NEW MEDIA LITERACY

communication for sustainability

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Given that a great deal of our understanding of the environment - its habitats and peoples - is derived from new and traditional media, it is imperative that any notion of sustainability literacy is connected with ongoing work on media literacy. Many individuals and virtually every organization have websites, and the growth of user generated content, social networking, online games, online distance learning and 3-D virtual worlds suggests our relationship with the physical world, including what passes for the natural environment, is increasingly mediated. Actual heritage sites, urban reconstructions and lost cities can be re-imagined virtually. It is possible to walk with dinosaurs or fly through the emergent ecocities of Dongtan or Masdar. Numerous sustainability scenarios are envisaged and communicated by governments, corporations, think tanks and NGOs which offer a powerful visual and aural persuasiveness. In this context, sustainability literacy, however defined, requires a sensitivity to virtual realism, to media ecology, and to those ongoing processes through which we shape and are shaped by increasingly ubiquitous technologies.

Umberto Eco (1979) wrote that if we stop worrying about the media feeding us pap and propaganda, which we gleefully and thoughtlessly are supposed to consume, and 'turn on our critical freedom', then we will perceive the media, traditional and new, as essential tools and instruments for learning and development. Media literacy and sustainability literacy are both practices rooted in criticality and action. Both emerge and evolve by way of the environments in which they operate, and today those environments are a combination of the real and hyperreal, the virtual and the virtuous, the critical and the seductive, the imagined and the engineered. Indeed, it is sometimes difficult, if not impossible, to maintain clear binary distinctions, for the media does not so much extend our experience of the social world beyond our own, rather narrow, temporal and spatial confines, but rather constitutes a significant and seamless development of it. Communities and neighbourhoods are giving way to networks, e-tribes and simulations. There is a depth that comes with the potential of new technologies and the unrealized creativities and skills of the individuals, groups and organizations using them. Consequently, our diverse media ecology has a key influence on what we are and what we might or can do (Altheide 1995; Boler 2008).

The new media ecology is self-evidently multi-modal. Words are no longer the dominant force. Text is no longer squiggles on a page but remains as signs and symbols nonetheless. Literature is not dead and neither is television, cinema or radio, but they are no longer the same. New possibilities have opened up for generating the image of the human form in 3-D realism, and for animators to trace over live action movement with spectacular effects. The technologies are not only visual but haptic, aural and potentially immersive. *Second Life* is genuinely, for some, an alternative world with images functioning interactively as an interface between the user and computer or other devices.

This brings new cultural and educative possibilities. Just as the algorithms of the Google search engine seem to predetermine the salience or very existence of knowledge, so Manovich (2008: 15) argues 'our contemporary society can be characterized as a *software society* and our culture can be justifiably called a *software culture* – because today software plays a central role in shaping both the material elements and many of the immaterial structures which together make up "culture."'

The digital image we see in our morning paper or on its increasingly important Internet space may not have an iconic relationship to its actual referent - it may not actually depict what was. It is something potentially ungrounded, making it not simply an issue of media ethics, of image manipulation, but one which involves the nature of knowledge and the critical freedom to apprehend where the burden of visual truth lies (Newton 2001). This means that it is necessary to establish a new civil contract between the image, the text, the sound and the senses, determined by the political and pragmatic project of living and learning in our uncertain and risky world. It means literally visualizing new possibilities which must communicate, and fashion, a more ecologically sensitive and sustainable global environment. In *How Images Think*, Ron Burnett (2005: 77) writes,

> Humans are as much within images as they are creators of images. They coexist with what is pictured and build hypotheses about the future and past through visualizations. It is in this sense that images are an expression of various levels of intelligence - images are visualizations of thinking, feeling, seeing and knowing.

The new technology re-mediates existing modes of communication, pedagogy, personal relationships and our participation in the various environments we inhabit. It offers new opportunities to produce messages, even perhaps memes, that resonate effectively with everyday life experience by connecting people with issues, cultures, actions, systems and philosophies. Social networking, indymedia, wikis, digital archives and computer games have become major elements in formal and informal learning. They have lead to the creation of collective knowledge, transcultural communication, and the linking of local to global concerns. Many websites communicate sustainability messages via a menu of virals, blogs, tweets, news, art, science, environment, comedy, music, networks, film and TV.

The key to success is harnessing new media to capture imagination and interest and transform understanding, values and knowledge. There are many arenas where one can view or make short, sharp, engaging and powerful audio/visual communications. Most campaigning organizations publish and promote sophisticated ideas that sometimes spread virus-like round the planet. The low cost of disseminating messages with new media, in comparison with traditional print-based and broadcast media, offers new opportunities for self and group expression, giving voice to those who have for too long been silenced. It offers a chance for others to connect with those who have been isolated in their subjugation (Blewitt 2008). The digital film festival Pangea Day in 2008 was an attempt to make McLuhan's notion of a global village a reality. The video *We* is universally available on the internet and graphically re-articulates the passionate words of Arundhati Roy's *Come September* Speech of 2006 on power and powerlessness, liberty and justice. There is never just a single story, she says, just ways of seeing and telling stories.

The natural world too is highly mediated (Elliot 2006). No sooner is a rare bird sighted than

pictures of it appear on the internet. The Bristol-based media and animal conservation organization *Wildscreen* offers a stunning archive of still and moving images, oral histories, and a kaleidoscope of learning resources that document, stimulate and motivate the activities of many people across the world to visualize a human ecology that is sensitive to the imperatives of sustainable development.

Clearly, although certain media skills can be taught, the capability to communicate is best acquired and learnt through doing, participation and engagement. As Hartley et al (2008: 61) discuss, it is important to understand how digital literacy evolves in informal learning contexts before it becomes transformed, emasculated and instrumentalized by formal organizations such as universities, colleges and schools. In its fresh democratic, participatory, sustainable and socially creative state, digital media provides a space where:

> ... learning by doing is the norm...Digital literacy is generated by its uses, not by a body of knowledge or 'critical' values. It is a demand-led literacy. (Hartley et al 2008: 61)

The user-generated content on the photo sharing website *Flikr* is testimony to the reality that with new media, the consumer is also the producer. In an era of ubiquitous computing, citizen journalism and pervasive media is becoming quite commonplace.

However, there are plenty of media critics and sceptics. The democratic and perhaps utopian projections of Nicholas Negroponte, Bill Gates and Sir Tim Berners-Lee have certainly not been fully realized, while some of their fears have. Private corporations have enclosed vast tracts of cyberspace. Government surveillance, often in the name of security, and personalized commercial marketing, often in the name of convenience, have segmented the public sphere into a series of fractured semi-privatized spaces where participation is disconnected from individual empowerment. As Andrejevic (2004: 197) writes:

> The advent of digital interactivity does not challenge the social relations associated with capitalist rationalization, it reinforces them and expands the scale on which they operate.

Media hardware also uses considerable amounts of energy, natural resources and, unless intelligently recycled or reused, (toxic) waste. In 2007, the carbon footprint of the information and communications industry overshot that clocked up by global aviation. Complex, visually dynamic websites are serious emitters of CO2 and just browsing a simple website produces 20mg of CO2 every second, with software glitches adding to the pollution tally. So new media are part of the problem but can also be part of the solution. The McKinsey report, *SMART 2020: Enabling the low carbon economy in the information Age* describes the potential of Information Technology for saving energy: 'no other sector can supply technology capabilities so integral to energy efficiency across such a range of other sectors or industries' (GeSI 2008: 11). For example, in higher education, digital media are enabling the development of smart campuses, e-learning and blended learning environments and a more efficient utilization of physical space. A study by the UK's Open University (Roy et al 2005:4) concluded that online distance learning courses consumed nearly 90% less energy and produced 85% fewer CO2 emissions than conventional campus-based university courses.

The critical understanding of sustainability communication and new media can best be

achieved through an informed engagement with the emerging technological affordances evident in many areas - social marketing, viral messaging, community development, environmental campaigning, media learning and sustainability education. In a highly mediated society, it is important to be critically aware of how the current and emerging mediascape influences our perceptions of the real and the possible, and how this mediascape can itself be altered through active engagement with it. Of course, this participation must also be informed by a sincere commitment to sustainability principles and global democracy. We are all media practitioners now. We need to be sustainability practitioners, too. Otherwise, where will we be? In the overcrowded dystopia depicted so vividly in the film *Soylent Green*?

Activity: change the world with a viral video

'A viral video is a video clip that gains widespread popularity through the process of Internet sharing, typically through email or instant messaging, blogs, and other media sharing websites.' http://en.wikipedia.org/wiki/Viral_video

Produce a 59 second viral video using an unsophisticated digital moving image camera to communicate a key sustainability message to an identified target group.

The viral may be produced by individual or a small group who will be responsible for the design, production and dissemination of the product, e.g., uploaded to the institution's intranet, YouTube, Green TV, Planet 2025 Network or similar platform. Assessment should encompass self reflection and peer evaluation. Did it work?

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Web resources: Wildscreen (www.arkive.org), Pangea Day (www.pangeaday.org), Green TV (www.greentv), Current TV (www.current.com), Planet 2025 (www.planet2025.net), Smart 2020 (www.smart2020.org), Alex Wissner-Gross (www.CO2Stats.com), The Flip (www.theflip.com), Soylent Green (www.imdb.com/title/tt0070723)