, biofuel, and big hydro. The solution is a paradigm shift: From a reductionist to a holistic worldview based on interconnections; from a mechanistic, industrial paradigm to an ecological one;

from a consumerist definition of being human to one that recognizes us as conservers of the earth's finite resources and cocreators of wealth and with nature.

Even though our economy can be invented, the laws of nature cannot. Economics is not a science and oceans don't have an ideology. Instead of a control fantasy, we need an economic system in service of ecology (as opposed to the reverse) that is based on life-affirming interconnection and interdependence. Where and how we dwell is intricately connected to the environment and its natural laws; we need to reunite these concepts as an eco/nomy.

Offering a "teachable moment" about the impact of ICTs on the environment, the transition to emergency online teaching leads to its own ecological peril, which ecomedia literacy can address. The heavy usage of server farms, high speed networks, and gadgets raises a range of ecological concerns for the media's ecological footprint that educators should know about. Air travel and factory production may decrease during this period, resulting in a temporary pause on our global emissions, but most online tools still depend on electricity that is primarily generated by coal, leading to its own spike in CO₂ emissions. Moreover, the attention economy based on fear and clickbait media raises concerns about the ecological mindprint of our media, i.e. the way that physical viruses become media viruses (and ultimately mind viruses). We need media to inform and inspire us to solve the myriad of ecological crises we face. Addressing these concerns requires not just how we think about teaching media, but how we conceive of media as ecomedia. Once we do that, our educational approach will shift accordingly.

Thankfully, media education is a flexible field with a variety of disciplinary "ecotones"—transitional zones between two ecologies, such as the area bordering a meadow and forest. Like the overlapping space of a Venn diagram, an excellent example of a scholarly ecotone is queer studies, which is rich with a diverse set of tools and ideas to work with from a variety of theoretical and practical perspectives. By bridging environmental studies and media studies, teachers engaging with ecomedia or sustainability literacy draw from an ecotone that enriches practice and student experience. By complimenting more commonly taught skills, such as the many literacies of media, representation, information, news, and technology, the ecotone of ecomedia literacy promotes skills necessary for environmental challenges, including ecoliteracy, self-reflection, critical analysis, systems thinking, creative problem-solving, and visualization. As we will see throughout this issue, as new branches of scholarship around ecomedia literacy are opening up, many media educators are increasingly addressing the state of our global ecosystem in their work. These changes are leading to a transition from a mentality of NIMBY to NOUP: Not on our planet.

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