

LO-TEK MEDIA: IMMANENCE ONLINE

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This talk will draw attention to digital works that offer alternatives to the discourse of virtuality by making reference to their own technological bodies. An immanentist aesthetics of digital media understands their meaning to be embodied in their physical and codic architecture. Low-tech digital artworks offer alternatives to the discourse of virtuality and the corporate-sponsored myth of transparency by making reference to their own technological bodies. The talk draws on the "digital aesthetics" of Sean Cubitt, the criterion of which is materiality, as matter cannot be reduced to symbolic systems. Low-tech digital artworks assert their own materiality and the economic and social relationships in which they are embedded. These works for the Web insist that electronic media occupy not a "virtual" space but aphysical, global socioeconomic space. They invite a phenomenological understanding of online media in terms of our shared fragility, corporeality, and mortality.

Discourse of virtuality vs. material reality:

Against the tide of virtuality of electronic media, a popular counter-current is beginning to move in favour of the actual or the material (more on the distinction between these terms in a moment). From cinema to television to the internet, some of the most popular images appeal to the desire for the real and for the indexical: evidence that what the image represents actually occurred. In cinema, a new science fiction genre deals with "virtuality anxiety," the fascinated fear that our real worlds will turn out to be virtual constructions. Movies like *Fight Club*, *The Matrix*, *Strange Days*, *Nurse Betty*, and the Spanish crossover success *Abre los Ojos* (*Open Your Eyes*) play on popular anxieties that our everyday immersion in symbolic, computer-generated worlds is ruining our ability to distinguish between virtual and actual. (Though this can also be seen as an enchantment with the indiscernibility of actual and virtual.) Now that so many spectacular images are known to be computer simulations, television viewers are tuning in to *Big Brother*, *COPS* and *When Good Housepets Go Bad*. Internet surfers are fixating on live webcam transmissions in a hunt for unmediated reality. The re-issue of archaic computer games like *PacMan* speaks, if not exactly to a desire for indexicality, then for the warm, gritty immediacy that these once-cold-seeming games now connote.

So there is a renewed popular interest in the material, in the physically existent, even as the desire for ever-greater verisimilitude supports the construction of ever more elaborate virtual worlds. To some extent these are personal, aesthetic choices. The political dimension of the actual-virtual dichotomy lies not with virtuality itself. Rather, it lies with the death wish behind the desire for transcendence that would reify the virtual from the material. (explain)

Here I must sketch out what I mean by virtual, actual, and material. As a Deleuzian, I argue that the universe is a material entity, which resides in an almost purely virtual state, and of which only certain elements are actualized at any given time. Henri Bergson, C.S. Peirce (at least in the early years), David Bohm, and mystics of various stripes concur in this non-dualistic conception of the universe as a "plane of immanence." What we call reality emerges from its immanent state when we turn our attention to virtual events, so that they become actualized. But they're all material. When talking of digital computers, we have to extend our understanding to the quantum level to describe how this may be so. I've "proven" that the even digital media refer indexically to material states, if one believes a minority position in quantum physics (reference: "How Electrons Remember"). Note that physics denotes what exists physically, as opposed to the virtual realm to which

mathematics devotes its energies. At this level, we may embrace the world of virtuality that exists on the WWW as what Manuel de Landa calls nonorganic life.

The question of materiality becomes more pointed when we move up from quantum to classical states, and to the crude level of material life. This brings a more clearly political edge to the virtual-actual dichotomy, which is addressed by Marxist materialism, and by feminist theories of embodiment, and by non-dualistic philosophies of immanence.

To establish a politics of materiality in digital media, Sean Cubitt has proposed a neo-Marxist "digital aesthetics." Beginning with the Adornoesque premise that what he calls synergetic corporations are infinitely capable of incorporating resistance, Cubitt is rightfully suspicious of mere subversion of the dominant digital culture. He calls instead for the building of social alternatives, which are grounded in the materiality and locatedness of specific human-machine interfaces. His criterion for digital aesthetics is materiality, because matter cannot be reduced to symbolic systems such as those created by digital media. The material, or we might say analog, relationship is the source of the social. Thus we might look for digital artworks that refer to the social circumstances in which they were produced, or that draw attention to the physical platforms on which they were built. In the following I will examine some of these works and the level of materiality on which they may be said to exist.

Most commercial applications of digital media, and many artists, applications as well, seek to make their physical infrastructure invisible: to merge computer-generated images with photographic images. The rhetoric in Hollywood suggests that "in the future" movies will be entirely computer-generated. Observing this phenomenon, Lev Manovich remarks provocatively that, with the brief exception of 150 years of photo-based imaging, the history of all media arts is a history of painting. Increasingly, the virtual masquerades as the material: I am suspicious of this development, for it seems to want to replace the indexical image of a pro-filmic reality with the signifiers of indexicality. Perhaps the most spectacular example of this is the spectacle of indexicality in the 1999 film *American Beauty*. *American Beauty*'s famous, apparently unedited shot of a plastic bag blowing in the wind functioned as a testament to the mystical serendipity of life itself. How ironic, then, to discover that the shot was not the result of a 35mm film crew waiting patiently in an alley for the bag to perform its ethereal dance, but was generated in computer. (Whether this matters to people other than materialists like me is a Peircean question: does the index need to indicate something pre-existing in reality, or merely our imagining of something that existed?)

The seduction of virtuality is that we can come to believe that we no longer need the material world. To paraphrase Cubitt, human communication is material and thus transitory. The abstraction of communication into information is an attempt to hold mortality at bay, but it takes place at the expense of our own dematerialization.

Digital media, because they necessarily abstract experience into information, invite us to mistake their information worlds for reality. They invite us to believe that we, too, exist in an abstract realm. The material consequences of this are considerable: We can pollute all we want, for example, as long as there are virtual rain forests to visit. A digital aesthetic, Cubitt suggests, would reconceptualize the world by refusing its reconstitution as information.

The Web and other computer-based media rely, of course, on a material substrate. They are not "virtual" media; the images they produce are not immaterial. A well-running platform, for those who have the \$\$, has a false transparency that makes it quite easy to believe we are operating in a virtual realm. Software, hardware, and server corporations have a deeply vested interest in this myth of transparency and the dependency on their

services it creates. But anyone who has a less-than-perfect system is likely to be reminded often that all this stuff exists at a material level. When our computers fail us we are most forcibly reminded of "virtual" images' physical being. Breakdowns and failures, anomalies of low and obsolete technologies, low bandwidth, and the ways electronic media are actually used as opposed to how the software manuals imagine them. The materiality of digital media asserts itself at a number of levels, which are, from micro to macro:

0. quantum level. Permit me just to assert that we are in fact all interconnected physically at the quantum level.

1. electronic level. Unpredictability: errors, breakdowns. True randomness. The myth of transparency would have us believe electrons behave the way they do in diagrams.

2. hardware level. Low bandwidth, obsolescence. The myth of transparency would have us believe everybody's working with optimal hardware.

3. software level. Viruses, lack of money for upgrades, obsolescence. The myth of transparency would have us believe everybody,s working with optimal software~and using it for instrumental, often commercial purposes. Many makers of digital media fall into the upgrade trap. Those who can afford to, use the newest technologies to (for web artists) produce on-line works that are inaccessible to audiences who lack the necessary bandwidth, memory, servers and plug-ins. In contrast, works that use low and obsolete electronic technologies may be considered an act of corporate refusal and an insistence on the materiality of the medium. "Appropriate technology"-style applications use software for purposes for which it was not intended.

4. social level. Lack of access for poor people and poor countries, lack of money, means people aren't online at all. The myth of transparency would have us believe everybody will "eventually" be connected.

Next I will look at several artists, web sites that deal with one or more of these levels of materiality following this discussion, I will return to the questions of embodiment and immanence in net.art.

To elaborate on materiality level 1:

Toronto artist Norm White points out that electrical engineering imagines digital media to produce a square wave, its two poles reflecting 1 and 0. But in reality, those square waves are very wobbly, as the electrons can never be fully tamed by the electronic circuits that herd them around.

*Draw/Overhead:

Square wave in theory
Square wave in practice

In fact, then, electronic error is inherent in digital computing, and it is the errors that remind us of the physical existence of the medium. At a micro level, our digital media are actually analog media: errors occur analogously with these tiny declarations of electronic independence.

At a more macro level, the materiality of digital media asserts itself in economic and political questions of absence, corporate dependency, and obsolescence.

To elaborate on materiality level 2:

Many artists fall into the hardware upgrade trap, making works that require fast computers with lots of RAM. Others, however, make virtue of necessity by exploiting the aesthetic and communicative potentials of "obsolete" hardware. Web sites designed for low-bandwidth, slow modems.

show Redundant Technology Initiative, www.lowtech.org/revolting :

A page on the RTI web site reveals a memo circulated by Microsoft to its subscribers, encouraging them to stop using the amateurish and unpredictable ASCII art and instead use Microsoft's clip art. (Even Microsoft Word now auto-corrects ASCII art, turning :) into a smiley face, for example *draw*.) Microsoft's goal is to ensure dependency at every level and to eradicate individual, creative, and unauthorized uses of its software. This leads me to--

materiality level 3: The hardware and software upgrade traps constitute a conspiracy by digital media corporations to enforce dependency on more sophisticated software and the bigger, faster machines it requires. However, there are artists, web sites that resist the software upgrade trap and exploit the potentials of low tech:

a. works for the web that are intentionally low-tech or that mimic a low-tech interface, in a nostalgic reference to obsolete platforms.

What deserves to be considered the folk art of the digital age, ASCII art, ignores the potential of graphical, audiovisual interfaces images to persist in the text-based interface that graphical interfaces have superseded. ASCII art uses the limited technical means of keyboard characters to produce a great creative variety.

show Veronika Carlsson,
<http://www.ludd.luth.se/users/vk/pics/ascii/ASCIIM.HTML>:

beautifully modelled naked men, Schiele-like, a sort of digital chiaroscuro. We may consider ASCII art to be an electronic variant of traditional art forms identified with women, such as textiles and embroidery. In their amateur status and private circulation among friends, ASCII sites function as another form of community-based, rather than professional, art practice. But rather than invoke a hierarchy between "low" and "high" arts, I'd like to suggest ASCII art is not only a legitimate artform outside the professional art world, but a political refusal of the upgrade trap.

People operating within the art world also incorporate ASCII art:

show Juliet Martin's ASCII-style concrete poetry web sites,
<http://www.bway.net/~juliet/>: and Vuk Cosic's ASCII music videos.

More recently (i.e., in the last year), many sites are incorporate ASCII-style text-based interfaces, including membank.org, pretty site on turbulence, and

show m9ndfukc.com

It's interesting that some of the most sophisticated sites reject the graphical interface for an animated, text-based interface. Nostalgic for the old-style Atari interface, these sites often use green or orange text on black screens. In these cases, extremely sophisticated programming hides behind, or alternatively, pays homage to, the military applications for which the interface was developed.

*show www.turbulence.org/Works/now/index.html

Primitive graphics reminiscent of early NASA, and Tron-style figures in *Here and Now* by David Crawford evoke the history of the medium, from its military development to the first commercial applications of shoot'n'kill software.

Scores of interfaces meet their come-uppance every year as the software companies encourage us to upgrade. Outdated software suddenly calls attention to itself as a physical entity. Losing currency, old software gains a body. (Currency, or cash, = the ability to translate objects into information.) Hence Vivian Sobchack's nostalgia for the wobbly forms and poor resolution of Quicktime 1.0:

b. "Appropriate technology"-style applications use software for purposes for which it was not intended. Art web sites that adopt this intervention often comment in structuralist style on the commercialized form of off-the-shelf web-authoring software like Adobe PageMaker, Dreamweaver, Shockwave, etc. Commercial software colludes in the corporate attempts to turn the 2-way medium of the WWW into a one-way medium, as occurred with television in the 1930s. In place of the equal exchange of early days of the web, a supplier-consumer relationship has been set up, and web authoring software is complicit in this unilaterization of the exchange.

I've identified a few ways in which web artists subvert the commercial purpose of web authoring software: the click box, the hotlink, the error message, the pop-up window, and the survey. While these works do not draw attention to the materiality of the interface as ASCII art does, they do point out the commercial purposes built into seemingly innocent software.

i. Online forms help marketers gather information from consumers, such as credit card numbers. Click boxes automate the "interactive" process into a series of consumerist choices.

Shulgin, Form Art Alexei Shulgin claims credit for the invention of Form Art, and sponsored a Form Art contest in 1997?

*show Juliet Martin, clack

What the genre of "Form Art" does is de-instrumentalize the form and click box, by reconceiving the consumer web page template as an aesthetic medium. Commercial web pages, "content," which is basically a medium for online shopping, is rendered all form. (We might compare Warhol's aestheticization of the box of laundry soap.) These examples show the pleasing patterns made possible with the structuring medium of web authoring software. (Ask Juliet M what software she uses)

ii. The hotlink is perhaps the defining form of the visual web interface term? Meanwhile the competition for choice URLs means that a hotlink is already a form of advertising, whether one follows it to the linked page or not. EasyLife, for example, has built poems of hot links to sites with suggestive names, hijacking their commercial and informative intentions for aesthetic purpose.

iii. Netscape/Javascript error messages

Javascript (always?) error messages are a powerful reminder that all these graphics come to us courtesy of programmers with varying degrees of time and experience. As you know, some sites become inaccessible because they have so many errors; to me this creates a material link to the harried programmer working late at night and making mistakes. Error messages become found poems in sites such as m9ndfukc, where we must assent to a

series of errors that go, "juzt 1 klik"; "juzt 1 klik"; "bizt du gluch!ch?+" "ja?+", before dumping us onto the mysterious sales site "Kagi."

*show www.turbulence.org/Works/short/index.html

John Hudak's Short Work, on turbulence.org, combines Form Art and the Javascript error poem, making these impoverished forms the indexes for sensuous experiences one cannot have online. A tiled image of wintry bare branches and a repeated sample of birdsong ironically invoke the distance from nature. Click on any of the array of click-boxes and you get an error message: "Coughing in the wind"; "the dog,s hind legs"; "My son imitates the ferry horn"; "smell of fresh brewed coffee"; "nose in peat and ivy." Here Form Art rejects verisimilitude in order to point past the sensuous limitations of the interface, asking us to imaginatively call up a multisensory narrative.

iv. the pop-up window

Like the error message, the pop-up window so maddeningly familiar to users of "free" servers like Yahoo! is a way of showing us the inexorable limits of the interactive medium. This in itself reminds viewers of the commercial constraints on the medium.... In some art sites these windows, usually meant for advertising, fill the screen faster than you can click them closed, until your computer runs out of memory and shuts down. Examples include Alexei Shulgin "This morning" and

*show Antoni Abad, "Kisses" -unless it,s too unruly (address)

Again, commercial form becomes useless and even dangerous.

materiality level 4, the social level

Beyond electrons trapped in silicon, hardware, and software, a fourth level at which the materiality of the WWW can assert itself is the broadly social level. Artists, web sites dealing with this level are too numerous to mention, as their material for parody, subversion, and sabotage is so broad. But to mention a few:

(The survey accumulates information about consumers in order better to market products and services to them. Amazon.com, for example, greets repeat visitors with "Hello, [Laura]! We have new suggestions for you in books, videos, and music." This format has been most famously subverted in Komar and Melamid's World,s Favorite Paintings web site. Their meticulously accumulated and charted information results in outlandishly undesirable "favorite paintings" for each of the ?? countries they survey. Komar and Melamid are basically critiquing digital thinking, which attempts to quantify and categorize subjective desires and beliefs. "Hello, Kenya! You prefer outdoor scenes, wild animals, and the color blue? We have a painting for you!").

Faux-commercial sites criticize the commercialization of what was once an interactive medium by delivering useless or impossible products. The faux-commercial web site has the potential to draw unsuspecting surfers into what looks like just another chance to shop but really is designed to mess with their heads. As with many actual e-commerce sites, it is near-impossible to divine, through the fog of sales rhetoric, what products these sites are selling. Airworld.net is programmed to search the web on buzzwords and download images and text from corporate web sites into their own, changing all company names to Airworld, so indeed it looks like you could join the Airworld company, invest in Airworld stock, fly Airworld airlines, and purchase Airworld hair products.

*show pavu.com appears to be selling designer soap, but it,s really an art distributor...

At this level exist many sites that apply Noophagism, or eating information (Mark Rudolph describes them as "anthropophagic", though really they're info-phagic sites). Like Airworld, these sites suck information off other sites and reprocess it. They include some of the most sophisticatedly programmed sites: Jodi.org, Mark Napier's Shredder and Composter, easylife.org, and M9ndfukc.

These vampiric sites live off the commercial activity on the web and recirculate it in monstrous forms; also they make information that normally would have a limited lifespan Undead. This may be termed a structuralism of "Nonorganic life" (explain). These and other works for the Web insist that electronic media occupy not a "virtual" space but a physical, global socioeconomic space.

Discourse of immanence

Let me return to the desire for indexicality I mentioned above. If electronic media are indexical, they are indexical of a particular level of materiality: they are indexical of the imperfect flow of electrons that constitute them, or of the platforms on which they were built, of how much time and money it cost to make them, or of the social networks in which they exist. Thus we can read an online artwork for bodily existence just as Benjamin sought the hand of the painter in the form of brushstrokes. Here the bodies indexed are the material bodies of subatomic particles, the physical bodies of platforms and servers, the tired bodies of programmers. These bodies are all immanent in the pages that flash on our screens: we only need to be able to read them. What is actualized on the screen is the tip of a virtual iceberg (bad metaphor): what is virtual within the web is bodies, organic and nonorganic, all interconnected. It is easier to be aware of these many bodies when transparency is not perfect.

(more on embodiment)

Technologies age and die just as people do~they even remind us of our common mortality--and this is another fact that the myth of virtuality would like to elide. Digital aesthetics thus invites a phenomenological understanding, in which we can understand media in terms of our shared corporeality.