

PATRICK
LIGHTY
**VARIANT
ANALYSES**
INTERRO
GATIONS OF
NEW MEDIA
ART AND
CULTURE

**THEORY
ON
DEMAND**

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Theory on Demand #12

Variant Analyses: Interrogations of New Media Art and Culture

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INTRODUCTION

This collection of essays on technology, art and culture is part of my archive of nearly two decades of writing about what would become New Media society. If you're not familiar with my participation in communities like Nettime, Thingist, Rhizome and Netbehaviour, as well as groups like Haymarket RIOT, Second Front, @TMark, The Yes Men and others, I'll tell you about why my interests could be seen as broad, but are squarely focused on the intersection of culture (including art), society, technology and politics. Much of my life has been touched deeply by this combination of effects; my mother was an artist, I was raised on Star Trek and science fiction in the 60s, I was given electronics kits and computers as soon as they were available, and my brother marched in the Moratorium during the Vietnam War, the first mediated war. I sprang forth from the technocultural vat, and my work has always been a reflection on my native culture, whether you would call it McLuhan's Global Village, 90's West Coast Cyberdelia, Baudrillard's Mediascape, or the larger noosphere of Infoculture.

The general themes that the essays are grouped in represent the main areas of inquiry my work has followed in critical theory, New Media culture and activism, New Media art, history and assorted cultural topics, such as literature and newer uncategorized works. It's important to mention that I have a number of writings on the area of New Media art curation, but concerns regarding space and breadth place them elsewhere. Some curatorial essays are included in Christiane Paul's excellent anthology, *New Media in the White Cube and Beyond: Curatorial Models for Digital Art*,¹ or *around the Net*, etc.

If there is any disclaimer for this book, it is that it contains both elements of theory and historical source material; I tend to wait too long to do a project. This book embodies history in that it contains essays from the mid-1990s when I began presenting as a plenary speaker at many venues on what would become transmedia. MACHINE is of that era, and *Grasping at Bits – Art, Resistance, and Control in the Digital Age* had its first edition in 1999. The texts continue to the time of publication (2012), but wherever possible, I have tried to update terms, eliminate anachronisms, and unify terms across essays to make the collection a more unified whole. The necessity for texts across the span of my discursive career comes from the fact that most of them are sequestered in obscure journals, in online format, or have been heard only once at conferences. It is for this reason I hope that this might be a *first volume* of essays, as there are far more unpublished works remaining, and even though over a decade old, works like 'Towards a Culture of Ubiquity' are still on track, and still a map for culture today.

The first essay, *Haymarket RIOT's Machine: Hacking Visual Sociology*, is my first major thesis on visual culture. Begun in collaboration with Jonathon Epstein around 1994, a discursive partner

1. Christiane Paul, 'New Media in the White Cube and Beyond: Curatorial Models for Digital Art', 2008, Berkeley: University of California Press.

for over twenty years, 'Machine' addresses the emergence of transmedia, one of the key tropes in New Media discourse in the 2000s. This essay is the explication of ideas that are core to the critical graphics and 'postmodern Schoolhouse Rock' videos generated by my first tactical media collective, Haymarket RIOT. The seminal moment was when Jon came to me, frustrated about teaching Baudrillard and Virilio at the undergrad level. In 1991 we sat at the table over tea and he asked, "What does hyperreality look like?" to which I said, "Simple. Just turn on Cable..." That McLuhanesque moment launched my inquiry into New Media communications, a thread that continues through *Art in the Age of Dataflow* (located elsewhere in this volume), which was commissioned by turbulence.org in 2009 on the morphology of literary forms since WWII, two other essays, *Causality Loops* and *Theory of the Eclectic*, deal with the notions of performativity of media, communication as performance and its cybernetic elements. The extension of forms of mediated expression expands into the performance of its modalities.

Social criticism and activism has also been part of my work, as my family was engaged with the Left in the 60s and 70s. The selection of essays represents a mix of critical, radical and activist perspectives, individually and as part of collectives. This thread of discourse follows from inquiry into visual sociology and discursive performativity of the 90s and represents another layer of investigation. *Grasping at Bits – Art, Resistance, and Control in the Digital Age* is a commission for the Walker Art Center's *Art Entertainment Network* show, and was awarded an Honorable Mention for a Golden Nica at the 2000 Ars Electronica festival. The essay, which deals mainly with tactical media artists, considers, through Hardin's seminal essay *The Tragedy of the Commons*, whether corporate concerns and capitalism in general colonize all territories they inhabit and how artists question corporate abuses of power.

Digital Anarchy and WikiLeaks: *Bitwise Resistance and the Rise of the Infostate* fast forwards from 2001 to 2011 and consider the role of asymmetrical power, positing the emergence of the 'Infostate'. This is a pan-global, emergent social state that exercises power upon the physical, although it seems to not have a central locus or coherent shape. The circuits of power inherent in the online world are intertwined and interdependent with the physical, but events like WikiLeaks and the Arab uprisings of 2011 show autonomous and anarchic processes of cyber-power which impact the physical mightily. This line of thought continues in *On Amorphous Politics* where asymmetrical power translates into cultures of leadership (traditional) and the decentered (2011 Arab uprisings, Occupy movements). In this clash of cultures between the institutional and the autonomous or decentered, the former has to assign a 'head' to the latter to try to understand and confront it in its own paradigm of hierarchy. However, as we have seen in the past few years, the recasting of autonomous groups with artificial figureheads has not been very successful; this can be seen in Anonymous as a 'group'.

No collection of my advocacy texts would be complete without my work on disability. *The Paralytic Move: Disability and New Media* was originally written for the Inter-Society for Electronic Arts (ISEA). The challenge issued by the essay is twofold: under the rubric of multimedia, what are the alternate experiences of the disabled, and could the disabled experience be used in New Media? That is, what are the possibilities for the disabled experience in New Media art after taking into consideration the limits of accessibility of New Media devices like computers, pads and so on?

The third section, Investigations in New Media Art and Culture, is one of the more heterogeneous sections, reflecting New Media art as a field in itself. Even though the term avant-garde is a problematic one at best in this millennium, I propose that New Media is a form of Third-Wave Avant-garde, as there might have been an 'Avant' surge in the middle of the century (50s and 60s) after the rise of the First Wave during the fin de siècle. Saying that New Media art is a cohesive movement of the Avant is a bit of a misnomer, or there might be differences regarding the possibility of an Avant at all in the 2000s, but I would like to propose it as a metaphor. That metaphor implies a paradigmatic shift created by New Media in cultural production, which is pretty clear since 2000, after the Whitney Biennial included digital art. This is also a meta-commentary, as there are many genres and purported "movements" (like the New Aesthetic and Glitch that can still be categorized under the general trope of New Media).

Another historiological study is *Just What Is It that Makes New Media So Different, So Appealing?*, in which there is an unexpected lineage from Duchamp to New Media scion Roy Ascott via Pop progenitor Richard Hamilton. Hamilton was a friend of Duchamp's, creating a second *Large Glass*, with Ascott studying under Hamilton at King's College. Although many inferences can be made in regards to formal inheritance between genres, from collage to cut and paste, what might be more striking are examples of three artists who emerged at the leading edge of their genres and their common lineage.

The next three essays on art in virtual worlds reflect an involvement in Second Life since 2006, an extension of my interest in virtual reality since the mid-1990s. As one of the co-founders of the performance group Second Front, I've had the pleasure of being at the heart of a vibrant contemporary art scene in virtual worlds that has an amazing mix of relational, installation, formal and 'happening' art. Formally, art in virtual worlds has distinctive qualities including atypical laws of physics and greater freedom of scale, while intentionally it is crucial to consider the gestural relationship (if any) between the virtual and physical. Expanding from this, the subsequent essays on 'E-Happenings' and Virtual FLUXUS (for which I am indebted to Bibbe Hansen and Larry Miller) explore the participatory elements of virtual art. This only makes sense – as virtual communities are a form of social media, art in these environments would include relational and performative elements.

The remaining essays in Investigations in New Media Art and Culture touch on elements of New Media art and media development. These include hoaxing the 2002 Whitney Biennial as a guest curator of Milto Manetas' whitneybiennial.com, which involved a fleet of phantom trucks circling the museum. Manetas felt that Flash-based art was an emerging genre of net.art, but one that fell outside the purview of the museum, and the way to inject that genre into the art dialogue would be to stage a parasitic biennial; an idea that would be later seen through the use of Augmented Reality. The result was a scandal, from hoaxing of the *New York Times* to the commotion caused when the promised U-Haul trucks with projectors were, in fact, straw dogs.

Collaboration is also an ongoing topic within the sphere of cultural production, and is extremely common in New Media art, as the tasks of conceptualization, fabrication, media production, programming and performance lie beyond the abilities of many individuals. New Media art creation often mirrors the practices of commercial media production, as the only differences between

products are frequently content and intent, not form. However, collective practices often conflict with traditional artistic myths and stereotypes, such as the singularity of the artist and craft. *New Media and Collaboration* considers the challenges of collaborative work and examines multiple collective production models for making art and circulating energy and power.

Towards a Culture of Ubiquity is a speculative essay originally written for a Banff New Media Institute summit called *Emotional Architectures* in 2001. Inspired by initial encounters with the Palm Pilot in 1998 and discussions of environmental and ubiquitous computing around the time of its writing, the essay posits that computation would slide from the screen onto the body and out into space. As of 2012, the text still seems eerily prescient, as ubiquitous computation appears to be moving in space with the advent of augmented reality, and as ideas like the 'Internet of Things' suggests the integration of the virtual and the physical into a holistic Infosphere.

The section New Media Situations encompasses topics not easily included in the previous sections, such as historiography, cultural manifestoes and literary theory. A difficult question that faces New Media culture is that of its own ephemerality. Before the computer and CD-ROM, the majority of media have been accessible through some form of mechanical technique. With digital technology, could we have equivalent ephemera to the love letters of Kandinsky and Muntz that survived long enough to get to the hands of scholars? *Reconfiguring a History of New Media* notes the mutability of online records and goes so far as to suggest scholarship on new forms of documents dynamically updated with the subjects they study. *De-Rezzing Histories: New Media as Ephemeral Record* takes a more direct examination of the problems inherent in New Media's distinctive qualities, including the impermanence of hardware and operating systems and additional problems of data transfer to upgraded machinery. I therefore consider disappearing digital histories through the aforementioned love letters, as well as William Gibson, et al's 'disappearing' novel, *Agrippa: A Book of the Dead*.

The *Alpha Revisionist Manifesto* is a polemic against the endless 'treadmill of the new' endemic to New Media society. The endless promises of new technologies, and I might add, technological cultures, stretch themselves into the future with increasingly speculative conceptual claims in order to gain intellectual territory. These are termed as being in a 'beta' (developmental or debugging) stage and an 'alpha' (speculative or proof of concept) revision stage. The idea of the Alpha Revision is that the artist claims their intellectual territory by announcing that they have a concept before producing it. Of course, this is absurd, but making Alpha Revision announcements is a widespread practice in technology, largely for raising additional venture capital. Might I be suggesting that artists create Alpha Revisions of their ideas so that they could be funded on Kickstarter (an online popular grassroots funding platform)? Perhaps!

Lastly, *Art in the Age of DataFlow* was a commission for Turbulence.org's Networked anthology, which considered the multidimensional expansion of narrative and literary forms since Joseph Frank's writing about spatiality in 1943. This explication spans Frank's reflection on Joyce and Proust, blogs, and Golan Levin's data mined site of blogs by heartbroken youth, *The Dumpster*. Dataflow suggests that New Media have spawned new kinds of literature, even if they are more artistic or speculative in nature, although some have bled out into mass media culture, online and not.

In closing, this collection of essays represents my desire to examine the cultural environment of the technological society in which I have lived for most of my life, to consider its trends and probe its cracks and lacunae. This volume represents an extensive overview of the majority of my thought on New Media culture as a child of the mediascape, and my attempts to understand the wilderness of mirrors that is the global system of networked humanity. It is my hope that the reader understands this assembly much like an indexical tag cloud of topics in criticism, activism, art and culture all hinting a 'shape' of networked society. As I have been an explorer of these strange landscapes, consider this volume as a journal of my travels over the past twenty or so years.

Patrick Lichty, 2012

NEW MEDIA: CRITICAL MILIEUX

HAYMARKET RIOT'S MACHINE: HACKING VISUAL SOCIOLOGY

BY PATRICK LIGHTY AND JONATHAN S. EPSTEIN

"We are in uncharted waters," remarked a commentator on National Public Radio on a July evening. "We have to stay infinitely adaptable in this age of uncertainty and change." Although this was a comment about the mercurial nature of the job market, these words seem particularly relevant to our work in visual sociology. The US and other cultures dominated by the American media complex have undergone profound shifts in the ways identity is understood, in which language is both used and constructed, as well as in our dealing with information.¹ Our modes of communication are undergoing no less significant changes.

Our purpose is to utilize current understandings of postmodern culture to explicate the first transmedia theoretical text in sociology: the *Machine* trilogy. *Machine* is the result of fusing the theoretical work of intellectuals such as Jean Baudrillard, Paul Virilio, Gilles Deleuze, Felix Guattari, and Arthur and Marilouise Kroker with the tools of postmodernism: the personal computer, digital recording techniques and mass media. It is our contention that transmedia texts such as *Machine* are a necessary next step in a truly postmodern sociology, which must be, virtually by definition, a visual sociology. *Machine* is an attempt to map the course of Western culture from the industrial, modernist period to the present postmodern, postindustrial period, what Baudrillard has referred to as the 'culture of the mediascape'.² *Machine* is meant primarily as a pedagogical tool. We will provide a theoretical background for these works and, following from Denzin, analyze them from a critical perspective; a logical self-referentiality postmodern strategy.

Theoretical Background

In a scant 50 years we have gone from A-Bombs to ANSI bombs, from Uncle Miltie to recombinant bodies, from US mail to e-mail. Information-age culture rides an incandescent shockwave of high-speed data transfer and technologies du jour, each springing up like silicon weeds on the information superhighway.³ As Electronic Frontier foundation co-founder John Perry Barlow put it in a speech at Wake Forest University, "Everything we know is wrong." All our preconceptions have been swept away in the postmodern age while we all wait for the dazzling new future that will arrive tomorrow, as promised by the high-tech science fiction commercials brought to us by the manufacturers of our cybernetic junk food. We stare on in amazement and indifference with what Denzin called the 'voyeur's gaze'.⁴

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1. Patricia, T. Clough. *Feminist Thought: Desire, Power, and Academic Discourse*, Cambridge, MA: Blackwell, 1994. Also: Norman K. Denzin, *The Cinematic Society: The Voyeur's Gaze*, Thousand Oaks: Sage, 1994.
 2. *ctheory*, 'Visecting the 90s: An Interview with Jean Baudrillard' *ctheory*, 1995, <http://www.egs.edu/faculty/jean-baudrillard/articles/vivisecting-the-90s/>.
 3. Arthur Kroker, *Spasm*, New York: St. Martins, 1993.
 4. Denzin.

The preeminence of emergent information technologies creates serious questions about the role of the social theorist at the fin de millennium. Can text alone comment on the increasingly complex issues created by a society that is transforming before our eyes, in an ever-accelerating media blur? That is to say, can the social theorist map out the terrain of the information-age society, thick with rapid sound and imagery, by employing only the written word?

We believe that the written word alone possesses a relatively narrow bandwidth for such an endeavor and presents many limitations. As the popular adage goes, "Writing about Rock & Roll is like dancing about architecture." In other words, in order to speak about mediated society, we must use media as a descriptor, and likewise utilize the technologies at hand to speak about technological society. This creates what we call a 'discourse of equivalence', which lessens the problematic nature of theorizing mass media with only the written word, instead creating a mediated or 'parallel text' via these forms of visual interpretation. By using these methodologies, the salient cognitive aspects of visual (and later, transmedia) texts are becoming more readily accessible to the postmodern mind, which is accustomed to an everyday barrage of popular media.

When formulating a methodology for speaking about mediated information society and its floating signifiers, shifting genders and cultural panic sites where the individual no longer finds social or cultural mooring, one would automatically begin with McLuhan's notion that the form of media dictates its content.⁵ The concepts involved in our work imply the ubiquity of McLuhan but proceed into the realm of what some have called Post-McLuhanism.⁶ We have asserted the end of the pre-media society and now speculate on the Baudrillardian implosion of the real into the hyperreal, where endless symbolism plays out until the next apocalyptic crisis comes along.⁷

The French sociologist Jean Baudrillard wrote of the implosion of reality into the hyperreal domain of simulations and simulacra.⁸ To some extent this has borne out with the Internet, with its varied social, discursive and simulated physical (MMO) spaces, as well as in emergent communications and multimedia technologies. Following Baudrillard, the postmodern era is oriented towards the representations of visual images.⁹

In *The Transparency of Evil*, Baudrillard states that many cultural spheres (aesthetics, politics, and sexuality) have reached a point of 'transparency'.¹⁰ That is to say, in postmodernity these spheres have reached their respective limits or points of excess, but still proliferate through continuous self-reproduction. In so doing, cultural spheres explode beyond their limits until all of aspects are interrelated: the politics of sport, the aesthetics of sexuality, ad infinitum. Baudrillard writes:

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5. Marshall McLuhan, *Understanding Media: The Extensions of Man*, Cambridge, MA: M.I.T. Press, 1994 (1964).
 6. Jonathon S. and Margarete J. Epstein, 'Fatal Forms: Towards a (Neo) Formal Sociology of Media Culture', Douglas Kellner (ed) *Baudrillard: A Critical Reader*, Cambridge: Blackwell, 1994.
 7. Jean Baudrillard, *The Illusion of the End*, Stanford: Stanford University Press, 1994.
 8. Jean Baudrillard, *The Transparency of Evil*, New York: Verso, 1993.
 9. Jean Baudrillard, *The Evil Demon of Images*, Sydney: Power Publications, 1987..
 10. Baudrillard, *The Transparency of Evil*.

Thus every category is subject to contamination, substitution is possible between any sphere and any other; there is a total confusion of types. Sex is no longer located in sex itself, but elsewhere - everywhere else, in fact. Politics is no longer restricted to the political sphere, but infects every sphere; economics, science, art, sport... Sport itself, meanwhile, is no longer located in sport as such, but instead in business, in sex, in politics, in the general style of performance.¹¹

This statement can be read as a descriptor of the amorphousness inherent in postmodernity. It only makes sense that the text itself grasps the epistemological shockwaves imploding it into the realm of the image. Its discursive location within the aesthetic is reminiscent of the (de)evolutionary sequences of the movie *Altered States*. To quote Baudrillard, "Sooner or Later, it implodes..."¹² And so it happens with the text, as it implodes into itself, infecting all other spheres of culture. In this case, it reemerges in the hyperreal world of the digital image: a transformation into the lingua franca of the Infobahn.

Throughout his writings, Baudrillard repeatedly describes the cultural simulacrum before us, a *mise en scene* of events with no apparent cause, a free-floating mediascape in which the endless reproduction of cultural forms speeding by on screens. As the staccato images flash by, the transparency of the aesthetic or 'trans-aesthetic' becomes evident. Baudrillard's sociology privileges the visual of the media- and cyberscape. But Baudrillard implies that the images are fixed, in stasis, and are to be confronted as individual pieces of the larger cultural landscape. The problem becomes the multiplicity of these images, which are presented at such a rate that they cannot be deciphered individually.

This issue is addressed by another French theorist, Paul Virilio.¹³ Virilio theorizes that while the juxtaposition of static images into new formations begins to capture the contradictory nature of postmodernity, in postmodernity motion, speed and flux are deciding features. Our preconceptions of time and space implode with ever-increasing advances in digital communications technologies. We become telepresent bodies with no sense of closeness or distance, with monitors for eyes perceiving the mediascape's increasing speed.¹⁴ Images blur with Muybridge intensity, and we are held motionless, inert, prisoners set and setting.¹⁵

According to Virilio, the change brought about by the mobilized body accelerated through technology implies that postmodern society is one of speed and motion, cinema and video. As bandwidth bringing us telepresent gratification increases, so do we move away from the still image as primary transmitter of information. The sociology of the postmodern then must incorporate speed and motion to address the cultural forms it confronts. According to Virilio:

11. Ibid.

12. *ctheory, Vivisectioning the 90s: An Interview with Jean Baudrillard*.

13. Paul Virilio, *Speed and Politics*, New York: Semiotext(e), 1986.

14. Paul Virilio, *The Aesthetics of Disappearance*, New York: Semiotext(e), 1991.

15. Louise Wilson, 'Cyberwar, God And Television: Interview with Paul Virilio', *ctheory*, 1994, <http://www.ctheory.net/articles.aspx?id=62>.

The techniques of rationality have ceaselessly distanced us from what we've taken as the advent of an objective world: the rapid tour, the accelerated transport of people, signs, or things, reproduce- by aggravating them- the effects of pyknolepsy, since they provoke a perpetually repeated hijacking of the subject from any spatial-temporal context.¹⁶

Even though motion and speed elaborate upon the quickly changing nature of the postmodern, it does not convey the shallow, rapid multiplicity of digital media environments. Deleuze claims the postmodern terrain is rhizomatic and highly interconnected, much like a 'strawberry patch' of media.¹⁷ Media operate in intricate high-speed webs that collapse space until little depth can be sustained, if content is actually present at all. With so much information, comprehension in its entirety is impossible. This is transmedia on the World Wide Web, and it is the lingua franca of postmodern culture in general.

Transmedia, or the Need for a Referent

Before we go on we must address the question of text. Could it be possible that Baudrillard and Virilio have destroyed the written word? Followed to its logical conclusion, Baudrillard's text implodes into imagery, and Virilio's into cinema and video, with only traces of the text left on the screen. However, we have not entirely thrown ourselves into the *Stargate*-like abyss of the visual, never to return. The text has not virtualized into hyperreality, thus annihilating our libraries and academies. Lanier's dream of post-symbolic virtual reality technologies has failed for the time being, and we are left in need of a common base from which to operate.¹⁸ The human mind requires a point of least abstraction, a referent, and a context in which to maneuver.

The use of transmedia in a sociology of the postmodern still holds true with Baudrillard, Virilio and Deleuze. We have an intersection of Baudrillardian transparency of technology, aesthetics, sexuality and so on. Technological media, such as video, CD-ROM and Internet installations, accord with Virilio's tenets of societal acceleration. And for Deleuze, all these interrelations build upon one another in an interdisciplinary web of media discourses. This is where the sociology of the postmodern leads us and is the repository of the textual referent.

The rhizomatic space of transmedia and the Internet requires a referent from which to operate, much like one requires a gateway or socket into cyberspace. Text is now a billboard in the land of 'posts'. It no longer enjoys the hegemonic privilege of the book. The sociology of the postmodern is not only textual but also aural and visual, encompassing as many senses as media will allow including, interestingly enough, smell. It is only in this way can we speak accurately about the information age.

What is created from this eruption are a series of concurrent or parallel trans-texts. Comprised of the various sensoria of written word, sight, sound, media and more, they now shift and arrange

16. Virilio, *The Aesthetics of Disappearance*.

17. Gilles Deleuze, 'Rhizome Versus Trees', *Deleuze Reader*. Constantin Boundas (ed), New York: Columbia University Press, 1991. p. 28.

18. Howard Rheingold, *Virtual Reality*, New York: Touchstone Press, 1991.

themselves in varying states of primacy or interaction as needed in a Foucaultian architectonic. It is from this point that we begin our exploration of cybertheory using the transmedia text *Machine*.

***Machine*: Interpretation, Analysis, Critique**

The *Machine* video trilogy represents the postmodern according to Virilio and begins the move into Deleuzian discursive strategies. The industrial machine is supplanted by the cybernetic machine, all wires, gears, silicon and computer graphic displays. The velocity of imagery has now reached cinematic speeds, combining digitally produced animations with hyperreal, televised images. The discursive strategy employed by *Machine* is one of music videos, cable TV and cyberspace. Its use of New Media delivers the message of information society.

Machine is not the first project to deal with social issues through the camera, whether virtual or physical. Other attempts worth noting are the MFA projects of George Lucas and Steven Spielberg. However, *Machine* is an experiment in pedagogy, of the expansion of postmodern thought within the media it describes and the transmission of these often complex and abstract concepts. It is not merely a vehicle for explaining social issues but a theoretical work of its own accord.

Secondly, Lucas and Spielberg were in the film departments at University of Southern California and California State University, Long Beach, respectively, both schools with facility directly under the wing of the Hollywood infrastructure. *Machine*'s production was executed independently, with an incredibly small budget, off-the-shelf computer programs, standard desktop personal computers and relatively low-tech analog home recording equipment such as a four-track cassette recorder. The video consists of scenes pumped directly into our homes via cable. Therefore, rather than a terminal art project with potential commercial backing by one of the largest media factories, *Machine* represents a grassroots attempt to survey the mediascape on its own terms. It is an academic research project with few ties to any juggernaut except what was presented to it as fodder. As a pedagogical tool, *Machine* has met with a great deal of success.

The *Machine* Trilogy explores the shift from the industrial, modernist society to the postmodern, transgressing cultural borders through information-age computer imagery and video clips. Through this visual methodology, *Machine* creates a discursive space in which specific societal events can be deconstructed.

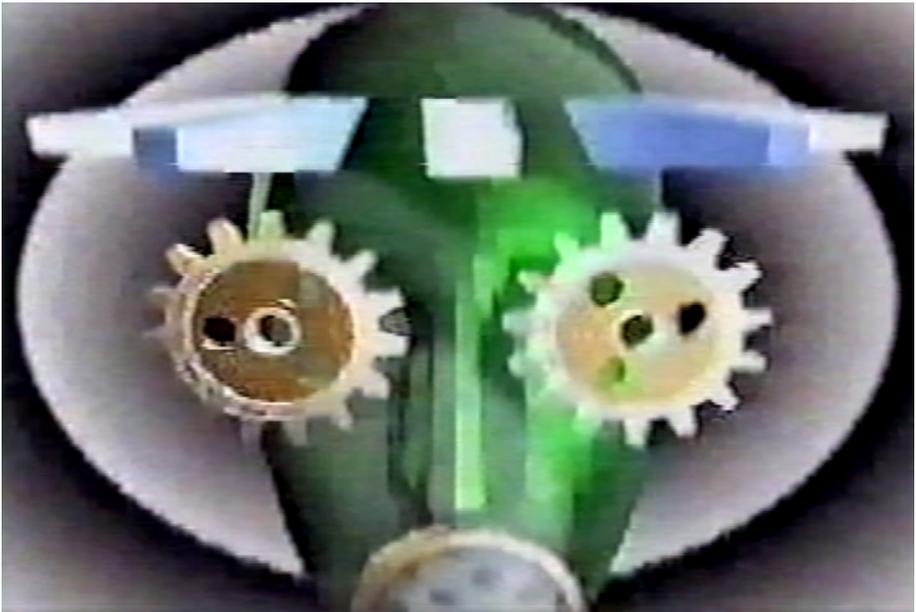
Before delving further into an analysis of each section, certain thematic elements of the work's compositional structure are particularly germane. In Paul Virilio's essay, *The Third Interval* the information age causes an implosion of physical and ontological space, allowing the individual little time to reflect on the media stream.¹⁹ And so it is with *Machine*. The relentless barrage of imagery combined with visual repetition inherent in American pop media allows the viewer to experience the events but not to assimilate or reflect on them, resulting in the existential info-blur of 90s cyberculture. These visual strategies reiterate the discursive space that *Machine* represents.

19. Paul Virilio, *The Third Interval: A Critical Transition*, *Re-thinking Technologies*, Minneapolis: University of Minnesota Press, 1993.

Machine I: Chew on This

Part one, entitled *Chew on This*, is meant to represent the angst felt by American mainstream society as it grapples with rapidly changing technologies. Its visual metaphor depicts changes in perception of the self and identity created by digital technologies. The video opens on a Bar-drillardian note of abjection, with the vocal 'Can you BELIEVE how little you care...!', along with visions of Cold War spokespersons stripped of their voices in a further recapitulation of the utter indifference of media society.

The next sections of *Chew on This* interrogate future directions of group identity such as religion, the military and governmental figures. As the video progresses these themes question the boundaries of societal memory versus the media's. Salient imagery includes the Stonehenge-like machine altar and the gear eyed androgynous CyberChrist (representing technology as the new postmodern religion, a theme that will return in *Machine III*), and the Lang-inspired Metropolis images (symbolizing industrial society reconstructed in digital culture). These themes will repeat in the following two sections, as the series' recurring concepts are embellished.



Frame from *MACHINE: Chew On This*.

Machine II: Access Denied

Machine II: Access Denied deals with the twofold manner in which technology stratifies society and culture. The video begins with an apparently innocent entry into cyberspace, greeting the viewer with a cheery welcome ('Welcome to Cybernet...Engaged'). However, the ramifications of emergent technologies become evident as flashes of people from underdeveloped, politically oppressed and impoverished regions appear, juxtaposed with the warning 'Access Denied' and culminating in the ultimate denial, the now infamous footage of the execution of the mediated gunshot to the cranium from the Vietnam War.

The technologically driven stratification of society along political, economic and educational lines is evident by this time; now that the privileged technocracy has blurred the distinction between the real and virtual, the question of history and cultural memory in such a society comes to the fore. The cultural 'memory test' begins as the head mounted display swings down.



Frame from *MACHINE: Access Denied*.

To paraphrase Paul Virilio, "What is perceived is already lost..." In cyber-mediated society, the speed of information processing accelerates culture, identity and history into a vanishing point that obscures media memory.²⁰ As the cultural 'memory test' begins, the very notion of whether history can exist produces a panic site, while pop cultural referents mix with politics and media news records. This creates slippages between cultural signifiers, including the media perceptions of institutions such as the American presidency, suggesting that 'memory' (history, etc.) is problematic in the age of e-mail. Reagan, Bush and Clinton blur as the Iran Contra hearings are conflated with *Bedtime for Bonzo*, and Whitewater is just another political buzzword following Watergate. The media memory test ends in failure, glitching out in the video blitz.

What is the result of this 'virtual amnesia' for a mediascape that delights in creating events whose existence is dubious at best? It is said that a society that cannot remember its mistakes is doomed to repeat them; this axiom extends to 'War as Global Memory Failure' and Baudrillard's claim that the Gulf War was a giant mediated video game.²¹ The striking similarities between *Super Mario Kart* and *Smart Bomb* video footage is obvious, and in advertising buzz slogans such

20. Jean Baudrillard, *The Evil Demon of Images*, Sydney: Power Publications, 1987.

21. Jean Baudrillard, *The Gulf War Did Not Take Place*, Bloomington: Indiana University Press, 1995.

as 'It's Wild!/It's Madness!', the conflict is ready to be consumed by the American entertainment complex. Ultimately, the onslaught of the spectacle feeds upon itself, resulting in its own ontological implosion into the fragmented existence of postmodernity in which technology becomes the primary mediator of the social.

Machine III: Deus Ex Machina

In an age that continually recreates itself around emergent communications technologies, we are all taken on the thrill-of-a-lifetime roller coaster ride of the transmedia spectacle. Culture becomes a vortex of endlessly repeating spectacles, riding the smart bomb from imploding bunkers of modernity. 24-hour news reports constantly pump an endless repetition of images, draining current and past events of all meaning and ensuring the indifference of the spectator. The O. J. Simpson trial is put on cultural parity with the crucifixion; the civil rights movement becomes a vehicle for movies and books on Malcolm X and Martin Luther King. The speed of information transfer increases until it reaches the vanishing point of saturation; information becomes noise. As *Machine III* states, 'The Medium Implodes the Message...'

Media culture surrounds the spectator with technology until it reaches ubiquity. According to Kroker, Kroker, and Cook the fast paced frenzy of postmodernity makes it impossible for the individual to secure a social or cultural mooring.²² Corporate media enforces the ideology that technological 'progress' is not just necessary, but inevitable. This serves as an opiate to the masses, asserting that the massive technological shifts inherent in the 20th century are a force for positive social change, promising that to live in the coming techno-utopia is to be truly alive. Technology becomes the new postmodern religion.

In *Machine III* the ubiquity of technology, the spectacle as corporate media commodity and the illusion of social stability as product of civil rights provides the masses with the impression that the New Church is viable and continues to satisfy the needs of the faithful. Like medieval encyclicals, Microsoft continues to define ontologies through operating systems. You can click on an icon and confess to the Holy Father in the new nirvana of cyberspace. The un-*WIRED* heretics are then left to the sinfulness of the body and physical world.

Machine III then is a reiteration that the media implodes all meaning through the opiate of the video screen to further the social imperatives of the entertainment megaconglomerates. Malcolm X and the Million Man March are now banalized into corporate pop ready for merchandising; the underlying decay has a thin veneer of media spin doctoring. Apathy for any real social progress sets in as cultural manipulation disguised as entertainment becomes epidemic, but no one seems to notice or care. *Machine* ends with the civil rights protesters marching out of Washington in utter silence, the words of Martin Luther King unraveling in reverse, the fallen lying unaided and Judas, signifier of the last righteous man, hangs beneath the gaze of the spectator's apathy.

22. Arthur Kroker, Marilouise Kroker, and David Cook, *Panic Encyclopedia*, New York: St. Martins, 1989.



Frame from *MACHINE: Deus Ex Machina*.

Impact

From the results gained by several upper-level classes at American universities that used *Machine* in its classes (including Kent State University, The University of Colorado and Wake Forest University among others), the students resoundingly identified with the concepts contained within the videos. This would lead us to believe that use of the 'trans-mediated' or parallel text speaks to a culture raised on cable TV, Nintendo and personal computers. This is the group that routinely processes information through visual, tactile and aural means, not only through the text. Through *Machine*, the participants can actually understand what we, the theorists, mean.

The 20-somethings of the 90s have seen *Machine* most often, as a generation raised on hit-and-run media tactics, of sound bites and MTV cinematography. For them, history is encapsulated in seven-second chunks, and films are seldom longer than four minutes. ADD is the syndrome of the day; this is the group that *Machine* seems to speak to most clearly. The fast-paced imagery, combined with original music on alternative rock radio stations, encodes culture in a media blast that resonates with the zeitgeist of the time in the undergraduate classroom. *Machine* is sociology that students understood viscerally.

Future Directions

Among our transmedia discursive spaces, *Machine* is only the first series of works to use this methodology of visual sociology. *Machine* is current with our methods of the time, and the next work, *Web*, expands on the aesthetic form *Machine* establishes. However, there are technologies, such as multi-user online worlds, online multimedia and interactive meeting areas that offer further exploration. As these emergent technologies develop, we will expand this discourse.

Machine is hardly a terminal point. The crucial point is that the medium is not the only message here – to say this would be merely rehashing McLuhan. Our sociology of the postmodern uses the media merely as a tool to describe the cultural forms we wish to address directly, with no translation into the narrow bandwidth that text alone presents.

Machine takes as its starting point Max Weber's assertion in *The Protestant Ethic and the Spirit of Capitalism* that "the peculiar modern Western form of capitalism has been, at first sight, strongly influenced by the development of technological possibilities. Its rationality is essentially dependent today on the calculability of the most important technical factors."²³ In the late 20th century, commerce and technology have finally achieved the penultimate capitalist dream by becoming totally inseparable, made even more insidious by wrapping it all in the guise of 'infotainment'. Increasingly it is more and more difficult to determine where entertainment and distraction end and the manipulations of the corporate sales pitches and advertising begin. As Weber noticed at the turn of the 20th century:

Today the spirit of religious asceticism-whatever finally, who knows?- has escaped from the cage- But victorious capitalism, since it rests on mechanical foundations, needs to support it no longer. The rosy blush of its laughing heir, the Enlightenment, seems also to be irretrievably fading, and the idea of duty in one's calling prowls about in our lives like the ghost of dead religious beliefs. Where the fulfillment of the calling cannot directly be related to the highest spiritual and cultural values, or when on the other hand it need not be felt simply as economic compulsion, the individual generally abandons the attempt to justify it at all. In the field of its highest development, in the United States, the pursuit of wealth stripped of its religious and ethical meaning, tends to become associated with purely mundane passions...²⁴

What is distinctly troubling about this is the way the technologies of postmodernism have become the sacred cow of governments, businesses and educational concerns, all scurrying to adopt new technologies in record numbers without taking time to weigh the potential benefits against the problems such action can, and undoubtedly will, create. *Machine*, then, is a warning, a plea as it were, for caution when considering our technologically mediated future.

Causality Loops: The Cybernetics of Performance

The emergence of New Media art in the forms of Internet-based video, web projects, electronic communication and installations problematize qualitative issues regarding performance in virtual and electronic spaces. Hybrid virtual and physical theatrical events, Internet-based 'performance art' installations, and 'hybrid' live events that utilize artificial intelligence all question the boundaries between art, theatre and technology. What constitutes performance in technological art, and how can we form a critique of New Media performance through an analysis of these aesthetic spaces? I will examine issues related to the performative aspects of New Media art through an analysis of cybernetics. This way, we will examine the relationship between technology, practitioner and audience in order to consider the spectrum of expression in interpersonal relations emerging in New Media art.

23. Max Weber, *The Protestant Ethic and the Spirit of Capitalism*, Los Angeles: Roxbury, 1996.

24. Ibid. p. 181-182.

Sue Ellen Case posits that the process of networked writing on the computer screen is a performative act, complete with its own set of protocols and rituals.²⁵ The writer enters this space of performance through typing, mouse clicking and performing a script of sorts as proscribed by the program and the operating system of the computer. The aforementioned could be expanded upon though. The creation of a website, although different from interacting with a word processor, entails certain procedures. One must compile data, place it in an Internet webspace that will hold the artist's work, and configure that data to display properly when viewed on the web. The production and display of digitally based creative forms networked and non-, such as word processing and interactive art, function in electronic space under Case's model.

Case then defines electronic media in terms of the interaction of the reader, or end user, who accesses the information from the Internet or other platforms, such as DVD-ROM. The user follows rituals as basic as pointing and clicking with the mouse to performing simple tasks such as text entry as required by the program. Both the creator of electronic media and the reader or interactor with those media 'performs' the experiences of creation and consumption. But there is a subtle difference between the gestural function of New Media art and New Media performance in particular, and this can be illustrated by examining the basic precepts of cybernetic theory.

Cybernetics refers to any self-regulating system that is set up by a stimulus and response through continuous feedback. This principle has been adapted to represent aspects of the body, the global environment, and even managerial systems. Performance is also a cybernetic system, in that it creates a self-regulating set of cognitive exchanges between the performers' actions and audience response.²⁶ This is a basic argument that can be applied to theater, which we will call a closed-loop system, as the process of stimulus and response typically regulates itself within the theatrical space. Of course, one could argue that the audience performs in its own right, and various reactions of persons on 'stage' provide feedback.

We could also argue that the audience and stage personae are simultaneously performers and audience, thus creating a heterotopic space in which layers of stimulus and response loops back continuously in 'real time'. The fact remains that except in few cases, theater and performance hold to this concept of response and feedback, acted upon by the cognitive filters of the participants. Can we then create conceptual parameters for understanding how certain interactive New Media installations and artworks cross over from acts of performativity into acts of performance? To answer this question, one must consider a cybernetic model of performance in the context of Case's theory of digital performativity.

The difference between performance and the performative in New Media art is quite subtle. With New Media installations, the participants often also create media and interact with the work. However, there is typically a temporal disconnect between performers, severing the real-time or 'live' process of interaction between participants. The author may perform the writing of the work; the 'reader' per se may perform by interacting with the work, but there is no feedback process of

25. Sue Ellen Case, *Performing Queer (Parts I & II)*, TDR, September 1994.

26. Peter Anders, *Envisioning Cyberspace*, pp.10-25, 1998, McGraw Hill, New York, NY.

live intercommunication, thus suppressing what Mary Flanagan calls, "the surprise of the live".²⁷ What we are left with is a simulacrum of performance through the absence of live interaction between participants. This creation of and interaction with New Media art generates mimesis of the live, but does not satisfy the real-time continuous cognitive interaction present in real-time performance. New Media 'performance' pieces then most closely resemble interactive cinema, as they frequently present the viewer with a decision tree consisting of options and their resultant (re)presentations of media. Even these borders can be blurred, as the Recombinant History Apparatus' *Terminal Time* project will illustrate later.

Breaking the continuous feedback loop of live human interaction (e.g. theatre) through the time disconnection of storing digital artwork defines a specific range of experience for the viewer's interaction with the work/event. This is due to the pre-ordained set of choices outlined by the author. In the most basic case of live performance, in contrast, the script may be set but there is a qualitative uncertainty of the interplay between the participants. This imbues a slight sense of chaos in the event, creating an 'unfixed' quality to the performance which is yet to be duplicated in interactive art. In order to reveal the principles that have been discussed, we will examine four instances of New Media performance and online installation. It is my hope that from considering these events we can discern the spectrum of performance/performative spaces emerging within the technological arts.

In Mark Amerika's *Holo-X*²⁸ we are taken to an online virtual reality space of sexual fantasy in which we are greeted by S.L.U.T., a virtual human of questionable sexual preference, who beckons us into her room. As we interact with S.L.U.T., she attempts to titillate the user with erotic stories of her experiences in her world within the Net. She also invites us to spend time with her, to 'walk' around her room, play with the stereo, her guitar, and read her many journals that are strewn around the room. But S.L.U.T. attempts to place a sexual tension upon the viewer by alluding to her data-promiscuity and her potential sexual desire at the moment that the user entered the room, but keeping herself at mouse's reach, possibly making T.E.A.S.E. a more appropriate acronym. In repeated visits to *Holo-X*²⁹, the visitor to S.L.U.T.'s boudoir is presented with a non-linear literary space in which they may peruse journals and 'chat' with her to create a representation of *Holo-X*'s virtual literary space. This is quite in keeping with Mark Amerika's oeuvre of works that seek to use the multiple aspects of representation capable in Internet spaces to construct multimedia literary spaces.

However, the range of interactions possible with S.L.U.T. is limited, and there does not seem to be much potential for free association or *true* data promiscuity on S.L.U.T.'s part. While this character is a simulated construct of a human being, *Holo-X* is actually interactive literature that simulates performance art much in the style of Annie Sprinkle or Karen Finley. *Holo-X* executes a performative function as interactive literature. As we next introduce spaces that include both the body and virtual aspects in performance events, we can consider the relationship of the body and self to the aesthetic space of technological art.

27. M. Flanagan, P. Lichty, *From conversation of July 1999*. Buffalo, NY, USA.

28. Mark Amerika, *Holo-X* 1997, <http://www.holo-x.com/>.

29. *Ibid.*

Through his interventions, Australian performance artist Stelarc bridges the gap between New Media and performance. In these situations, the body is augmented and duplicated through technological means such as prosthetic third arms, physically-linked robotic equipment run in the gallery, remote-control Internet installations, and virtual representations of his body. The space is further bifurcated as events are frequently viewed through the Internet, where during the performance of works such as *Third Arm*,³⁰ remote participants are able to manipulate the artist's body via remote control and his virtual worlds works. The onlooker is able to manipulate Stelarc as body or infoset and sees ramifications of those actions in real time, regardless of whether the patron is in the gallery or online. In these works, we can see that the feedback loop, key to the principles of cybernetics, is executed on a number of levels: the perspective of the performer/artist relationship, the artist/machine, and the self-regulation of the machines within themselves.

In addition to the real-time manipulation of the living body in performance, Stelarc is also augmenting his performances with additional levels of stimulus and feedback through his technological prostheses, both physical and virtual, and so creating a cyborg performance. The performer is in real time, even if telepresent, and responds with defined, yet unpredictable actions. In addition, he is confronting his device's controls, creating additional levels of meaning. Stelarc bridges the gap between performative media art and performance with his hybridization of space. Although events also blur the border between performer and audience, Stelarc's acts problematically break the link between himself and his observers.

Severance between audience and performer is an effect also seen in Mary Flanagan's *The Perpetual Bed*. *The Perpetual Bed*³¹ is a virtual reality-based performance that consists of projections of a computer-generated space that Mary interacts with on stage through her laptop computer. In *Bed*, Flanagan maneuvers through a free-floating virtual space of her memories, many from her childhood and family. These memories are reduced to two-dimensional scrim which float in midair as short cinematic loops or still images, rendered in sepia or black and white. Such representation produces a sense of historicity, as if we were sitting down to examine a box of old Daguerreotype photographs. A second aspect of note relating to these 'memories' is the way in which they act as sound objects. As Mary passes by these familiar memories in the virtual world, their associated sounds become more distinct, providing a metaphor for the way we recall memories. In addition, several semi-autonomous scrim 'entities' pass through the virtual world, reminding one of stray thoughts in the recollection of a story. In other performances, online visitors can interact textually during the performance through 'windows' in the virtual world. In so doing, *The Perpetual Bed* creates a hybrid world of the artist's reflections and memories that we visit with her, if only for a little while.

Flanagan is operator as performer, maneuvering through the space from her laptop console, narrating verbally and textually as she recounts her mnemonic world. Through this juxtaposition of live stage performance and online installation, the live interaction between audience and performer is restored and opens up possibilities for online participation during the event, thereby

30. Stelarc, Stelarc Home Page, <http://www.stelarc.va.com.au/>, Web Accessed January 12, 2000.

31. Mary Flanagan, *The Perpetual Bed*, University of Maryland Center for Baroque and Renaissance Studies, Baltimore, Maryland USA October 1998 performance.

blurring the boundaries between virtual and physical. The roles played by Mary, her memories, the semi-intelligent scrim, and now the external audience all come together to create the stage presentation of the *Bed*. Flanagan's experiences in her varying presentations of this piece raise questions about the necessity of live interaction between stage and audience participants for the fullest development of a performance-based work.

Two events in the various performances of *The Perpetual Bed* question the need for live, cognitive interaction and feedback between audience and performer.³² For her 1998 intercontinental performance in France, an Internet link was established to transmit video from the space where Flanagan would execute the piece in New York into the theatre where the event would be held. Although the media was transmitted to the auditorium live and in real time, peculiar to this performance was that Flanagan had no way of receiving feedback from her audience. Even though this could have been established, to some extent, through the Internet video camera and microphone, the exchange was one-sided. The result was her complete disconnection from the audience's reactions, giving her no ability to interact or adjust for her onlookers. This caused her to question the role of the performer's presence in the audience's location and the importance of continuous feedback during the performance.

These issues became evident once again at an event in Norway, where she was in the same location as the audience. The evening transpired quite normally, with Flanagan on stage at the console presenting the piece. However unique to this occurrence was that several audience members were aware of the potential problems that her absence would present. The audience members remarked that although they understood that she had performed the piece remotely before, those who voiced their preference believed that the artist's presence was necessary to create the atmosphere of performance. Both events, from Flanagan's perspective and that of the Norwegian observers, would tend to underscore the importance of having the performance and audience in the same location. This suggests the viability of the cybernetic model of performance and its requirement of live, real-time interaction between on-stage persons and audience members.

Even though the concept of performance cybernetics provides a robust model for the study of theater participants' interactions, there are events that blur the boundaries between performance and the performative. One such work is The Recombinant History Apparatus's³³ audience-based interactive video, *Terminal Time*. In this piece, the audience is presented with three segments of video, all prefaced with questions from which answers are selected based on the longest sustained applause for a given option. At this point, the artificial intelligence systems of the piece select clips of historical imagery and narration to create a history of the world that reflects the biases of the audience.

Unique to its artificial intelligence is the fact that *Terminal Time* utilizes a system in which several internal expert systems select the topics 'by consensus' and will not necessarily return identical

32. Mary Flanagan and Patrick Lichty, personal conversation, Buffalo, New York, 1999.

33. Personal observations from project development. Recombinant History Apparatus is S. Domike, M. Mateas, and P. Vanouse.

historical narratives for repeated showings. This 'uncertainty' quotient exhibited by *Terminal Time* hints at the beginnings of free association and feedback with the audience while staying within certain predetermined parameters indicative of live performance. This work exhibits traits of the exchange of stimulus and feedback between performer and audience found in live theatre, but only does so in three predetermined times in the execution of the installation, whereas in human-based events, the feedback loop of social interaction occurs continually throughout. However, the uncertain outcomes following identical selections allude to a potential for technologically mediated cybernetic performances that call into question issues of human/computer interaction and the cognitive aspects of technological art. The uncertainty principle behind the AI system in *Terminal Time* creates an interaction loop that questions the usual decision trees of interactivity and creates an environment more like live performance or theatre.

In considering these works, I create only one model of performance in technological spaces among a myriad of possible interpretations. There are also challenges as new languages are created for these events and in so doing, one must be careful to not reinscribe old boundaries with our taxonomies. However, a cybernetic analysis of New Media performance is useful in that it allows us to create epistemological metaphors that we can use to examine New Media art and technologically based performance. The genre of performance-based technological art will continue to proliferate with great frequency as artists and performers learn (or choose) to explore these media's creative potentials.

As suggested by Kellner, the emergence of a New Media culture will call upon its constituents to create new creative spaces to construct metaphors expressing the experiences within that practice.³⁴ Perhaps through analyses of these electronic and theatrical spaces such as the ones presented in this discussion, the issues of representation and epistemological landscapes that these genres make visible can be explored further.

34. Kellner, Douglas, *Presentation before the Electronic Culture & Communication Section of the Popular Culture Association*, March 1999, San Diego, CA.

PRESENTATION/INTERVENTION/PERFORMANCE: A THEORY OF THE ECLECTIC

Electronic art is currently experiencing a profusion of expressive modes through HTML(x), Virtual Worlds, MMO gaming, e-mail, Social Media, and hybrid forms of communications. Often New Media theory locates itself in relatively narrow modes of communication (text and some web installations) and ideological frameworks (such as French poststructuralism). I propose the expansion of New Media art theory and criticism and its practices of production and representation to reflect the diversity of praxis/ideology in technological spaces.

My line of reasoning comes from a series of comments in the journal *TDR* by Richard Schechner on performance studies,¹ which I pair with Baudrillard's writings on cultural transience.² Schechner wrote that performance studies have become too detached from mainstream theatre and its practices and should strive to reincorporate performance and theatre studies. I interpret this as his lament that theory and practice have become too estranged and should be more deeply involved. In New Media the separation is often paradoxical, which leads us to Baudrillard.

Following Baudrillard's theory of cultural transience, the rift between different modes of expression is highly problematic. In electronic communications (including technological arts), cultural forms reach a level of transience as their borders become indistinct, if not indistinguishable. Sport, for example, now incorporates elements of aesthetics, politics, entertainment, war, and commerce, and vice versa, to one extent or another. It would be safe to say that in many cases, theory is then as inextricably linked to the production of art as praxis is with theoretical discourse. This opens the door to previously hybrid experiential forms of theory as art, as well as art and performance as theory. Keep in mind that this inversion shows only two possible dimensions of many combinations of praxis under our proposed methodology.

Yet the principles discussed do not only apply to works encompassing the continuum between theory and practice, but also to the various modes of presentation, or 're-presentation' of such eclectic works – mediated, textual, or otherwise. According to Baudrillard and Schechner, could performances or installations of theoretical content be placed within an experiential framework that reflects the diverse range of media and cultural experiences? To do so would problematize the borders between genres in production and presentation – boundaries which, as Baudrillard asserts, are already in contention.

If the practitioner engages these borders between genres, the opportunity arises to conflate concepts discussed in any body of work. Although I posit that the delineation between theory, practice, and representation are far from distinct, a work will appear nonsequitur if the intent and cultural context provide a poor frame of reference and do not engage a public. Even if a work's

1. Richard Schechner, *Post-Post Structuralism?* Cambridge, MA: MIT Press, 2000, pp 4-6.

2. Jean Baudrillard, *The Transience of Evil*, New York: Verso, 1994, pp 45-50.

borders between theory and practice have been blurred at best, the resituated modalities must still be grounded not only in extant texts, both media and print, but by considering the audience's experience as well.

Rethinking methodologies (theoretical, practical, etc.) can also include resituated ideology. There is a paradox that at the end of the second millennium, the prevailing theoretical ideology in Western art and performance centers on French Poststructuralism. As an ideology, postmodernism breaks down master narratives, suggesting discursive heterogeneity, yet has become a canon in its own right and is in many ways considered a priori in many cases. Through its own principles of de-privileging master narratives, we must realize that postmodernism is only one set of ideas in contrast with paradigms like Process Philosophy, Object-Oriented Ontology, and so on. Resituating theory and practice within a larger experiential framework suggests that works can embody any ideology within a given frame of reference. In order to do so, we must also be aware of the ideology at play (postmodernism, (trans/re/hyper)modernism,³ humanism, Neo-Platonism, etc.) to compellingly deliver a message in a given setting. But how is that message delivered?

In examining practices that utilize theoretical and experiential strategies, we will look at two 'events' in which different configurations create their own critique. In my work '*Grasping at Bits*' (included in this collection),⁴ a text about intellectual control and art on the Internet, is broken apart from the linear textual model into modular paragraph-statements. It is grouped by topical association through the use of a dynamically-linked mind map interface in its online version.⁵ This interface allows the 'reader' to navigate through the discursive space of the essay in a spatial fashion as I expand on in *Art in the Age of Dataflow*, leaving it up to individuals to create their own narrative structures.

The paragraph-statements in the online version are linked via four redundant interface structures as well as pop-up annotations and color coding to denote affinity to certain conceptual themes. *Grasping at Bits* is not only a nonlinear critical essay in its online version, but also incorporates elements of interactivity, design, information architecture, and aesthetics to allude to more lyrical and structural forms than the traditional essay. It plays upon the discontinuities that hypertextual narratives present by virtue of their nonlinearity, as well as mixing media forms for performative theoretical spaces through which the reader can explore and experience.

Grasping at Bits reflects a self-awareness of the heterogenous nature of the media environment it represents. Under the framework of spatial narrative and hyper-browsing, the practitioner can incorporate other experiential tactics to (re)present a theory of the eclectic, including multimedia, performance, and personal engagement with the audience. The rather rarefied intellectual frame of reference that contemporary, and not just electronic, art practice occupies often creates

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3. Marcos Novak, *From the Invencao (Sao Paulo, 1999) and Living Architectures (Banff, 2000) conferences*. Novak posits that additional layers of society are developing in addition to those previously theorized, creating a 'trans' modernity, the prefix trans- suggesting a parallel existence of several modes of existence at once.
 4. Patrick Lichty, *Grasping at Bits*, Interactive Hyperessay, <http://www.voyd.com/gab>.
 5. See screen capture in this article for reference.

a perception of disengagement with its public. Such disconnects could be hardly further from the truth, as principles found in current cultural theories are frequently drawn from the everyday events within the surrounding social environment. The difficulty seems to be presenting the work so that it is cogent, clear and accessible to a public.

For example, at the *Living Architectures* summit at the Banff New Media Institute, I witnessed a presentation on interactive media in public spaces that was 'performed' as a tabloid-style science-fiction story. The humorous story was about aliens who 'illegally' take over Internet2 bandwidth that the Canadian taxpayers paid good money not to use in the first place.⁶ The presentation, although unorthodox by academic standards, put forth its concepts concisely and memorably. Engaging with the audience in critical discourse and artistic expression is a crucial point in communicating our ideas and experiences, and conciseness and humor, along with common cultural referents, created a strong rapport. However, this is only one methodology, and I do not suggest that all theorists should consider being stand-up comedians (although some do this unintentionally), but this illustrates that alternate modes of presentation and style can yield compelling results from which we can learn when communicating with an audience.

While there are manifold ways that discourse can be re-embodied in New Media and online spaces, what of the traces left by digital culture as they become part of the archive? The records left by countless performances, mixed media events, and now electronic performance and installation severely problematize archiving such the record of these sites of engagement. The difficulties are numerous, from operating system incompatibility and system obsolescence, to neglected updates for new software, among others. When looking for the most enduring record, we are usually left with the book, although some argue that the life of the book is just as limited if the proper materials such as acid-free paper are not used. A key irony here is that the Long Now Foundation,⁷ an organization that considers humanity's role in the long-term future of the planet, is largely funded by the high tech sector. So as we consider the work's contextual frame and mode of expression in the larger cultural environment, the archive, however circumspect, is also one more aspect in the embodiment of the work.

A theoretical approach that is more representative of contemporary practices and milieus creates greater latitude for other media, forms of communication and engagement with the public. There is also the burden to be aware of the ideological and cultural context of the work. While daunting, the spirit of experimentation evident in New Media art demands an expansion of discursive strategies. These can incorporate experiential information, alternate modes of expression in media and style, and transparency between aspects of culture. In so doing, perhaps new theoretical approaches will arise which are cogent yet engaging.

6. Douglas Macleod, *Aliens Invade Toronto* (performance) Banff New Media Institute, Alberta, Canada, 22 September 2000.

7. Long Now Foundation, <http://www.longnow.org/>.

CRASH PRESENTATIONS: A THEORY OF THE ECLECTIC

Electronic art is currently experiencing a profusion of expressive modes through HTML, VRML, Flash, e-mail, and hybrid forms of communications. However, it seems that new media theory has located itself in relatively narrow modes of communication (text and some web installations) and ideological frameworks (such as French poststructuralism). I propose that new media art theory and criticism expand their practices of production and representation to reflect the diversity of practices and ideologies in technological spaces.

My line of reasoning comes from a series of comments in the journal *TDR* by Richard Schechner on performance studies, which I pair with Baudrillard's writings on cultural transparence. Schechner wrote that performance studies have become too detached from mainstream theatre and its practices and should strive to reincorporate performance and theatre studies. I interpret this as his lament that theory and practice have become too estranged and should be more deeply involved. In new media the separation is often paradoxical, which leads us to Baudrillard.

Following Baudrillard's theory of cultural transparence, the rift between different modes of expression is highly problematic. In electronic communications (including technological arts), cultural forms reach a level of transparence as their borders become indistinct, if not indistinguishable. Sport, for example, now incorporates elements of aesthetics, politics, entertainment, war, and commerce, and vice versa, to one extent or another. It would be safe to say that in many cases, theory is then as inextricably linked to the production of art as praxis is with theoretical discourse. This opens the door to previously hybrid experiential forms of theory as art, as well as art and performance as theory. Keep in mind that this inversion shows only two possible dimensions of many combinations of praxis under our proposed methodology.

Yet the principles discussed do not only apply to works encompassing the continuum between theory and practice, but also to the various modes of presentation, or 're-presentation' of such eclectic works – mediated, textual, or otherwise. According to Baudrillard and Schechner, could performances or installations of theoretical content be placed within an experiential framework that reflects the diverse range of media and cultural experiences? To do so would problematize the borders between genres in production and presentation – boundaries which, as Baudrillard asserts, are already in question.

If the practitioner engages these borders between genres, the opportunity arises to conflate concepts discussed in any body of work. Although this discussion posits that the delineation between theory, practice, and representation are far from distinct, a work will appear nonsequiteur if the intent and cultural context provide a poor frame of reference and thus do not engage a public. Even if a work's borders between theory and practice have been blurred at best, the resituated modes must still be grounded not only in extant texts, both media and print, but by considering the audience's experience as well.

Rethinking methodologies (theoretical, practical, etc.) can also include resituated ideology. There is a paradox that at the end of the second millennium, the prevailing theoretical ideology in Western art and performance centers on French Poststructuralism. As an ideology, postmodernism breaks down master narratives and suggests discursive heterogeneity, yet has become a canon in its own right and is in many ways considered a priori. Through its own principles of de-privileging master narratives, we must realize that postmodernism is only one set of ideas. Therefore resituating theory and practice within a larger experiential framework suggests that works can embody any ideology within a given frame of reference. In order to do so, we must also be aware of the ideology at play (postmodernism, transmodernism, humanism, neo-Platonism, etc.) to compellingly deliver a message in a given setting. But how is that message delivered?

To examine practices that utilize theoretical and experiential strategies, we will look at two 'events' in which different configurations create their own critique. In my work '*Grasping at Bits*', an online essay about intellectual control and art on the Internet is broken apart from the linear textual model into modular paragraph-statements and grouped by topical association through the use of a dynamically-linked mindmap interface. This interface allows the 'reader' to navigate through the discursive space of the essay in a spatial fashion, leaving it up to individuals to create their own narrative structures.

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Grasping at Bits is self-aware of the varied nature of the media environment it represents, and the practitioner can incorporate other experiential tactics to (re)present a theory of the eclectic, including multimedia, performance, and personal engagement with the audience. The rather rarefied intellectual frame of reference that contemporary, and not just electronic, art practice occupies often creates a perception of disengagement with its public. Such disconnect could be hardly further from the truth, as principles found in current cultural theories are frequently drawn from the everyday events within the surrounding social environment. The difficulty seems to be presenting the work so that it is cogent, clear and accessible to a public.

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NEW MEDIA AND ACTIVISM

GRASPING AT BITS – ART, RESISTANCE, AND CONTROL IN THE DIGITAL AGE

Introduction

At the turn of the third millennium, the international art community has begun to recognize the significance of the Internet as a milieu for expression and critical inquiry into the globalization of capitalist culture. The increasingly *Blade Runner*-esque role of corporate culture and 'big money' in global society, particularly cyberspace, raises questions about freedom of expression and the influence on intellectual property by multinational corporations. Artists who critique the expanding role of corporate power make visible its cultural terrain, frequently through the subsequent litigation by the institutions under scrutiny. Events such as the LEONARDO and etoy controversies reveal how corporations use legal action to enforce their brand identity over artistic groups that actually predate them.

In a 'golden age' of global capitalism, brand names and corporate culture are in near-ubiquity in Western society. The media image as identity pervades and perverts our cultural milieu, and questions the linkages between material and aesthetic symbols of exchange. In a society that increasingly centers itself on the production and consumption of symbolic information, who will control aesthetic objects? Can freedom of aesthetic expression be assured in a climate of increasing capitalistic expansion into a 'free' market economy, or will such influences signal a cyberspatial 'Tragedy of the Commons' (Hardin)? This provokes a circumspect view towards the matrix of issues surrounding corporate influence and control of intellectual property. Subsequently, I will speculate upon possible implications of the intersection between the aesthetic and the material in the age of the Internet.

Colonization of the New World (DOS Kapital)

An all-pervasive hypercapitalism is the new colonizing force of the 21st century; it fulfills all desire by inventorying, quantifying and exploiting 'need' to create a homogenous mass culture of production and consumption of corporate signs! It is an extension of 20th century materialist culture, spurred on by the explosive forces of globalization, international capitalism, and fin de millennium technological expansion. This cycle of production permeates all aspects of society from the cradle to the grave, due to unchecked capitalism's complete development within the international milieu. Multinational conglomerates construct vertical consumer cultures for mass consumption of food, entertainment, art, clothing, or transportation brands without requiring the consumer to leave the safety of corporate influence. Coordinated marketing strategies homogenize markets and audiences by channeling signs through both consumption and reinforcement of the company's signifiers. The effect of a 'pure' experience of production and consumption systematically unifies global economies of symbolic and material exchange. Producer and audiences of material and aesthetic property combine into a 'New World Order', a single consumer community. But then, 'It's a small world after all', isn't it?

1. Michel DeCerteau, *Culture in the Plural*, Minneapolis; University of Minnesota, 1997, p. 134.

The Transparence of Hypercapitalism

Hypercapitalism must seep into every aspect of global culture in order to saturate markets and maximize its productive potential. I once again refer to Baudrillard's *The Transparence of Evil*,² in his position that situations within society (art, sports, sex, politics) become transparent to one another in a society inundated with media; different genres' cultural attributes become ubiquitous and conflated. As I have noted elsewhere, sports become politics, politics become pornography, art becomes war, war becomes a video game, and capitalism becomes sport, ad infinitum. This is not to say that all aspects of culture within a mediated society cannot become one another, as they do. However, it is how cultural aspects combine that is of interest. This transparence of culture is evident from American television ads, which tout the excitement of day trading on Ameritrade, the tribal identity sold by Nike (Just DO it [without counting the ramifications]) and the Gap (EVERYONE in bulletproof vests!), and the remote control titillation of CNN's coverage of the Gulf War. And it should be no different that after the end of the Cold War; Western society basked in its victory by allowing capitalism to pervade all aspects of life through consumerist culture. And this is no surprise, as McLuhan remarked that in an information society, all the walls go out, politics become entertainment, and education becomes big business. Information and capitalism knock out the walls of postmodern culture.

The Potential of the Object

The potential of the object, material or symbolic, must be reduced to its commodity use value. By definition, corporate culture strives towards the maximum utilization of all resources to obtain the greatest profit regardless of the mode of exchange, whether durable goods or aesthetic content. All content is potential product and must be exploited to its fullest extent. We want not only to see the touring Monet (Mon-ey?) exhibition but to take home the print and the T-shirt as well, go to the chat room on monet.com, and then wear the shirt to the Rivera exhibition, where we buy a bag and iPhone app. As all aspects of the object become aestheticized symbols of commodification, it is no surprise that the local branch of the art museum is at the shopping mall. Museums place their shops at the entrance, and the Museum Store has become a potent signifier of hypercapitalistic reconfiguration of aesthetic cultural forms. But this cyclical commodification of signs is most prevalent on the Internet, where all information is a potential symbol of exchange and reifies the homogenous cult of commodity.

Intermezzo: Mondo and WIRED

There are fewer examples that illustrate the cultural colonization by capital than as early as the magazines *Mondo 2000* and *WIRED*.³ In the first half of the 1990s, there were a plethora of well-produced fringe maga-'zines' that epitomized the burgeoning cyberculture of the Bay area, and best known of these is arguably *Mondo*. Slick and highly aestheticized, *Mondo* focused on the culture of the tragically hip at the bleeding edge of contemporary culture. It featured visionaries such as Brenda Laurel, Jaron Lanier, and astrophysicist Fiorella Terenzi. *Mondo* was the operating manual for the silicon Haight-Ashbury of the early 90s. However technoutopian and cyberdelic the *Mondo* crowd were, the specter of commodification of culture would soon emerge.

2. Jean Baudrillard, *The Transparence of Evil*, New York: Verso, 1993.

3. WIRED, <http://www.wired.com/>, *Mondo 2000*, <http://www.mondo2000.net/>.

Enter *WIRED*. At its inception, it was the geeks' answer to *Mondo 2000*. Similarly slick and polished, the difference is that it focused less on the aestheticization of possible futures and more on the cultures of Silicon Valley research communities and MIT. The ideological differences are similar to the Shaper and Mechanist clades in Sterling's *Schismatrix Plus*⁴, with those cultures' desire to remake humanity either through genetic manipulation or technological augmentation through prosthetics. The contrast is between wetware and hardware, soft versus hard.

WIRED is aligned with Silicon Valley research and prognostication (R&P!) and initially gained strength through the support of writers such as Nicholas Negroponte, and from its coverage of institutions like the MIT Media Lab. This sort of institutional legitimation quickly made it the key publication for mapping the digital revolution. Such strategies of legitimacy and verisimilitude (as *WIRED* became 'the source' for the future of technocracy) drew the attention of megapublisher Conde Nast, which purchased the magazine. And without surprise, the homogenizing effect of capital was seen immediately in its pages. *WIRED* offers less coverage about research and prognostication and more about CEOs, entrepreneurs, and their high-tech products (the CEO of the Month Club). The channel for the high-tech culture had been appropriated and controlled, assuring efficient delivery of product to the consumer every month, with *Mondo* being long extinct. In the shift in *WIRED*'s journalistic strategy after its multinational buyout, capital had to expand to fill the space allotted.

The Centrality of the Image

As capital colonizes cyberspace, we are reminded of Negroponte's prognostication about the shift from systems of exchange based on atoms (material) to one of bits (information).⁵ This follows Baudrillard's assertion that the media, and especially digital society, is founded on the simulacrum of the object translating into a double of the thing itself⁶ and exhibiting full equivalence for any exchange of use value. In fact, the image became a symbol of exchange as many societies shifted from hard coin to promissory note. Western society changed from an economy of symbols of exchange to a system of symbols for exchange. The material becomes less of an issue as the real is increasingly placed in the realm of informational object.

Intermezzo II: the Agora

The Internet's origins as a primarily academic and military medium by default did not present itself as an attractive commercial space. Before the 1990s and the advent of the World Wide Web, it was not a widely explored venue for aesthetic inquiry. During the 1980s, the wider online community consisted of privately owned bulletin board systems and isolated providers such as Delphi and CompuServe (now part of AOL), which are significant because they did support large, active forums for discussing digital art. It was not until the early 1990's, when Tim Berners-Lee created the basis for the World Wide Web that distributed networks proved viable as a widely available social space. In 1992, there were only 100 web sites, which is a far comparison from current numbers, and it is safe to say that at the time only the pioneers of net.art were considering the medium.

4. Bruce Sterling, *Schismatrix Plus*, (reprint), Ace Books, 1996.

5. Nicholas Negroponte, *Being Digital*, New York: Vintage Press, 1996.

6. Jean Baudrillard, *SIMULACRA AND SIMULATIONS*, Ann Arbor: University of Michigan Press, 1985.

Liberty and Bits

Berners-Lee envisioned the web as a public space for the free and fluid exchange of ideas and information.⁷ This was reflected in the writings of other net.visionaries such as Negroponte, attributed the slogan "Information wants to be free". Such sentiments were memes that ran deep through the cyberculture of the early to mid-1990s. However, with the wildly skyrocketing Dow Jones Index, companies such as Microsoft took notice of the rising popularity of the web, and the halcyon days of e-utopianism gave way to the e-gold rush and Big Capital's entrance into cyberspace.

Paradigm and Spasm

Reflecting upon Negroponte's writing,⁸ paradigmatic schisms become evident in the conversion from material to information-based systems of exchange. As Western society had been dominated by materialist capitalism for the past two hundred years, the initial response of corporate culture was to apply materialist principles of mid-20th century industrial consumerism to the realm of electronic intellectual capital. Yet Wall Street has shown that Infoculture and Infopower operates on substantially different principles than that in industrial society, as investments and returns from the tech sector are frequently no longer measured in terms of actual holdings and performance but on speculation and expectations based on common shareholder consensus. Like mice in a jar of oxygenated fluid, capital's shift to non-material symbolic systems of exchange locks it in a series of spasms – it must learn to stop breathing atoms (air) and start breathing bits.

The shift to the ephemeral has caused similar shudders in the art world. Galleries that once hesitated to display digital prints, which have been problematic under materialist discourses of collecting and archiving, still enter logistic spasms when confronted with net.art and even smart-phone app art. This genre does not fall into paradigms of material commodity and presents issues not only of Warholian and Fordist mass-production, but also of Benjamin's infinitely reproducible object.⁹ What must then be commodified is the object's 'aura',¹⁰ not the data itself. The experience of an artwork's image or verisimilitude (implication of truth) becomes the symbol of exchange. So what is for sale, or at contention, is not the object itself but the representational practice that governs it, creating a marked shift from materialist discourse.

The New Verisimilitude

The net is the new verisimilitude. The image is central, as the representation of the real supplants any possible material referent. Brand names become the aestheticization of the real; any mega-corporation such as Disney has taught us this. And such practices reify the homogenizing effect of capital so that any obfuscation of it disrupts the system of truth inscribed in digital culture. Dilution of brand identity creates breaches in the cycle of consumption until efficiency is lessened and maximum profits go unrealized. In the economy of symbols, any deviation from the mass-produced image is the denial or 'aestheticization' of 'truth' and the irruption of the product. Thus the necessity to control content in cyberspace becomes dominated by capitalist agendas.

7. Tim Berners-Lee, <http://www.w3.org/People/Berners-Lee/>.

8. Negroponte.

9. Walter Benjamin, 'The Work of Art in the Age of Mechanical Reproduction', *Film Theory and Criticism*, ed. Gerald Mast and Marshall Cohen, London: Oxford University Press, 1976, pp. 612 – 634.

10. Walter Benjamin, *Theoretical Questions*, Stanford, CA: Stanford University Press, 1996.

Control of the Object

One may argue that 'information wants to be free', but its dissemination cannot be. Capital demands control of the flow of resources to maximize productivity and maintain the ecosystem of capital. In a culture based on the production of signs, the key point is to control the flow of symbolic representation (cultural capital) to the proper consumers. As Barbara Kreuger wrote, "There's something about categorizing things, about putting things in their place. Maybe it's about a kind of comfort".¹¹ The necessity for control is the illusion of the market's laissez faire 'freedom',¹² but only under rules defined by oligarchic institutions of power. Seemingly 'free' services on the net are often 'branded' (as is the user) with an ad or promotional graphic of some sort. Branding propagates throughout the mediascape as a categorization and quantification of all symbolic relations for easily recognizable recoding into the cycle of production and consumption.

Manifesto Destiny

Terms such as the e-gold rush, which has been mentioned in numerous financial trades, hearkens back to the era of 18th century America and westward expansion under the banner of Manifest Destiny. Popular stories of settlers standing at the shores of the Mississippi and firing shots westward to determine the location of their plot of land parallel the excitement of cybersquatters hoping to get rich by attractive (and profitable) intellectual property. The formative years of global Internet culture signal the digital land rush for the proverbial 'Forty acres and a mule'. But in an environment where property is measured not in hectares but in conceptual acreage and domain names, ideologies are territories of contention. Ideologies such as libertarianism, capitalism, and almost every conceivable '-ism' litter the landscape, creating a form of 'Manifesto Destiny' as endless 'alpha revision' positions are generated by the corporate oligarchy. In an information-based society, memes are like blind shots into the wilderness by visionaries, hoping to take root in the fertile soil of the digital culture. In societies of distributed networks, capitalism is frequently on level ground with culture jamming and fringe media. In fact, the power inversion that allows the rush of capital into cyberspace also allows channels that subvert the production and consumption of symbolic use value. Some of these event-sites of culture are unintentional, but others are open critiques of the oligarchic power structures laid in place by corporate concerns and frequently take the form of obfuscations, appropriations, and identity wars.

The Temporality of Signs

The centrality of the image as object (such as the brand name) of exchange when combined with the necessity of the image's perceived legitimacy, or 'aura', introduces a temporal component in which the borderland of its legitimacy relates to the date of inception. These issues of temporal primacy and symbolic legitimacy are at the crux of controversies that involve international disputes over electronic identity, net.memory (in search engines), and brand placement. This should not be confused with power relations vis-a-vis multinationals attempting to enforce their branding over supposedly less powerful groups, acts more closely related to the colonizing forces of capital. A key component of many branding conflicts that raise questions in Internet law actually

11. Barbara Kreuger, *Remote Control*, Cambridge, MA: MIT Press, 1993, p. 2.

12. Frederick Jameson, *Postmodernism, or the Cultural Logic of Late Capitalism*, Chapel Hill: Duke University Press, 1992, p. 266.

comes from late entrants into the electronic environment that claim retroactive rights to electronic identities or domains. The disputes come mainly from the practice of 'cyber-squatting', or purchasing large numbers of domain names for the intention of profitable resale.

SLAPP Me, Baby...

However, legal disputes and other tactical engagements like SLAPP (Strategic Lawsuit Against Public Participation) suits are not limited to confrontations between business and the profiteer. Multinational corporations have pursued litigation against antecedent groups under the grounds that the existence of the other entity, although unambiguous, obfuscates their singular brand identity and harms profitability. Under the capitalist agenda, the market must be homogenized and exploited to its fullest extent without any ambiguity. It is curious to consider whether the electronic sphere is witnessing an effect similar to Hardin's *Tragedy of the Commons*¹³ in which the fate of capitalism is to exploit the available resources regardless of sustainability until the system collapses. The resultant crisis necessitates a profound rethinking of strategies.

Border Wars: Branding and Primacy

At the writing of this essay, a number of legal conflicts are questioning the ability of corporate interests to express their sovereignty over cultural capital through claiming the right to supersede previously extant institutions, large or small. These conflicts center on the ownership and unambiguity of key domain names and recognizable identities and the temporal primacy of identity in the net's memory, or its search engines. From a theoretical perspective, these issues make clear that not only can there be no ambiguity on the system of symbolic production, but capital desires no similarity in space (cyber or other) or time. Primacy of identity must be assured. More pragmatically, legal battles reveal the matrix of political, institutional, and legal powers that define the information society. Two examples of international litigation illuminating issues of branding and primacy are etoy and the International Society for the Arts, Sciences and Technology's journal, LEONARDO.

ETOY

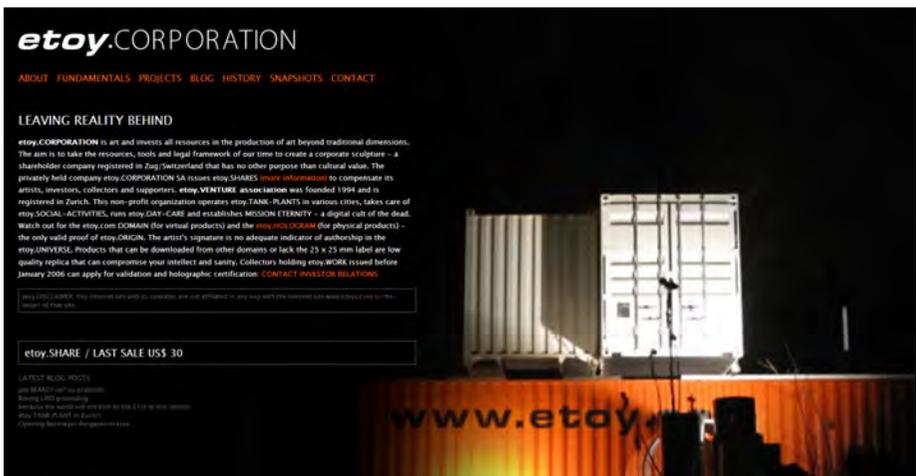
The anonymous agents of etoy¹⁴ explore the role of corporate power in Western society through an intellectual product based almost entirely around the corporate image. Bald-shaven and clad in orange jackets, the Teutonic quartet base themselves in a large orange container called 'The etoy.TANK', mirroring corporate culture by issuing shares and mock corporate facelessness through the interchangeability of their 'Agents'. Their cultural critique is illustrated in interviews where, during commercial breaks, etoy.AGENTS switch places and continue the conversation while the on-air personality remains completely unaware. The etoy.ANTICS supply fodder for discussion and controversy throughout Europe's e-culture, including high-profile technological arts festivals like Ars Electronica. Their tactical engagements fit with the information culture's narrative of economies of symbolic exchange and mimic inflated perceptions and expectations surrounding the stock markets.

13. Garrett Hardin, 'The Tragedy of the Commons', *Science*, vol. 162, December 1968, pp. 1243-1248.

14. Etoy, formerly <http://www.eto.com>, now www.toywar.com, (now offline).

The etoy.LAWSUIT

The battle between California-based toy reseller Etoys and etoy is well documented in the New York Times and *WIRED*,¹⁵ so a complete recount does not serve the purpose of this discussion. In 1999, the three year old multi-billion dollar Etoys.com corporation filed suit in California for the suspension of the etoy.com site, even though the etoy.CORPORATION (etoy frequently refers to aspects of their work in nomenclature borrowed from various programming syntaxes) predated the toy company by over three years and held similar claims for the etoy.WEBSITE. Etoys' claim centered on alleged complaints that potential customers were accidentally entering the etoy.com website and thus the European art group inadvertently jammed their brand recognition. The Christmas buying season was fast approaching, and potential brand dilution caused the Etoys legal department to consider the legal action. After it was refused a several hundred dollar offer to buy out the etoy.com domain name, Etoys obtained an injunction restraining the etoy.com name and freezing of the Austrian-based art corporation's domain name in the databases of Network Solutions, Inc., an *American*-based corporation. Etoy could not operate the etoy.com website or receive e-mail through that domain name, even though the injunction only stated the closure of the web address. So began the TOYWAR.



etoy.com website.

Toywar

The international technological art community came to the aid of their prominent colleagues within days, including the Electronic Disturbance Theatre, Rhizome, and @TMark. Numerous sites sprang up along the lines of etoysucks.com, and various electronic sit-ins were arranged, which caused a CNN-televised visit to Thing.net by the FBI to resolve concerns about EDT's FloodNet denial of service actions against Etoys. News traveled quickly via media events like the MoMA press conference sponsored by @TMark, assuring coverage throughout the world's media infrastructure. The etoy.TOYWAR had become a hot cultural topic, and Etoys was labeled 'bad guys'.

15. Jill Priluck, 'Etoy: "This Means War"' *WIRED* Online, 21 December 1999, <http://www.wired.com/news/business/0,1367,33189,00.html>.

After the shutdown of the etoy.com domain name, etoy set up toywar.com to continue their efforts without breaking strict legal sanctions. As a result, possibly in part from the populist actions and partially from the entry of toy giants such as Toys 'R Us and the passage of the Christmas season, Etoys' stock value dropped sharply. Etoys November 29 high of \$67 a share had fallen to a January 2000 low of \$19 per share.¹⁶ Shortly thereafter, Etoys dropped its lawsuit against etoy, and never re-established their rights to the domain name use of any email access. Etoy continued to capitalize upon the TOYWAR concept through toywar.com¹⁷ and secured exhibitions of installations based around the continuing legal conflict.

LEONARDO

LEONARDO is the journal (founded 1968 by Frank Malina) of the nonprofit International Society for the Arts, Sciences and Technology (ISAST) and its sister organization, Association Leonardo, which is a French non-profit organization dedicated to studying the interface between the arts and sciences. By entering the word 'Leonardo' into a search engine, one is likely to obtain listings for sites associated with the organization. However, in France, a multinational corporation named TransAsia Corporation registered a number of trademarks that incorporated the word Leonardo, and the dilution of the brand name by ISAST was felt a capital liability. TransAsia owns the brands Leonardo Finance, Leonardo Partners, Leonardo Experts and Leonardo Angels. Due to the fact that users accessing Internet search engines get the related ISAST web pages, TransAsia claims to have lost over one million dollars in revenue and filed a suit for that amount plus the removal of all ISAST/ LEONARDO-based references in all search engines.¹⁸ The suit resulted in the search and seizure of numerous documents from the home of Frank Malina, former editor of the journal, but did not result in restraining injunctions against the Leonardo/ISAST sites.

The question that arises from this suit is whether an interest can not only exercise brand domination over a relatively common name, but also whether one entity can exert temporal sovereignty over a piece of intellectual property. It would only be logical that TransAsia should also seek injunctions over the DaVinci estate, as it would only make sense that Leonardo DaVinci is a further infringement upon their trademark to be stricken from the net's memory. As media commentator Douglas Rushkoff said at the etoy press conference, "In 1999, commerce takes precedence, and an artist can be booted off line illegitimately, illogically, and illegally".¹⁹ If this progression is followed to its logical conclusion, then primacy of identity, both spatial and temporal, will result from economic might.

On May 29, 2001 a three-judge panel in Nanterre, France, issued a preliminary ruling against TransAsia stating that the two entities offered no competing services.²⁰ LEONARDO was ruled

16. RTMARK.COM, Etoy Timeline. <http://www.rtmk.com/etoyline.html>.

17. Etoy, TOYWAR, <http://www.toywar.com>.

18. Obtained from the Leonardo Journal Online website

19. Mark K Anderson, 'What's in a name? Plenty, when it's hot e-property' Boston Globe 30 January 2000, http://www.boston.com/dailyglobe2/030/focus/What_s_in_a_name_Plenty_when_it_s_hot_e_property+.shtml.

20. Announcement regarding Leonardo lawsuit at Leonardo On-Line, <http://mitpress.mit.edu/e-journals/Leonardo/isast/lawsuit.html>.

as not infringing on any TransAsia trade name and allowed to retain its identity. No compensation for either party was awarded, and although an appeal could have been filed within 30 days, no knowledge of such an appeal is known of.

The LEONARDO/TransAsia case is another clear SLAPP suit in which the defendant could prevail if it can afford a few tens of thousands of dollars for the privilege of retaining their identity. Although the prevailing opinion is that most defendants in e-identity lawsuits can win given time and resources, corporations know the inability of smaller entities to withstand a sum which might constitute a couple years' wages and some engage SLAPP suits in a predatory fashion.

Terrains of E-war

The similarities and differences in the etoy and LEONARDO cases reveal how capitalist agendas are inscribed in the digital domain. With etoy, an American company sued for identity rights against an Austrian concern and seemingly secured that intellectual property for the moment. Regardless of the fact that Etoys dropped its suit, NSI hesitated to release the domain until it received an additional court order. Conversely, entities related to Leonardo are largely US-based, although the Association LEONARDO is a non-profit in France. Prosecuting electronic identity can provide temporal primacy to the brand name, as the suit tried to erase the alternate Leonardo name from the Internet's cultural memory.

The dominance of American interests is therefore evident on the Internet, ironic when contrasted with the popular media image of the Internet as McLuhan's 'Global Village'. The underlying power relations begin to suggest a 'New World Order' of American technocratic control of intellectual and cultural capital in the electronic sphere. Actions exercised by Etoys and TransAsia illustrate the homogenizing effect of capital, and the reification of agendas of temporal legitimacy through the superseding and/or erasure of entities that disrupt the flow of capital or resources. And lastly, these events reveal the finiteness of the Internet's intellectual terrain, as controlling entities fight with increasing frequency for scarce symbolic and intellectual property. Issues of control that arise from the intersection between the economy of signs and capital herald a time when the promise of endless expanses of digital prairie are vanishing, and cyberspace begins to resemble a cyberspatial analogue of Gibsonian Sprawl. This development is reminiscent of Hardin's Tragedy of the Commons and is oddly fitting if translating the agendas of materialist culture to electronic space.

Tragedy of the E-Commons?

The colonizing effects of capitalism, not the transparency of media, lead us to question whether the Internet is experiencing a cyber-'Tragedy of the Commons'. In Hardin's essay,²¹ the reader is presented with an allegory of a shepherd and a flock of ten sheep on a plot of land that allows sustainable maintenance of the stock. However, another herder, upon seeing the prosperity of his neighbor, wishes to secure his own stock and adds one of his lambs to the pasture. The original flock of ten has now lessened its productivity due to the shortage of resources, and actions are taken to add more sheep to make up for losses introduced by the second herder's addition. The process continues, until the resources are destroyed and the end result is an entirely unsuitable environment for production of any kind.

21. Hardin.

Translating Hardin

Although Hardin's fable is imperfect, it aptly illustrates his contention that capitalism in a free market economy is by definition unsustainable and results in the complete exploitation of finite resources until crises occur. Can a principle that was originally posited for a system of material exchange be applicable to an environment of symbols in which intellectual content and symbolic identity are the resources of trade? One attribute of cyberspace is the illusion of its infinitude. The settlers of antebellum America saw the West as a vast resource for settlement and capitalization. Contemporary society sees its own Manifest Destiny in the Internet.

Obfuscation and Tactical Engagements

The Internet affords the widespread proliferation of economies of symbolic exchange that are less tethered to traditional power relations of politics, material wealth, and social status than to the media image (corporate, personal, social). The perceptions of legitimacy that the media image confers on identity and use value define the intellectual capital of the Internet, caught in the endless cycle of symbolic production and consumption. However, on the 'level playing field' of the Net, tactics of confusion and obfuscation of that identity by groups performing critical inquiry into corporate power disrupt the cycle of intellectual capital and make those oligarchic structures evident. The issues of corporate abuse and exploitation of informational practices are addressed by artists such as ®™ark and plagiarist.org, who make visible the terrain of E-culture and questions of the cyber-commons.

Sainsbury

A number of projects have used strategies of confusion as a method of critical inquiry, including Sainsbury, 7-11.org, gatt.org, and plagiarist. Each of these installations differs slightly in their mode of delivery, but still play with legal ambiguity, brand recognition regarding 'fair use', and parody in their critical strategy. The Sainsbury hoax²² was perpetrated by Irrational.org, a collective of artists that includes Heath Bunting and Rachel Baker, which played on the image of that company's customer 'Reward' card system. The commercial site itself was not hacked, but mirrored with slight modifications to reflect logos of the artists. However, it maintained the 'feel' of the online catalog. Users would find the site through search engines and promptly apply for the card without any inkling of the hoax. In response, Sainsbury filed a Cease and Desist order. The amusing notice is rife with awkward grammatical structures, and alludes to forms of intellectual content abuse itself. The company had difficulty pursuing litigation against the artists, whose identities were often in a state of flux and obfuscation.

7-11

Another example of culture jamming, Vuk Cosik's 7-11.org²³ mimicked the popular American convenience store's website as a framework for a 'convenient' place for artists to exchange information. 7-11.org was intended as an agora for artists to communicate through, much as 7-11s in the States are frequently neighborhood focal points of social interaction. The site included

22. Heath Bunting, Sainsbury Hack Archive, <http://www.irrational.org/tm/archived/sainsbury/>. <http://artnetweb.com/iola/journal/history/1998/salzburg/index.html>.

23. Vuk Cosik, <http://www.7-11.org>. Original page not online. Also Robbin Neal Murphy, 'Art and Legal Ambiguity of the Internet' <http://artnetweb.com/iola/journal/history/1998/salzburg/index.html>.

thinly modified attributes from its progenitor, including a link to address customer complaints to a customer service representative, Keiko Suzuki (herself an appropriation). In like fashion, the Southland Corporation failed to see the irony in Cosic's parody and cried foul for diluting the 7-11 brand. Southland Corporation's sensitivity to derivative parody perfectly signifies the necessity of homogeneity in the production of signs, and likewise signals the use value of the image in the economy of bits.

gatt.org

Similarly, gatt.org²⁴ – the first project by the activist group, The Yes Men, is a play on the acronym of The General Agreement on Tariffs and Trade. It was designed as a lens for online dissent towards the World Trade Organization summit in 1999. Gatt.org was sponsored by the anonymous corporate subversion group ®™ark,²⁵ and the site mirrored the look and feel of the wto.org site²⁶ but reflected sharply satirical 'alternative' views. In response, WTO Director General Mike Moore protested the mock site and its tactics of confusion. The gatt.org staff rallied back that it was, in fact, the real site, establishing The Yes Men's tactics of 'identity correction'. Gatt.org accused the wto.org site of being guilty for obfuscating the real issues of corporate abuse, as thousands of documents at the WTO available to corporate interests alone. gatt.org declared that this informational opacity denied freedom of information to the public. Due to the anonymous nature of the website's architects and riots confronting the Seattle summit, little or no threat of legal action was reported in the popular media. Gatt.org would continue to be the primary operating base for The Yes Men well after the Seattle global summit, and no injunctions were ever filed.



gatt.org website.

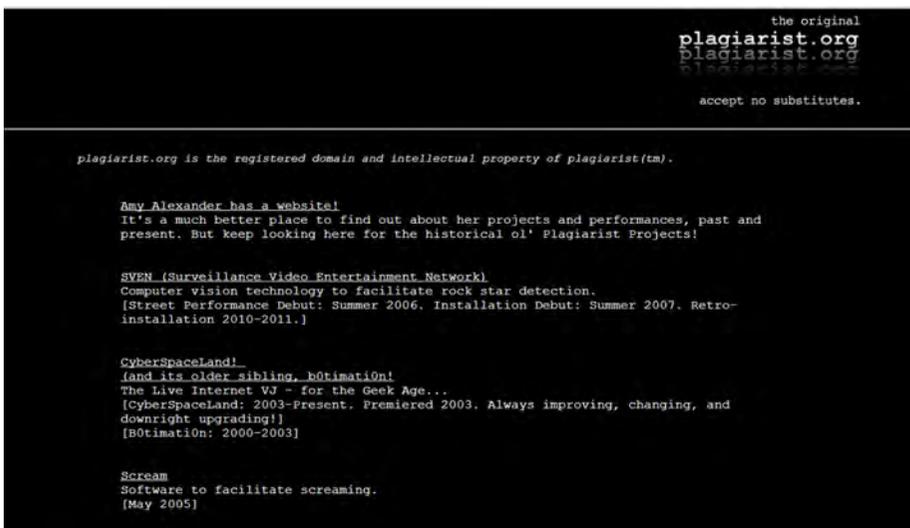
24. The Yes Men. Gatt.org WTO, <http://www.gatt.org>.

25. ®™ark, <http://www.rtmark.com>.

26. The Yes Men, <http://www.wto.org>.

Plagiarist.org

Sainsbury, 7-11.org, and gatt.org disrupt the transparent culture of the symbolic economy of signs and identity by disturbing the smooth cycle of production and delivery of intellectual product in the capitalist ecosystem. However, an interesting appropriation of corporate identity that made no pretense of masquerading as a mirror of an existing corporate site was that of plagiarist.org,²⁷ hosted by electronic artist Amy Alexander. In Plagiarist's ACQUISITIONS installation, the site attempted to take a tongue-in-cheek investigation into the ubiquity of corporate takeovers by appending the prefixes of over twenty-seven corporate names to the domain of plagiarist, for instance 'dupont.plagiarist.org'. This work differed in its lack of pretense, clearly announcing its intention as an aesthetically based spoof on pages of the site, but the homogenous milieu of corporate identity was shattered. Subsequently, legal agents of DuPont Corporation contacted Cal Arts (Alexander's institution) and faxed a complaint of over twenty-two pages that constituted the threat of a SLAPP suit. DuPont failed to make a formal complaint but did include unrelated material from another website where a 'person described as a 'plagiarist''²⁸ was criticized for the production of anti-Semitic death threats. Cal Arts requested the proper documentation for possible action, to which the DuPont lawyers responded that "they would get back with them". This action by 'big capital' again clearly underscores the unacceptability for any form of ambiguity in representation within the ecology of signs.



Plagiarist.org website.

Appropriations and Attacks

Another mode of aesthetic inquiry into the control of information or intellectual property (another word couched in terms of materialism) is that of appropriation. Although popular in the 80s and early 90s, this form of tactical engagement still actively challenges the role of materialist territo-

27. Amy Alexander, Plagiarist, <http://plagiarist.org>.

28. Amy Alexander, Plagiarist <http://plagiarist.org/acquisitions.html>.

riality and intellectual content. Daniel Garcia Andujar's Video Collection,²⁹ based in his *Irrational.org: Technologies to the People*® initiative, is a critique on the increasingly prevalent database-like archives and opaque seas of 'help' information. Reactions to the piece may have been more interesting than the piece itself, which varied from queries for technical help to livid outrage at Andujar's audacity to create the database at all. Perhaps the latter response came from an economic perspective, as Andujar was so bold as to break the material link between systems of exchange (material) and systems for exchange (information).

Deconstructing Beck

Deconstructing Beck,³⁰ although not a net.art piece, brings into play issues of encoding and distribution techniques that are currently controversial in net culture. An ®TMark-sponsored work, *Deconstructing Beck* challenged the practices of artists like Nine Inch Nails and Beck who have been suspected of illegally sampling other artists in their own compositions. The result was an Illegal Arts CD of 'songs' by various artists whose music was comprised ENTIRELY of samples from Beck, which understandably infuriated the legal department at Geffen Records. This inversion of artistic practice brought into play three key issues: it questioned the role of artists' rights to receive royalties and to be subsumed by corporate influence; it asked whether artists' rights are in play at all in the realm of consumer production, and it challenged whether intellectual capital can be completely controlled in mass market culture. In light of MP3 sound file recording programs and concerns of the MPAA over the DeCC Linux-based DVD de-encrypting software,³¹ the transmission channels of intellectual capital are likely to become increasingly porous, despite additional layers of encryption technology.

Manifest E-Destiny II - Limits and Exceptions

Similar to the seemingly boundless nature of the Old West, the Net's irony is its finitude. This limitation stems both from the limitations of the possible number of Internet Protocol (IP) addresses available, but also from sources related to taxonomies of desire as well. The most limiting parameter of the informational terrain comes from the fact that there are only so many easily recognizable domain names defining the battleground of the cybernetic sheep for the best informational fodder. If one can find similitude in the words of Frank Zappa, reason states that the cyberspatial equivalent to the vast unpopulated expanses of Montana is www.zirconiumencrustedtweezers.com (an understandably undesirable identity). It is evident that the actions of artists in our study make visible trajectories of cybernetic culture as it expands toward the Internet's Malthusian limits of intellectual property. This is not to say that, as in previous days, emerging infrastructures may (or may not) be opened to let the public might access its predecessor. Such an action could alleviate some of the technical limitations intrinsic to the present system, but the metaphorical creation of a new continent does not address the questions of the sustainability of information density on the Internet.

29. Daniel Andujar, Technologies to the People Video Archive <http://www.irational.org/video/>.

30. ®TMark/Illegal Arts, Deconstructing Beck, <http://www.rtmk.com/ppdb.html>.

31. There are many sources that refer to the loss of the hackers to the Motion Picture Assoc. of America. A good article is: Lynn Burke, 'DVD Case: It's a Linux Thing', *WIRED* Online, 28 January 2000 <http://www.wired.com/news/politics/0,1283,33925,00.html>.

At the turn of the millennium, a plethora of additional top-level domains, suffixes following the 'dot', as in dot.com, dot.net, dot.org, and the like have opened up with tens of different suffixes in play. This does not replace the auratic primacy of the first three domain names, though. Regardless of the suffix appended to a domain name, browsers typically search on these three TLDs, and, while opening up territory for new Internet-based real estate, leave the others as poor cousins of the first settlers of the digital frontier. The recognition of a dot.com, even though the cultural connotations of this distinction have been diluted somewhat by the Internet stock crash of 2000, is still strong in the private sector. Until more widespread usage of new TLD's becomes more common, the old domains, and especially the dot.coms, will be the valued sites of online identity property and impetus for more border wars between cultural enclaves and the private sector.

Conflicts arising from the Internet's cultural colonization reflect power discourses of dominant hegemonic and oligarchic forces that repeat throughout history. However, the mode in which the politics of control are unfolding in cyberspace, especially related to intellectual content, reveal the paradigm shift from the atom to the bit (tangible to intangible) as foretold by Negroponte.³² Furthermore, the current exercise of considerable influence by the corporate sector exposes the framework of power that strives to dictate information society and possibly control expression through quantification and commodification. Traditional materialist logic assumes like Hardin that present trends of exploitation may continue until an ethical or economic crisis mandates legislating moral standards like liberty or freedom of expression.

Yet attempts to simply map previous methodologies successful under materialist mindsets misrepresent the fundamental paradigmatic shifts evinced by the rise to prominence of the Internet. Changes in the modes of communication, symbolic exchange, and expression challenge global culture to create new mindsets running contrary to previous cultural forms of human intercourse. The power discourses made visible by artists questioning intellectual control by the corporate sector reveal a bricolage of reinscribed cultural borders intermixed with glimmers of different, if not new, models for human interaction. It could be logical to assume that the current trend of reasserting the cycle of capitalist consumer culture into e-space will continue. In contrast, a critical dialogue must be shaped regarding the continued formation of the global electronic culture through tactical inquiries such as those employed by plagiarist, etoy, irrational.org, and ®™mark. It is through such topical engagement that we gain insight into the social and power relations of the developing electronic world. Also, as part of a larger dialogue, aesthetic interventions could hopefully influence the shape of our cyberspatial milieu. But then, the current level of comfort with the First World techno-economic expansion threatens to inscribe the apathy inherent in global shopping mall culture onto the electronic realm. If so, I should inquire into printing up a few thousand Lichty t-shirts and key chains or send some digital images to Chinese ateliers and order some oil paintings. Wait – I've already done that.

See you at the mall. I'll be at the museum store.

32. Negroponte.

AN ALPHA REVISIONIST MANIFESTO

In the technological sector, having a product 'in Alpha' refers to a product that is in development, frequently being little more than a fully developed idea in the process of implementation. The 'Beta' stage follows, the final consumer testing trial that precedes release of a product (software, hardware, etc.) to the public. This adheres to an industrial tradition that includes such new world cultural icons as Detroit's concept cars, but a promise of progress is no longer enough for technological society. We are now in a period of the Alpha Revision.

In previous times, such as the 1950s, development was closely guarded with peeks of, or brief glimpses at objects-in-progress, only to climax in the glorious debut of the newest Philco television, Chevrolet automobile, or motion picture. In the past, the industrial production culture guarded its developing projects closely. The need for primacy in the promotion of ideas and products in the increasingly accelerated culture of the 80s and 90s technological markets became ever more pronounced and required announcements to be made while concepts were in the 'Beta' stage. The marketing of a product or concept increasingly moved back in the development arc, and in that period the prevalent timeframe was that of the final testing phases. In contrast to this, the current technological culture is one that feeds on hype and diminished expectations of the real.

History was once a prime driver of society. Philosophical and artistic movements have often looked to the past to revitalize the present and strategize the future. McLuhan mused that artists live in the present, making them seem visionary while others looked back.¹ In the McLuhanist shift, the present becomes the focus. However at the turn of the second millennium the focus increasingly turns to the future. History is hopelessly ephemeral in digital culture, the present is a bore, and it takes far too long for projects to get out of beta. The acceleration of culture demands the consumption of ideas at their half-baked peak of freshness instead of waiting two years from, say, Microsoft's announcement of the X-Box 1440 or Sony's PS6 for delivery of the physical object. So to insure primacy of the idea in the larger community, and to maximize mindshare for that idea, the concept *itself* must be released as soon as possible.

This is reinforced by the inability of actual objects and events to satisfy our expectations. The release of the Playstation II in the US met with 50 percent of delivered systems from projected numbers due to tantalum shortages. Even though it was the 'latest technology', the machine had a scant twenty-five games at time of release.² When the most current computer system is brought to market, the chip manufacturers frequently have a version a little faster that is not quite

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1. Marshall McLuhan, *Understanding Me: Lectures and Interviews*, Cambridge, MA: MIT Press, 2005, p.198.
 2. Bryan Bergeron, Jeffrey Blander, *Business Expectations: Are You Using Technology to its Fullest?* New York: Wiley & Sons, 2002, p.60.

ready for release. But in the case of any new microprocessor and operating system, the new chip or OS falls short of expectations, reinforcing the discontinuity between the hype and any hope of its consummation.

Even being an artistic visionary is not enough; one has to be increasingly speculative in order to secure primacy, the Bush Administration and the Second Gulf War taught us that. McLuhan's present fails our expectations of the future. At the prestigious 2000 Ars Electronica technological arts festival, the top prize did not go to any Internet art practitioner per se, but to science fiction writer Neal Stephenson.³ Fin de millennium culture is not even satisfied with the next big thing; its interest is turned to the next blip on the radar two to ten years out, or generates its own speculations. The new object of desire becomes the next upgrade for failed technological and political expectations; the most up-to-date applied fictive piece that may or may not come to fruition is the one worthy of attention, the next cultural vaporware rules.

In Lunenfeld's essay, *Demo or Die*, he describes a culture at MIT of researchers demonstrating their ideas so that they can perpetuate their acceptance, funding, etc. through a ritualistic series of PowerPoint lectures and prototype displays.⁴ This culture has bled into the art world, as artists 'demo' their works with the same tools that corporate executives employ to generate excitement about their 'Next Big Idea'. This is expanded in mass culture in Bravo Television's reality show, 'Work in Progress' that places aspiring artists in a metaphorical mud pit against their peers, to be judged to be 'the next art star' by dispassionate New York art critics. In this way, the capitalistic production culture of symbols in the dot-com world has inscribed itself on the artist, New Media or not.

The artist has returned to the creation of objects with the rise of DIY (Do It Yourself) culture and home fabrication machines, although contemporary projects may be largely symbolic in nature. With the lack of physicality inherent in digital art, and net.art in particular, the art symbol is objectified in the form of the installation. However, as with the execution of the physical object, the execution of the online installation falls short of expectations, as is evident in the Ars exhibition's refusal to give the top award to any artist who actually created one. Due to numerous factors such as systemic incompatibilities, quality of the machine used to see the work and so on, the qualitative experience of the installation is almost always a disappointment compared to the spark of imagination that an Alpha Revision announcement conjures, all fresh and half-baked. However, the Alpha Revision announcement territorializes intellectual property in an exciting fashion for its fetish value, and this is its importance.

It might be said that this manifesto is merely another extension of the conceptualist legacy, and this is not an incorrect assumption. However, the cultural shift represented by digital art is that the obliterated physical referent is reborn in the symbolic, that the embodiment of the subject has moved from the cyborg to a corpus of information. In so doing, net.art pieces, even in the form of

3. Hannes Leopoldseder and Christine Schöpf, *Cyberarts 2000: International Compendium Prix Ars Electronica*, Wein/New York: Springer, 2000, p.14.

4. Peter Lunenfeld, 'Demo or Die', *Snap to Grid: A User's Guide to Digital Arts, Media, and Cultures*, MIT Press, 2000, p. 13.

Brechtian descriptions of happenings, are reiterated as symbolic objects through these shifts in discourse and representation.

What are left as satisfying experiences in the digital are merely allegories to, and functional prototypes of, works-in-progress that may or may not ever be created, depending on interest and funding. The Alpha Revision art project (typically a White Paper that describes the concept and specifications of the project) signifies that which is not fully conceptualized or executed, even symbolically, except for the germ of an idea. If there are the 50 or so recorded concepts for such symbolic works (this treatise refers to digital art), these are in fact works in themselves, and the art which could come from these concepts is distinctly different and potentially less satisfying than the images invoked by the concepts. As with the Alpha Revision announcement, the desire conjured by an upcoming project is far more powerful than what the release of the work/product itself will engender, and is probably not worth doing in itself. Here, the conceptual aesthetic of the information world is linked to the creative potential imbued within the description of an intervention or work, and not necessarily the work itself.

Therefore, the option now exists to have the work one imagines creating propagate through the rhizomatic web of the electronic noosphere, for description is enough on its own. Perhaps, due to a sort of refusal to let go of past forms of expression, the artist will likely continue to create occasional works, but far more will still be in 'Alpha' because the likelihood of having the power, time or money to execute them all is very, very slim.

The past is no longer good enough,
The present is a disappointment,
The future takes too long to arrive,
Culture is now in Alpha Revision.

THE PARALYTIC MOVE: DISABILITY AND NEW MEDIA

In the technological arts, there have been initiatives to foster greater diversity in the larger cultural discussion.¹ Although projects such as the ISEA Virtual Africa and VSA's Renaissance projects have created significant steps towards including a wider base of colleagues in New Media art practice, I find that many diversity programs on the institutional level tend to focus largely on gender, sexual orientation, nationality and race and not issues of ability. Although they are not altogether absent, concerns related to disability seem to have less prevalence. Since television advertisements allude to the Internet and other online communities as inclusive spaces, why is there not a greater representation of disabled artists online as such? Also, what representational practices would the disabled person use to construct their sense of identity as part of this demographic? How can we engage disability and technologically-based art as starting points for inquiry?

Paul Virilio foregrounds certain metaphors regarding disability and technology, as well as possible issues emergent at the crossroads of art, in his essay, *The Third Interval*.² He writes of the convergence of cultural similarities between the technologically accelerated person and the physically disabled person who uses technology. According to Virilio, as we become subject to longer spans of computer access, immobilizing the body, with physical mobility becoming irrelevant. As the disabled person obtains access to networked communications systems, their mode of functioning accelerates, becoming similar to the increasingly immobilized networked non-disabled. Has disability become transparent (or the physically able becoming paralytic) within society as larger numbers of people gain access to Internet technologies?

In order to consider this question, we need to address access and the disabled. Economic pressures frequently prevent the disabled individual from gaining access to the Internet. Although in some Western countries the disabled may be eligible for some assistance in obtaining computer equipment, access charges can be problematic to those whose disposable incomes are frequently under ten to twenty percent of their monthly amount.³ This is compounded further by the fact that many creative computer programs and peripherals are not covered under governmental disability programs and are simply beyond the economic reach of the disabled. Perhaps one solution is the use of numerous freeware web authoring and media creation packages available on the Internet for net.art and digital imaging. However, these tools also present the challenge of presupposing a certain level of technical facility, let alone certain sensoria and physical facility.

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1. ISEA Virtual Africa Project, <http://www.isea.qc.ca/welcome.html>.
 2. Paul Virilio, 'The Third Interval', *ReThinking Technology*, ed. Verena A. Conley, Minneapolis: University of Minnesota Press, 1993.
 3. Conversation with M. Cohn, CEO of Promote Awareness, a disabilities advocacy foundation, <http://www.promoteawareness.com>.

Assuming that physical obstacles are overcome to one extent or another, what are the representational issues of the disabled New Media artist on the conceptual level? Consider works based on social stereotypes, such as Gomez-Pena and Silfuentes' *Temple of Confessions* site.⁴ In the Temple, visitors confess their cultural 'sins' relating to their prejudices and preconceptions of cultural otherness. Confessions addresses Latino and Chicano tropes, but this author has yet to see interactive sites that confront matters of disabled identity.

The traditional perception of the disabled person is of those with impairments in mobility, as depicted by the international symbol for the handicapped: the person in the wheelchair. Although this symbol creates an easily identifiable metaphor for this demographic, it represents only a fraction of the entire population. Such a heterogeneous group can be difficult to define under any classification. For example, many disabled individuals and artists have very different interfacing needs; consider amputees, the perceptually disabled (blindness, deafness), as well as those with cognitive impairments or disorders. Not only can these limitations impair the manipulation of tools required to create New Media art, they also might alter learning curves for gaining expertise over software. However, an inclusive attitude in the arts does not imply similar amounts of disciplinary virtuosity in all people. A discussion of the disabled in New Media arts must limit itself to those who have a calling to the arts and the requisite creative desire, and then address interfacing issues for this group.

A majority of responses heard from disabled artists themselves relate to the social stigmas they are ascribed, such as associating them with the state workhouse craft shop. A professional colleague possessing a syndrome with symptoms similar to those of cerebral palsy was asked if he would speak English in conversation. Recalling Virilio's claim, the disabled artist often attempts to pass in online culture. This also confirms Goffman's work on virtual identity and stigma, which claims that the individual, when given the choice between a stigmatized identity and a virtual one that passes in societal interactions, frequently chooses to mainstream themselves.⁵ The act of passing is problematic for advocacy of handicapped demographics; the disabled individual diminishes the visibility of their social group, often re-marginalizing their cultural issues.

As a former cultural director of a foundation that seeks to advocate the rights of the disabled and to alter mainstream perceptions toward the disabled individual, I find that locating disability within the emerging digital art world a great challenge. There are some excellent groups working with artists and the disabled to explore technological arts, such as Lighthouse Brighton⁶ and Renga-Sense of Touch,⁷ in which sighted and unsighted painters engage in visual-tactile dialogue. In that conversation, there is a necessity for shared perception, and the simple introduction of tactility to the creation of 2D works changed the way each created profoundly as they iterated between them. This simple act of remapping touch into the creation of flat works creates a (syn)tactical shift in communication, inferring that making or designing for disability opens up dialogue rather than constricting it.

4. Pena and Silfuentes, *Temple of Confessions*, <http://www.powerhousebooks.com/temple/temple.html>.

5. Erving Goffman, *Stigma. Notes on the Management of Spoiled Identity*, Harmondsworth, Middlesex: Penguin, 1963, p. 10.

6. Lighthouse Brighton, <http://www.lighthouse.org.uk/>.

7. Renga Project, *Sense of Touch*, Japanese collaborative, 1998, <http://www.renga.com>.

Regardless of this, disabled culture is by and large left unaddressed in many art genres, and in digital art in particular. These issues could be engaged through installation works, programs for access and curated exhibits centered around the technologically-(re)enabled artist, such as *Renascence 07* by Very Special Arts. This exhibition was one held at the Kennedy Center for the Arts in Washington, DC consisting of artists using New Media. The alterity of the artists varied in terms of sensorium or mobility, such as Hans Bernhard/*UBERMORGEN*'s documentation of hospitalization due to a bipolar event, Leon Lim's self-explanatory *Silent Story*, to Mary Behr's *MOVE!*, a responsive paper sculpture critiquing the invasiveness of airport security upon the disabled body. These works are exceptional and brave in that these artists articulate the disabled identity and its stigmas, representing a demographic which is at best unheard, at worst silenced through stigma and lack of support. That is, if the obstacles of support and access are overcome, there are other issues of promoting the work of the disabled artist.

Obstacles for promoting the disabled artist stem from socioeconomics, access, visibility, social stigma and educational sources. Many artists of this group who do work in the digital arts distance themselves, eliding the issues of their own disability, often through the adoption of Sherry Turkle's notion of virtual personae. It is surprising that even though there are a number of artists online who use technological media, few feel that such personal experiences are germane to their work. Or conversely, if the disabled artist does not seek to pass, they are typecast as surely as any actor or performing artist, and this is the challenge of non-silent disability. Considering the role of the disabled in furthering a more diverse environment for technological arts, it is safe to say there is a need for larger dialogues. And it is my hope that this brief discussion will pose questions and open discussion about the role that the disabled artist plays in the larger cultural milieu.

DIGITAL ANARCHY, SOCIAL MEDIA AND WIKILEAKS: OR, SKYNET DOESN'T LOOK ANYTHING LIKE WE THOUGHT IT DID

Atomic Power versus Infostate

In the beginning, the Internet was conceived by the U.S. military (DARPA) as a decentralized network for sharing and redundantly storing information in multiple locations in case of nuclear attack.¹ By design, one node could be destroyed, and the network would continue to function despite the loss. To discuss virtual versus conventional power and their constituent streams of capital, I use the terms 'atomic' versus 'info-' power and capital. The use of the term 'atomic' is a double entendre, as the ultimate extension of both the material and conventional loci of power exerted by the traditional nation-state. This taxonomy is a personal metaphor for material potential and its ultimate extension (nuclear weapons). But the infrastructure of atomic power has also created distributed power through information exchange on the Internet by building its infrastructure, mutating conventional power into concurrent, distributed, heterogeneous power fields which I call the Infostate and that include the World Wide Web, email, social media, and all functions of networked communications. Although aspects of conventional power have restructured themselves in terms of the informational milieu, the latter is not necessarily congruent with the former, since the Internet spans most physical and material nation-states and resides in no single one. The Internet therefore redefines power boundaries along many different vectors, and I do not say 'lines', as that would infer non-existent clear boundaries, than the atomic/material.

The Net is an emergent social system as typified in popular science fiction franchises like *The Matrix* and *Terminator*, where technology finds its own agenda, one that is frequently hostile to its progenitors. The Internet, as evidenced through the influence of WikiLeaks and the African uprisings of 2011, shows evidence of conduits of power separate from conventional/atomic means. Infopower becomes autonomous from its material, atomic roots. Instead of creating the science-fiction trope of robots, the Infosphere asserts itself upon the atomic. In *The Porcelain Workshop*, Antonio Negri states that one of the three major shifts into the postmodern is the primacy of informatics and cognitive capital central to contemporary postmodernism.² The shift from material capital to the cognitive redirects power discourse to data flows and immaterial Infocapital that the material sphere then becomes dependent upon. As such, society refocuses on this cogno-capital flow, revealing alternate foundations of power in the new millennium. Negri's conception of cognitive Infocapital as locus of power situates Infopower as an asymmetrical challenge to material capital. Its modes of production and circulation are so different (especially cognitive capital's amorphous nature) that it creates social effects more fluidly than material culture.

1. J. Abbate, *Inventing the Internet*. Cambridge, MA: MIT Press, 1999.

2. Antonio Negri, *The Porcelain Workshop*, Cambridge: Semiotexte, 2008, p. 20.

Despite the Internet's decentralized nature, there are physical zones targeted by nation-states' attempts to territorialize, filter, and limit the flow of cognitive capital through 'firewalling' or Domain Name Server (DNS) limitations, as evident in Turkey, China, and especially during Egypt's Internet shutdown in the late January 2011 revolution.³ Also, according to Deleuze⁴ and Agamben,⁵ power separates the subject from potentiality and thereby mitigates dissent. In the same way the nation-state tries to exert power by separating the means of support from the figurehead; for instance, WikiLeaks' founder Julian Assange. Cognitive capital is hit-and-hit-and-hit-and/or run culture, swarming like digital bees. This is analogous to the rise of technology and the creation of the virus in *The Matrix and The Matrix Reloaded*, as the data overrides and supersedes embodied conventional power. Neo (the prior conventional paradigm) tries to destroy Agent Smith (the informatic), only to viralize him, creating a swarm of Smiths with no apparent 'head', symbolizing hierarchy vs. the dust cloud.

In the same way, efforts to enforce firewalls remain porous and slippery, combated by technologies like proxy servers that reveal the Infostate's transborder nature. The de-territorialization of the Infostate creates an asymmetrical power relation that, due to its amorphous nature, is highly problematic for conventional nation-states to engage, let alone control. Conventional power requires a hierarchical control structure; it needs centralized faces, such as Saddam Hussein or Osama bin Laden, upon which to focus fear or hatred. Infopower resides in digital cloud-culture and is mercuric and morphogenic. When confronted by conventional power's centralized, hierarchical nature, it merely splits, morphs, or replicates, sidestepping command-and control-structures like a dust cloud. This relationship signals a Krokerian Panic Bimodernism⁶ that combines impossibilities in which one's ability to relate to the other implodes.

Namely, with the rise of Wikipedia, WikiLeaks, and other social media, we see how First World power has been bitten by its own child. By bleeding information from the hierarchical and material to the distributed, rhizomatic digital networks (i.e., the U.S. diplomatic cable leaks), WikiLeaks, Anonymous, and resistant sites within the distributed Infostate have mounted an asymmetrical insurgency against conventional power. The backlash of conventional symbiotic nation-state and corporate power against WikiLeaks, for instance, awakened the amorphous hacker youth subculture of 'Anonymous', best known for its mass protests against the Church of Scientology.⁷ The explosion of Infopower and populist sentiment is also seen in Tunisia and Egypt (which have median ages in the mid-20s), where Twitter and Facebook, paired with cell phones, caused an amorphous infostructure for dissent to flourish in the transnational milieu of the net. The children

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3. Spencer Ackerman, 'Egypt's Internet Shutdown Can't Stop Mass Protests'. *Wired*, 28 January 2011, <http://www.wired.com/dangerroom/2011/01/egypts-internet-shutdown-cant-stop-mass-protests/>.
 4. Gilles Deleuze and Felix Guattari, *A Thousand Plateaus: Capitalism and Schizophrenia*. Trans. and Foreword by Brian Massumi. Minneapolis: University of Minnesota Press, 1987.
 5. Giorgio Agamben, *Nudities* Giorgio Translated by David Kishik and Stefan Pedatella. Stanford University Press, 2010, p 43.
 6. Arthur Kroker, *The Possessed Individual: Technology and New French Theory*, New York City: Palgrave Macmillan, 1991, p 12 and 24.
 7. BBC Staff, 'Masked demonstrators gathered outside London's Church of Scientology in protest against the organisation', *BBC Online*, 11 February 2008 http://news.bbc.co.uk/2/hi/uk_news/england/london/7237862.stm.

of the Internet and the military-industrial complex (conventional power), as well as those of the digitally savvy Third World, (not the robots) turn upon their 'parents' in an Oedipal twist, eliciting the expected reflexive response. We will examine these emerging subcultures in more detail, starting with Wikipedia and the structure of the wiki as a form of community organizing characteristic of sites' Infostate resistance at work today.

Wikipedia and Wikiculture

The rise of Wikipedia challenges notions of conventional legitimacy, cultural production, and institutional power. Community-driven online media like wikis create frameworks for anarchic models of media production and grassroots community, social protocols, and delivery methods based on conceptual frames of the site's mission. The scope of the Burning Man-like potential for cultural location of wiki discourse ranges widely from Wikipedia to Encyclopedia Dramatica. As wiki-based media expands, what can we learn from the relocation of power structures from the institutional to the communal?

Looked at from a radical analysis, the wiki might be considered a socially emergent site for online, self-organizing, anarchic, communal organization, based only on the mission of the site and the goals of its members. Wiki communities set their bylaws, creating what Guattari might call 'molecular', or localized hegemonies. But we see that user-generated sites, in themselves media ecologies, are only anarchic if used in terms of their initialized forms; that is, flat, rhizomatic, and amorphous in organization. The social hierarchy becomes internally and externally unequal as it institutionalizes. These entanglements could include the incorporation of nonprofit foundations, funded patronage, or merely social legitimization on the Internet or even memetic and viral recognition.

The shape of community-based media sites take time to coalesce into formal structures as groups establish their own hegemonic codes of conduct. User-generated collective communities and the normalization of their content can be seen in engineering terms similar to that of cybernetic system utilizing feedback that oscillates wildly in the beginning and comes to a relative state of equilibrium as the social structure normalizes. Also, as sites become better established, the protocological norms of the community, implicit or explicit, are established, giving rise to enforcers of those norms, the set of superusers (admins). The site, the community, and the content oscillates into being and iterates into stability, as can be seen on the CPOV list,⁸ which claims that stabilization of a Wikipedia entry possesses an iterative process of about 20 updates and edits until it reaches a stable form.

Once a user-generated community has established a set of dominant social contracts, a method of content distillation, and focus around its subject or mission, the social media site has gone as far from the generalized, amorphous Wiki model as the fetus from the initial zygote. This differentiation reminds one of what Felix Guattari calls 'Molecular Discourses', in which a specific set of rules, taxonomies, or other rhetorical apparatuses are created for a certain user-generated site's content, mission, mode of production, or set of internal governance. This is the core of the asser-

8. Please see CPOV listserve, http://listcultures.org/mailman/listinfo/cpov_listcultures.org.

tion that Wikipedia is merely one situation located within an emerging cultural milieu of numbers of structures of socially-emergent media, examples of which we will look at next in the context of sociopolitical events and the rise of the Infostate.

The Fall of Tunisia and the Rise of EgyptBook

Infopower creates a lens for existing unrest. On Friday, 14 January 2011, President Zine al-Abidine Ben Ali left Tunisia after more than two decades in office due to massive uprisings following the self-immolation of college student Mohamed Al Bouazzizi, whose vending cart was seized by authorities.⁹ The Tunisian government was unstable from rising unemployment and lack of opportunity, and social networks such as Facebook served as conduits for dissent. Tunisians with access to the Internet saw the (at least perceived) disparity in opportunity between their country and the world, expressed in informal social media for some period of time. In addition, information from WikiLeaks stated that the United States called Tunisia 'Sclerotic', and described Ben Ali's family's role in nearly all parts of the economy, causing further dissent through online social media.¹⁰

These events represents three points of destabilization, one physical, two informatic: first, Al Bouazzizi's immolation became the spark setting off the powder keg of unrest and aggravation; next, this act was exacerbated by leaked cables; and finally, Infopower exerted itself in the consolidation of communication by the networks, creating channels and batteries for cognitive power. Therefore, though not the singular cause for the fall of a nation-state, Infopower produced the impulse and means of organization of a delicate political situation pushed beyond a 'Tipping Point',¹¹ as well as channels for a concentration of cognitive capital necessary to organize revolution. Atomic power predictably reacted to the informatic when Ben Ali instructed the police (or 'militias' according to the Western press) to turn against the revolutionaries and general populace after his escape.

Following Tunisia's fall, in late January 2011, unrest and anarchy broke out in Egypt, with masses calling for the ouster of President Mubarak. Pundits on a January 30 CNN broadcast stated that the Tunisian revolution 'awakened the Arabic imagination' to the possibility of revolution. Repeated cell phone use of Twitter and Facebook could also be considered an epistemic arc of the political effects began by WikiLeaks and social media's channeling of dissenting cognitive capital.

A similar, but more peaceful uprising took place in Egypt, and Syria broke out into a bloody civil war, threatening conflict with neighboring Turkey, all with social media taking some role in the onset of the events. Even in the First World atomic power's concerns about the leverage of Infopower against it is such that in August 2011, San Francisco Bay Area Rapid Transit shut down cell

9. David Kirkpatrick, 'Tunisia Leader Flees and Prime Minister Claims Power', *New York Times* Online, 14 January 2011, http://www.nytimes.com/2011/01/15/world/africa/15tunis.html?_r=1.

10. Maha Azzam, 'How WikiLeaks helped fuel Tunisian revolution', http://articles.cnn.com/2011-01-18/opinion/tunisia.wikileaks_1_tunisians-wikileaks-regime?_s=PM:OPINION *CNN Online* January 2011.

11. Malcolm Gladwell, *The Tipping Point: How Little Things Can Make A Big Difference*, New York City: Back Bay Books, 2002.

coverage before a planned protest.¹² The rise of the Infostate and Infopower's political supersession upon the material/atomic are evident in how mass media operates between the conventional, corporate state and the Infosphere. It's also important that Facebook does not support Infocapital's use of its streams unless it suits its corporate agenda, demonstrated by its public stance against WikiLeaks. However, to oppose radical streams of activity would threaten to disrupt the capitalist ecosystem in the Infosphere through negative public sentiment, and thus illustrates one of the aspects of Infopower on conventional capital. The Infosphere in which Infopower operates is amorphous, 'lumpy', discontinuous and heterotopic. It is thus asymmetrical structurally and in its power relations to the material state, causing severe anxiety to conventional power.

The Emperor's New Bits, or Hans Christian Anonymous

In the classic Hans Christian Andersen story, *The Emperor's New Clothes*, twin weavers swindle an emperor who cares for nothing but his wardrobe by offering him clothing invisible to anyone 'too stupid' to see the couture. Hoodwinked by the weavers, the emperor parades the new line for the populace. The masses are cowed into an Orwellian acceptance of the ruse by the emperor's power, save for one boy who exposes the Emperor's nakedness.¹³ Perhaps this is the metaphor for Critical Art Ensemble's description of youth as cyber-interventionists in the context of an era in which *Electronic Civil Disobedience* (ECD) addressed malaise in parts of the Left who that had 'bunkered' itself.¹⁴ While there were radical changes in discourse between the 1990s and the 2000s, ECD's text aptly foreshadows many of the events of 2010-2011. The 20-something demographic of which *ECD* speaks includes Anonymous, embodying the youth of the Andersen fable and representing the interventionists of the online public sphere.

Anonymous's ad hoc group of hacktivists largely skews to a younger demographic. This 'group' is anarchic (although it is 'lumpy' and has loosely organized groups within it), emerging from sites such as 4chan.org to satirically speak its truth to power. In 2008, for instance, they targeted the Church of Scientology with a series of online video calling out the church's lack of transparency. Flash mobs wearing Guy Fawkes' masks physically 'troll' or aggravate church locations, playing boom boxes loaded with recordings of Will Smith ('Bel-Airing') and Rick Astley ('Rick-Rolling'). These gestures are classic online trolling postures, and Anonymous' actions against the church were intended as a momentary physical Distributed Denial of Service (DDoS) attack or simply an old fashioned sit-in. Basically, Anonymous arrived from nowhere as a group of nobodies, then returned to the ether from which they came. Anonymous is a cloud of asymmetrical Andersenian 'children' speaking truth to the emperor's power.

However, Anonymous is not an organization but an anarchic ad hoc group that emerges through the underside of the Internet. It represents Infopower: emergent, distributed, and nearly flat in

12. Anna Duckworth, BART Defends Controversial Wireless Shutdown During Planned Protest, http://news.cnet.com/8301-27080_3-20091822-245/s.f-subway-muzzles-cell-service-during-protest/, KNBC, San Francisco

13. Hans Christian Anderson, *The Emperor's New Clothes*, http://www.andersen.sdu.dk/vaerk/hersholt/TheEmperorsNewClothes_e.html, Hans Christian Andersen Center.

14. Critical Art Ensemble, *Electronic Civil Disobedience*. <http://www.critical-art.net/books/e.cd/> New York, New York: Autonomedia, 2009.

its (dis)organization, with its conduits of power surging through any net connection. Anonymous is like dust; eliminate part of it and it replicates as long as there are net connections. Monitor them and they encrypt. Cut a connection, they reroute. Anonymous is a human computer virus. Anonymous is deemed 'troll' culture, or youth motivated to aggravate any power as a form of entertainment or loose anarchism. Anonymous is largely the youth hacker demographic described by Critical Art Ensemble but is also anyone or anything that chooses to take up the cause.

In *Electronic Civil Disobedience*, Critical Art Ensemble proposes that in the age of informatic power, physical (atomic) resistance speaks to dead capital, as authority elides or corrals the physical protester.¹⁵ Disruption of capital resides in the virtual. The real interventionists are the 20-something hackers who punch through firewalls and reroute flows of information, creating redirection, disruption, and detournement of Infocapital at will. For example, Anonymous has used distributed, asymmetrical cyberwarfare, such as denial of service attacks used to overload a website's server computer through mass visitation and to disrupt online bank sites, commerce, and others. During these interventions, Domain Name Servers from controlling service providers/physical (i.e. atomic) infrastructure concerns like Comcast (which has proposed measures against net neutrality) became erratic, resulting in highly intermittent Web access. This is a prime example of the tug of war between the agendas of atomic and informatic power.

The disruption of Infocapital and Infopower is predictably met with harsh indictments from conventional power. The case of Ricardo Dominguez and the Electronic Disturbance Theatre's virtual sit-in against the University of California was a relatively benign case of data disruption as political act. But the asymmetrical response by the university system's attempt to remove Dominguez' tenure reifies the tension between atomic and informatic powers.¹⁶ The disruption of Infocapital took place on a larger scale when Chinese governmental hackers' compromised Google, as revealed by WikiLeaks,¹⁷ and with the near hack of an Iranian reactor by computer viruses.¹⁸ In the Netherlands, members from an Anonymous rally were beaten in the streets, and two 16 and 19 year-olds charged for the Denial of Service attacks against government and commercial sites seeking to stop WikiLeaks.¹⁹ Also, in the UK, five men between ages 15 and 26 were subject to a 7a.m. raid for temporarily crippling MasterCard, Visa and PayPal websites, also seeking to disable WikiLeaks.²⁰ Is it surprising that in movies like 2012's James Bond movie *Skyfall*²¹, technical guru

15. Ibid.

16. Jerry To, 'Admins Continue to Investigate Dominguez', UCSD Guardian, 13 May, 2010, <http://www.ucsdguardian.org/tag/ricardo-dominguez/>.

17. James Glanz, John Markoff, 'Vast Hacking by a China Fearful of the Web', New York Times Online, 4 December, 2010, <http://www.nytimes.com/2010/12/05/world/asia/05wikileaks-china.html>.

18. Robert McMillan, 'Stuxnet virus may be aimed at Iran nuclear reactor', Computerworlduk.com, 10 September, 2010, <http://www.computerworlduk.com/news/security/3240458/stuxnet-virus-may-be-aimed-at-iran-nuclear-reactor/>.

19. Ryan Single, 'Dutch Arrest Teen for Pro-WikiLeaks Attack on Visa and MasterCard Websites', Wired.com, 9 December, 2010, http://www.wired.com/threatlevel/2010/12/wikileaks_anonymous_arrests/, Web. n.r. Jan 3, 2010.

20. Mark Halliday, 'Police arrest five over Anonymous WikiLeaks attacks', Guardian.co.uk, 28 January 2011, <http://www.guardian.co.uk/technology/2011/jan/27/anonymous-hacking>.

21. *Skyfall*, Metro Goldwyn Mayer (MGM), Los Angeles, CA, 2012.

'Q', a tool of state/atomic power, is an expert in cyberwarfare? These examples illustrate Negri's idea that postmodern power and capital have shifted to the informatics and cognitive fields and signal a primary shift in the balance of power in the First World, if not globally, from the nation-state to the Infostate.

WikiLeaks

For those who have been unaware of late 2010's geopolitical news, WikiLeaks is an online Wikipedia-like database that 'whistle-blows' against questionable governmental and corporate activity by releasing controlled and classified documents.²² As of December 2010, they have released copious cables (transmitted internal memos), largely related to U.S. foreign policy and international intelligence. This sudden transparency to power has the First World, especially the U.S. State Department, in a panic. Why? WikiLeaks shows an unflattering side of the United States committing any number of gaffes, such as calling Russia a 'mafia state',²³ and painting uncomplimentary portraits of Middle Eastern leaders.²⁴ The range of other undisclosed information spans from the revelation of weapons technology transfers from North Korea to Iran²⁵ to U.S. drug companies targeting African politicians.²⁶ The WikiLeaks disclosures, and social media in general for that matter, have sent the First World into diplomatic chaos, with geopolitical politics reconfiguring itself like a planet-sized Rubik's Cube.

The First World then reacts to dissent by expediting material and physical diplomacy that would normally take months by trying to arrest Assange, possibly to extradite him to the United States, his locus of challenge, forcing him to seek asylum in the Ecuadorian embassy in London.²⁷ Although the 'head', (the object of conventional power's leverage) is in exile, the 'body' of WikiLeaks and its 'computational cloud of dissent' stated on December 7 (incidentally, the day of the Japanese attack on Pearl Harbor) that it will continue to release information.²⁸ Despite attempts to anthropomorphize a centralized identity, or place a single 'face' on challenges to hegemony (as in the Queens of Aliens and The Borg in Star Trek), asymmetry is faceless and morphogenic dissent. It is like trying to hold mercury, because decentralized dissent can only be addressed through decentralized means, not structures of conventional command and control.

22. Wikileaks, <http://213.251.145.96/>. Accessed 28 May 2011.

23. BBC Staff, 'Wikileaks: Russia branded 'mafia state' in cables', *BBC Online*, 10 December, 2010, <http://www.bbc.co.uk/news/world-us-canada-11893886>.

24. Cahal Milmo, Jerome Taylor, David Osborne, 'Deceits, plots, insults: America laid bare', *The Independent Online*, <http://www.independent.co.uk/news/world/politics/deceits-plots-insults-america-laid-bare-2146208.html>.

25. Orkuba.com, 'China pressed over Iran and North Korea's nuclear trade', <http://www.orkuba.com/blogs/viewstory/2100>.

26. BBC Staff, 'WikiLeaks: Pfizer denies dirty tricks claims in Nigeria', *BBC Online*, 10 December 2010, <http://www.bbc.co.uk/news/world-africa-11971805>, Web, n.r. December 17 2010.

27. Karla Adam, 'Lawyers for WikiLeaks' Assange outline defense for extradition hearing in London', *Washington Post Online*, 11 January, 2011, <http://www.washingtonpost.com/wp-dyn/content/article/2011/01/11/AR2011011105433.html>.

28. Robert Booth 'WikiLeaks to keep releasing cables despite Assange arrest', *Guardian.co.uk Online*, 7 December 2010 <http://www.guardian.co.uk/media/2010/dec/07/wikileaks-cables-julian-assange-arrest>.

WikiLeaks therefore has created a situation of concurrent, distinct, and palpable effects upon the domain of conventional power, with a First World backlash on the 'awakening of imagination' it offers. This reifies Negri's assertion that capital in the postmodern has shifted to information and the cognitive and that the real theater of engagement is the Infosphere. WikiLeaks has realized infoinsurgency as First World, and digital society becomes informatic. The most powerful form of anarchy today is in the disruption and release of data withheld by the nation-state. Information and the people who circulate it still want to be free.

Conclusion

In light of this power redistribution, how will conventional atomic power reassert hegemony? As mentioned at the beginning, it will contain the rise of informatic power through its means of distribution, such as national firewalling, trunk-line disconnection, or limited Internet, crippling the flow of digitized material capital as well. In Egypt, the Internet was disabled, severely limiting information flow and the social and material functions dependent on networks (although as of 29 January 2011, smart phone networks were online).²⁹

But cutting the digital backbone is problematic at best, since conventional and informatic powers are in symbiotic relation. The latter is nimbler, always a step ahead of the former, and to attack a symbiote will cripple its partner as well. The logical result is the elimination of net neutrality (the free and open flow of data across the Internet) or severing typologies and information flows across the networks. But the symbiotic effect means that conventional power and capital is also hobbled, as the physical is dependent on the same flows of information. It cannot engage in this means of retaliation, since it would be the digital suicide of the First World nation-state.

In *The Coming Insurrection*, the French anarchist group, The Invisible Committee, posits a communo-anarchic insurgency to overthrow the conventional nation-state.³⁰ In its place is a cybernetic proto-industrial model of networked communes with high tech microproduction, established during and after a mass armed insurrection. If the Committee suggests a substructural relation through anarchic enclaves and networks, that tactical position is entirely sustainable. The Insurrection will be symbiotic, tactically acting upon conventional capital in a cybernetic loop of transparency of power. The revolutionaries will have an android in one hand and a Molotov cocktail in the other, riding horseback across the digital grid rather than the savannah. They will be equally ad hoc in organization, technology, and distribution, using whatever means necessary to tap free Wi-Fi from Starbucks on courier bikes. Perhaps this is overly romantic, but with do-it-yourself culture, digital equipment, and open culture, the symbiotic citizen of the Infostate can surf across the regions of the atomic world with a swarm of siblings.

Hence, the power of WikiLeaks and social media – they use the infrastructure relied upon by conventional power as site of anarchic resistance and prove informatic power's potential to render conventional power impotent. While important to specific situations, Assange is not crucial to

29. Nicholas Jackson, 'Despite Severed Connections, Egyptians Get Back Online', *Atlantic Monthly Online*, 29 January 2011, <http://www.theatlantic.com/technology/archive/2011/01/despite-severed-connections-egyptians-get-back-online/70479/>.

30. Invisible Committee, *The Coming Insurrection*, Cambridge, MA: (Semiotext(e) / Intervention), 2009.

these events' systemic effect; they are 'symptoms' of the emergent system of power. In this case, the iPad is mightier than the sword. As nuclear détente created an 'aesthetics of uselessness' in its stockpiles' ridiculously high potential to destroy the Earth, the Infostate can merely shut down the control systems of the bunker to reduce the atomic to aesthetic nullity. We see a nation of nuclear gophers, lifeless in their burrows. Power reconfigures in light of informational versus conventional power, which is why WikiLeaks and social media as political lever is significant and why the geopolitical panic-sites they create are so powerful.

INVESTIGATIONS IN NEW MEDIA ART & CULTURE

THE CRISIS OF REPRESENTATION IN FIRST- AND THIRD-WAVE AVANT-GARDE ART

Introduction

The move from realism and mimesis to abstraction in modern painting that was brought to the fore of the Western art world by the first wave avant-gardes, including movements such as Fauvism, Expressionism, Impressionism, Cubism, then later shifts such as Dada, Futurism, and Surrealism, is seen as one of the defining points of Modernist art. The tri-fold combination of the adoption of contemporary technological practice, a conscious break with historical tradition, and the cult of the avant-garde are seen as the defining points of early modernism, what Malcolm Gladwell might call a 'tipping point'.¹ It might also be said that although the impact generated by the first wave avant-garde was singular, the events leading to that period have deep historical precedents. Precedents in the development of post-Renaissance Western art led to the construction to an original avant-garde, its second wave, and what I will call the third-wave avant-garde, or the New Media movement. Within these waves of the avant-garde various crises of representation (mimesis, objectification, and verisimilitude) have taken place.

Cultural scholars might argue that modernism, with its utopian faith in human progress, died when postmodernism broke with Western history. Foucault, Habermas, Kelly, and Krauss have interrogated the modern versus avant-garde and found them to be imperfect at best.² However, it is this author's contention that, utter and catastrophic irruptions of entire civilizations notwithstanding, preceding eras at least define the terms for their predecessors, and perhaps additional layers of cultural development will accrete almost akin to the rings of a cultural tree. Conversely, postmodernism in its very etymology presupposes the existence of the modern in order to define itself, but also assumes modernism's destruction in its construction. Perhaps Baudrillard, in *The Illusion of the End*, ironically hints at the Twain-esque exaggerations of modernism's demise.³ In fact, events at the turn of the millennium hint that a transmodern state encompasses the modern, postmodern and post-millennial period. What is necessary here is to contextualize the representational problems specific to the modernist conception of the avant-garde through the epistemic arc towards a transmodernist avant-garde, i.e. New Media art.

Pre-echo I: Mimesis, Technological 'Cheating' and the Camera Lucida and Obscura

Aristotle's *Poetics* puts forth an understanding of art's mimesis that has served as one of the foundations of Western aesthetic traditions.⁴ Although the *Poetics* primarily refers to the art of

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1. Malcolm Gladwell, *The Tipping Point: How Little Things Can Make a Big Difference*, New York: Little, Brown, & Co., 2002.
 2. Examples of writings to this extent can be found in Bryan Wallis, *Art After Modernism*, New York: New Museum of Contemporary Art, 1984.
 3. Jean Baudrillard, *The Illusion of the End*, Stanford: Stanford University Press, 1994.
 4. Aristotle, *Poetics*, trans. S. H. Butcher, The Internet Classics Archive, <http://classics.mit.edu/Aristotle/poetics.mb.txt>.

theatre, the impact of classical thought upon the West cannot be understated when considering recurrent themes of neo-classicism since the Renaissance. His statement that, "Imitation, then, is one instinct of our nature" clearly frames his argument that humanity is the most imitative of all creatures.⁵ From Aristotle's claim of the mimetic function of art, the Western tradition has developed aesthetic and technological devices to more objectively reproduce the perception of the physical world, from perspective to optics.

The artistic debate between the humanistic creation of art as mimetic interpretation through the lens of individual genius and the use of optical devices as graphic reproduction has been a point of contention since the Renaissance. For example, the optical principles behind the camera obscura have been known since the classical era, and numerous devices were employed by old masters such as Alberti, Da Vinci, and Durer to create more optically correct representations of the objective world.⁶ Of particular interest is William Hyde Wollaston's 1807 patent of a formalized camera lucida consisting of an arm and prismatic beam splitter, known to be used by Ingres.⁷ In fact Hockney's book *Secret Knowledge* created a scandal with its series of camera lucida paintings and for positing the use of optical devices by many of the traditional masters.⁸ Whether Western masters used these devices or not is of less interest than the apparent cultural perception that the only lens for true aesthetic virtuosity is that of human perception. The suggestion that technological devices constitute a lack of virtuosity and aesthetic dishonesty is quite in line with Aristotelian aesthetics and sets the stage for the first wave avant-garde.

Pre-Echo II: Manet, Daguerre and Talbot

One work considered a harbinger of the break with mimetic realism is Manet's *Le Grand Dejeuner* (*The Luncheon on the Grass*, 1863).⁹ Manet's attention to the realist tradition of precise foregrounded figures and classicist triangular composition contrasts with the loose background brushwork and non-perspectival orientation of the bather in the distance. The result acknowledges the tradition from which it originates, but places the foregrounded figures upon a drastically flattened ground to break from the representational function normatively ascribed to the painterly work. Manet himself states this in the catalogue for his solo show after his exclusion from the 1867 Paris International Exposition, contrasting the past's obsession with 'faultless work' with his vision for 'sincere work'.¹⁰

One compelling account for this break from realism is the photographic developments of Daguerre and Talbot (who also experimented with Wollaston's camera lucida). Announced in 1839, the photographic process (ironically for the context of this essay coined as a 'New Medium for a New Age' by Hunter) was the first process with mass popularity finally to fulfill the sought-after

5. Ibid, ch. IV.

6. Russell Naughton, from *Drawing Aids*, 2004, http://www.acmi.net.au/AIC/DRAWING_MACHINES.html.

7. Ibid., although resources exist at the George Eastman House Archives.

8. David Hockney, *Secret Knowledge: Rediscovering the Lost Techniques of the Old Masters*, London: Thames & Hudson, 2001.

9. Edouard Manet's *Le Grand Dejeuner 1863*. From Hunter, et al. *Modern Art*, New York: Vendome Press/Prentice Hall, 2004, p. 17.

10. Ibid. p. 16



Edouard Manet, *Luncheon on the Grass*, Image Courtesy Wikimedia Commons.

goal of Aristotelian mimesis through representational (technological?) flawlessness.¹¹ What lacks irony is that many of the first subjects for the new process consisted of portraiture and, through the works of Brady and O'Sullivan, reportage and landscape. With the representational function of painting relieved by the technological precision of the photograph, perhaps it is no surprise that 22 years later Manet would choose to break from the realist tradition. But the question that Manet asked regarding realism remained. What was the purpose of art, if not to accurately represent objective reality? This author posits that the first wave avant-garde acknowledged that once realism was achieved, all that remained for the artist was to explore verisimilitude (the implication of 'truth'), whatever that might represent. To paraphrase Picasso, is it true that with the advent of photography, painting was then set free?

First Wave: The Fin de Siècle Avant-Garde

The convergence of new sciences and technologies, humanist and plural perspectives and a utopian social vision combined to create powerful visions from the Fauves to the Surrealists. As Kandinsky stated, all art is a child of its time, and the social, cultural and technological revolution in Europe is reflected in the myriad movements of the period, which we will now discuss through a series of emblematic event-scenes.¹²

11. Ibid. p.18.

12. Wassily Kandinsky, *Concerning the Spiritual in Art*, New York: Dover Publications, 1977.



Georges Seurat, *A Sunday Afternoon on the Island of La Grande Jatte*, Image Courtesy Wikimedia Commons.

Seurat and Monet: Impressionists and Pointillism as proto-Pixilation

Both Seurat and Monet were concerned with an almost scientific approach to the perception of light, and given the advances in optics in the 19th century, were reflections of recent discoveries regarding perception and physiology of the eye. Their use of fragmented color to construct an aesthetic whole has resulted some of the most popular works of their era as time has passed. It is Seurat that most strongly resonates with the electronic era through his use of colored dots. These patterns formally resemble the phosphor dots on the television screen and later the computer monitor or even the stochastic patterns of 300 dot-per-inch inkjet printers. One could imagine the individual dots in his masterwork, *Ile de la Grand Jatte* as ancestors of the pixel.¹³ Rather than say that Seurat was a progenitor of screen-based displays, a stronger argument might that he, and to some extent the Impressionists, could have lent inspiration to screen-based displays. But what is more important to this body of work than the possible ties with the fin de millennium is the break with realism and embrace of the scientific method and technological advances.

Kandinsky: Truth in Abstraction

Kandinsky's discovery of nonobjectivity in painting turned Manet's argument for 'sincerity' in painting into a human quest for the inner spirit or expression in art. With his *Komposition* works and seminal book, *Concerning the Spiritual in Art*, the mimetic function of painting loses its relevance in the modern era.¹⁴ It is almost equally of note that his previous training as a lawyer and his profound influence by Goethe and the Theosophical movement (Blavatsky, Besant, et al)

13. George Seurat, *Ile de la Grand Jatte*, 1884-86, Collection of the Chicago Institute of Art, Chicago, Illinois.

14. Kandinsky.

would serve as a spiritual quest for truth in expression as a channel for direct expression, and as an active force for the evolution of humanity.¹⁵ While Kandinsky's work as part of the Blaue Reiter was inspired by a decidedly non-technological source, he also became part of the Bauhaus, which merged technology, art and a fanatically utopian vision that still influences Western society.

Kandinsky's Expressionist quest for the 'spiritual in art' bridged Manet's sincerity and the 'truth' of pure spiritual communication between the artist and the audience. Kandinsky's essay 'Movement of the Triangle' shows that art evolved beyond realism and the act of reproduction that lacked any form of 'Fantastic Imagination'.¹⁶ And as he ends that chapter, he lays the foundation for the evolution of the human spirit which is inextricably linked to, "the internal Truth (sic) which only art can divine, which only art can express though those means of expression which are hers alone".¹⁷ It is this utopian spirit, communicated through art as a revolutionary gesture, that Kandinsky shatters both mimesis and realism to clear the way for the movements in the fin de siècle.

Technology as Public Enemy #1: Avant-Garde as Activist

The utopian spirit of the first wave avant-garde often manifested itself through critical activism. Dada, Futurism, Constructivism and the Bauhaus sought social utopianism through intervention. Varying widely from critical, constructive, and destructive proposals, these four movements expressed themselves through art, technology and ideology to propose idealized social structures. Dada could possibly be considered as the one of the first tactical media groups, using technology to create outrage and hopefully reflection. The Dada soirees, especially the advertisements for interventions by Hausmann, invited attendees to have a 'jolly time', and then assaulted audience sensibility with abstracted, bizarre performances that often incited riots.¹⁸ The Futurists advocated new technologies to put forth a utopian Fascist ideology, but conversely to Dada's decidedly anti-war stance, sought the destruction of the museums and academies, as well as the expurgation of society by glorifying speed and the carnage of war.¹⁹ Unfortunately, the rhetoric of the Futurists, taken out of its original context of a brutal utopianism, has served as the clarion call for rebellious art students ever since.

Constructivism and the Bauhaus sought a synthetic dialogue between disciplines, art and technology, a discourse of the arts as shaper of society. Both espoused a near-fanatical method for engaging with the practitioner through deep social activism (Constructivism), or rigorous ideological indoctrination (Bauhaus). It is ironic that although both were deeply 'committed', as Adorno would put it, and Constructivism would influence the later Bauhaus, both were eventually dispersed by the rise of totalitarian regimes. With the Bauhaus leaders and students' exodus to the United States, their ideals and principles were adopted by contemporary society and continue to this day.

15. Ibid.

16. Ibid.

17. Ibid.

18. Raoul Hausmann, *Invitation for Dada Soiree, (ca. 1916) From Germany: Dada (video) New York, Specialty Video Company, 1987.*

19. Filippo Marinetti, 'Foundation and Manifesto of Futurism' (1909), *Art and Theory, Harrison & Wood, ed., New York: Blackwell Press, 2002.*

Segue One: Riding Waves – From Avant-Garde to Avant-Garde

One can continue this exploration through Purism, Surrealism and any number of –ism's, but what will result is a reiteration of the general themes of utopia, technology, progress, pluralism, and breaks with history that continue through subsequent avant-gardes. What also repeat are social upheaval, technological change and crises of representation (realism, objectification and the subject, respectively), creating the cultural context for each of these generations' aesthetic practitioner.

Wave Two: Intermezzo – The Dematerialization and Mass Production of the Object

In his seminal essay *Art in the Age of Mechanical Reproduction*, Walter Benjamin wrote that the artwork's mechanization and mass production shift its function radically from materialist fetish to mass commodity, destroying its aura and even politicization.²⁰ Aside from his pop art persona, Warhol echoed Duchamp's challenge to the uniqueness of the art object not by using extant objects but by commenting on mass production through silk-screens and print. His *Mao* series simultaneously merges subject and process of mass distribution (political media icon and silk-screen) to question art in the age of the mass market²¹

This idea of originality is also well explored by Rosalind Krauss in *The Originality of the Avant-Garde: A Postmodernist Repetition*.²² In this essay, she describes the 1981 Rodin exhibition at the National Gallery in Washington D.C. where new casts of Rodin's *Gates of Hell* were on exhibition. The casts were created over 60 years after the artist's death from plasters left to the nation of France by his estate. Although Krauss posits her argument from a postmodern perspective, she reiterates the question of art's originality that has been a point of contention for centuries, as many of the Renaissance masters (such as Caravaggio) either had 'schools' or ateliers that produced the finished works, many of them copies. Therefore it can be said that questioning the object as unique is nothing new; the work of art is a liminal space, and the vision of the artist remains unresolved to this day.

The other avant-garde project of the second wave is the art object's dematerialization through performance, process and conceptualism by artists such as Acconci, Brecht, Cage, FLUXUS (Maciunas, Miller, Ono, Paik, et al), Morris, Nauman, and Smithson. Lucy Lippard's *Six Years: The dematerialization of the art object from 1966 to 1972* documents countless ephemera that offer a historical trace of an inherently ephemeral period in art creation.²³ William Morris succinctly expresses the conceptual impulse for dematerializing the art object, posing 'The detachment of art's energy from the craft of tedious object production'.²⁴ Along with the events of the university

20. Walter Benjamin, 'The Work of Art in the Age of Mechanical Reproduction', *Illuminations*, trans. Harry Zohn, New York: Harcourt, Brace & World, 1968.

21. Andy Warhol, 'Mao 6' (1973), *Modern Art*, ed. Hunter, et al., New York: Vendome Press/Prentice Hall, 2004, p. 306.

22. Rosalind Krauss, 'The Originality of the Avant-Garde: A Postmodern Repetition', *Art after Modernism: Rethinking Representation*, New York: The New Museum of Contemporary Art, 1984.

23. Lucy Lippard, *Six Years: The Dematerialization of the Art Object from 1966 to 1972*, Berkeley: University of California Press, 1973.

24. William Morris, 'Notes on Sculpture 4: Beyond Objects', *Art and Theory, 1900-2000*, Harrison & Wood, ed. New York: Blackwell Publishers, 2002.

revolts in France in 1968 (which would be instrumental to the formation of postmodernism), the Vietnam War protests and the Haight-Ashbury scene of 1969, one can argue that the second wave is concurrent with another period of utopianism, ahistoricity and social turbulence. Although not identical to the conditions of the first wave, the second wave arose during another period of technological development through mass media and a utopian desire for change.

Third Wave: Precursor – The Construction of a Transmodern Project

One may dispute the possibility for an avant-garde during or after (as I will posit) the postmodern. By defining the avant-garde as a cultural gesture tightly bound to the agendas of modernism, a fin de millennium avant-garde would be an ongoing modernist endeavor. Perhaps in saying that neo-Dada develops from Dada or even Surrealism for that matter, it would be a misnomer to propose that millennial modernism is the same as the fin de siècle's or the second wave. There have been two world wars, tens of art movements and numerous philosophical schools of thought that have profoundly influenced Western, if not world culture.

Secondly, to propose the survival of the modern is not to discount or to invalidate the postmodern. The construction of the postmodern, even its etymology, suggests a symbiosis with the modern from which it cannot escape. In fact, the rhetoric of postmodernism itself argues for the existence of a millennial modernism. Michel Foucault, in *The Archaeology of Knowledge* explores the idea of the architectonic in the construction of discourse and meaning in which bodies of thought exist in a series of concurrent sliding plates.²⁵ These epistemic 'plates' may foreground or recede, cause frissions with one another and so on. In this way, one could say that in addition to the postmodern, Western thought exists with an architectonic of all previous schools of thought, jostling and reconfiguring one another.

The architectonic suggests that the various schools of postmodernism slide along the plates of the modern (and later, the transmodern); the postmodern, rather than being a paradigmatic break, is a function of the modern itself. In positing that it is a reactionary break from the modern as such, postmodernism constructs its discourse, among other things, as an analytical, or 'deconstruction set' of the modern, but operates concurrently with the modern itself. As one cannot escape from the system that one seeks to critique, neither can postmodernism escape from the cathedral of the modern.

Two other concepts can be applied to the plural model of cultural paradigms being constructed here; both coined by the French theorist Jean Baudrillard. These would be the notion of cultural transparency and the 'Zero Point' of culture in which all potentials have become realized. In *The Transparency of Evil*, Baudrillard describes cultural transparency as a state in which sites of engagement permeate all other aspects of culture and become exhausted.²⁶ From this, although modernism has ceased to be a central cultural impetus, aspects of it are ubiquitous within society (e.g. the population of Target department stores with Bauhaus-inspired goods). Once again, cultural tropisms coexist, some fore- or backgrounded as influences of previous eras continue to reverberate through the

25. Michel Foucault, *The Archaeology of Knowledge*, trans. A.M. Sheridan, New York: Pantheon Books, 1972.

26. Jean Baudrillard, *The Transparency of Evil*, New York: Verso Press, 1990.

contemporary. In *Illusion of the End*, Baudrillard uses the metaphor of the black hole, or singularity, with its event horizon and zero point, to describe the paradox of stability and instability, in which all things radiate from beyond a 'point of no return'.²⁷ In this way, the zero point suggests both an end to history but also accounts for the continuance of cultural memes and philosophical schools of thought within society long after their publicized 'ends'. All of these effects contribute to the social concurrence of all previous forms with the contemporary to one degree or another.

Trans-itioning Beyond the Postmodern

New Media artist and architect Marcos Novak has been using the title of trans-architect at least since 1998.²⁸ In *New Babylon, Soft Babylon*, Novak polemically quips about the 'Quarrel between the Ancients and the (trans)Moderns', suggesting a move to transmodern spatial practices which de-center themselves from physical referents to the virtual-as-construct. This radically breaks from the ideal- or real-as-construct in that, under Novakian transarchitecture, an idealized or objective real is no longer necessary for the construction of the subject, in agreement with Baudrillard. Therefore, transmodern aesthetic representation has broken not only from the mimetic function, but the objective as well.

In *The Language of New Media*,²⁹ Lev Manovich muses over the nature of the post-millennial age, whether it is called 'supermodern', 'transmodern' or 'second modern'. His idea that this terminology suggests a continuous historical trajectory rather than epistemic irruptions from era to era may not cohere with a Foucaultian architectonic, but could work under an accretive model, in which additional cultural layers operate concurrently with previous forms as if the rings of a tree were allowed to slip and rotate upon one another. While Manovich's model may not work well in the case of the paradigmatic shift between the 19th and 20th centuries, it certainly works under the model of the modern era as a continuous architectonic cultural milieu.

Positioning the Transmodern

As of 2012, ideas on transmodernism are speculative in nature, and a contribution to ongoing dialogue. Some of the functions of the transmodern discussed by Novak and Manovich are the concurrence and simultaneity of modernisms in Western culture, as well as a break with the objective (i.e. a will to virtuality). While a model of the transmodern expands beyond its predecessors, it also encompasses them; it is the union of concurrent cultural functions. Transmodernism operates as both the superset of the first two stages of the modern, but also its receptacle. Transmodernism allows the deconstruction of the fin de millennium cultural terrain as well as the coming of the third wave avant-garde New Media movement.

Tangent: The Dark Side of Transmodernism – Tactical Reality

One possible outcome of the break from the objective is the emergence of tactical realities. Derrick Jensen's *Culture of Make-Believe*³⁰ and Suskind's *New York Times* article, *Without a*

27. Jean Baudrillard, *The Illusion of the End*, Stanford: Stanford University Press, 1994.

Marcos Novak, 'Next Babylon, Soft Babylon', *Architectural Design*, 68.11/12, 1998: 21.

28. Novak.

29. Lev Manovich, *The Language of New Media*, Cambridge, MA: MIT Press, 2001, pp. 284-5.

30. Derrick Jensen, *The Culture of Make-Believe*, New York: Context Books, 2002.

Doubt,³¹ documents what I term as tactical realities in which scenarios are presented as 'factual' but originate from decidedly non-objective sources. Tactical realities arise from the decidedly transmodern idea of reality-as-construct.

Tactical reality should be contrasted (but not confused) with tactical media. While tactical media create a (usually Internet or video) mass-media intervention designed to probe culture for a self-reflexive reality check, tactical reality attempts to use societal functions of power and legitimacy to inscribe non-reflexive constructed realities. In contrast to propaganda, generators of tactical reality truly believe their reality, although a non-objective and constructed 'virtual-as-subject' presented as objective fact. Although this may be a controversial statement, perhaps the idea of tactical reality becomes problematic when the mimetic function is represented as a non-analytic, objective reality.



The Yes Men, Image Courtesy The Yes Men.

International pranksters The Yes Men provide an example of the difference between trans- and post-modern engagements.³² Their idea of identity correction posits that through various parody doppelganger sites such as gwbush.com, dowchemical.com and gatt.org the agendas of the powerful can be represented more 'accurately' than the powerful can articulate themselves.³³ Trade summit organizers and international media organs originally mistook The Yes Men for the World Trade Organization and invited them to appear as guest speakers. While tactical reality would be comprised of the WTO actually (re)constructing scenarios without objective criteria and presenting it to the international community as 'fact', The Yes Men use their foray into global power structures as a means for analysis, parody and reflection, which is then represented to

31. Ron Suskind, 'Without a Doubt', *New York Times*, 17 October 2004.

32. *The Yes Men*, <http://www.theyesmen.org>.

33. Both dowchemical.com and gwbush.com no longer exist in their original state, but at the time of this writing gatt.org still exists. See <http://www.theyesmen.org> or <http://www.rtmark.com> for additional documentation.

an audience. While the reconstruction of the WTO through gatt.org begins as a satire of tactical reality, its self-reflexive parody by way of intervention identifies as postmodern critique, through a decidedly modernist use of almost Dadaist and Situationist media activism. These simultaneous levels of engagement exemplify the complexities of the third-wave avant-garde.

3rd Wave Entry Point: The Question of New Media

This brings us to the framing of the third avant-garde within the international New Media art movement, a contextualization that raises questions about New Media as medium, genre or movement and whether it fills the criteria of the Avant-Garde as defined by the rise of the Modern. I will briefly touch on the former and then expand more fully into the latter, due to its relevance to our thesis of the linkage between a first and third-wave avant-garde.

New Media as movement is a dual polemic that questions the definition of New Media itself and its function within contemporary art. Although many excellent books exist on New Media, Internet art, virtual art, and technological art, there is still a lot of contention regarding the nature and definition of New Media as such.³⁴ In many ways New Media is no longer 'new', its methods of representation and construction are varied until it difficult to categorize and define it against prior art forms. As mentioned before Hunter coined photography as a 'New Medium for a New Era', and the use of the Sony Portapak by Davis, TVTV, Paper Tiger and Paik question whether video was the last generation of New Media before the coming of digital media and its practitioners.

There is also the question of nomenclature. For example, is the *Neue Sachlichkeit* (New Objectivity) of the early 20th century new? Perhaps for now, New Media, in its diverse approaches and relative newness to the art world, might justify its definition as a genre. However, this author argues that posterity will classify New Media as a movement, if only by the nature of historical and museological classification.

A further complication is the method of production, as genres are frequently tied to their modes of production (painting, sculpture, textile, photography), and movements tend to be tied to a methodology or ideology (i.e. Dada, Futurism, Impressionism, Cubism). What is problematic is that New Media simultaneously links to ideology, if more implied than overtly, as well as its methods of process and production, through the incorporation of digital media and time (real or rendered). Manovich might argue for other criteria, such as interaction, or the screen as new cinema, yet Goldberg's 2002 Whitney Biennial installation of robotic talking heads and Survival Research Labs' kinetic mayhem defy interaction and screen-based genres.³⁵ Perhaps the most useful definition of New Media combines the use of electronic media forms or its traces along with computation, with some element of time, whether in real-time or rendered time (such as digital video). In so doing, this broad classification allows for a large number of works while considering the matters of their cultural function and modes of interpretation.

34. Examples include: Oliver Grau, *Virtual Art Cambridge, MA: MIT Press, 2002*; Rachel Greene, *Internet Art, New York: Thames and Hudson, 2003*; Christiane Paul, *Digital Art, New York: Thames and Hudson, 2002*; Bruce Wands, *Virtual Art, New York: Thames and Hudson, 2005*; Michael Rush, *New Media in Late 20th-Century Art, New York: Thames and Hudson, 1999*.

35. Ken Goldberg, *Whitney Biennial of American Art, New York: Whitney Museum of American Art, 2002*.

Intersection: Third Wave Avant-Gardes (Night of the Undead Modernists!) – Modernist Tropes in New Media

Although a hundred years has passed and the postmodern has emerged as an analytical metaset of modernism, the so-called digital revolution has proved that the union of technology, ahistoricity, utopianism and non-objectivity in the modern are quite healthy. In the early 1990s, magazines like *Mondo 2000*, *boING boING*, and *WIRED* created a halcyon technological revolution with its ubercognoscenti Brenda Laurel, Jaron Lanier (considered the father of VR), Diamanda Galas, Sherry Turkle and Fiorella Terenzi. A 1998 Super Bowl ad for MCI declared the Internet's erasure of class, gender, race and disability through the opacity of the screen.³⁶ Commentators on net.art message lists such as Rhizome and Thingist (Brad Brace, Joseph McElroy, and others³⁷) called for the destruction of museums and academies, and the creation of self-perpetuating distributed archives of source material. Combined with fetishism for new technologies, the New Media community in many ways reflects the same principles of modernism.

The mass digital culture in the 1970s can be traced to a number of historical sources, from the development of digital computation in the 40s, advanced interfaces and ARPANet in the late 60s, and commercial video gaming and home computing in the 70s. However, it would take online communities like The Well, Delphi and CompuServe in the 80s and the World Wide Web in the early 1990's to create a cyberculture, and thus a third wave avant-garde. This is not to say that New Media artists did not exist prior to these events, but New Media as a genre (and now a movement) could not exist without the communal nature of the Web, mailing lists and the Usenet. Where previous artists in the vanguard congregated in various cities to exchange ideas, the Internet created an international net of practitioners from a larger, distributed largely western community. The themes of technological utopianism, ahistoricity and breaks with the mimetic arguably link to this early adoption of technological forms and scientific ideas. The inherently technological nature of New Media and its early call to ahistoricity has been noted among other themes such as utopianism, cyber-purism, and the activist impetus of the Open Source movement.

The Utopian Push: Activism on the Net

Four examples show the connective nature of the Internet as a proven ground for utopian activism: the CyberZapatista movement, the ToyWar, and interventions surrounding the 2004 Republican National Convention (e.g. Anne-Marie Schleiner, Furtherfield, and ScreenSavers).

Two of these events, the CyberZapatista interventions and the ToyWar, were waged by tactical media artists Ricardo Dominguez / Electronic Disturbance Theatre, @TMark, Reverend Billy and a network of online supporters. In the CyberZapatista interventions, online Zapatistas from Mexico's Chiapas region sought media attention on a global stage for their social issues.³⁸ Along with distributing missives throughout the Internet documenting Chiapas events, the CyberZapatistas and EDT stages several 'virtual sit-ins' designed to disrupt peacefully strategically placed

36. Network Super Bowl ad, 1998.

37. Brad Brace, Joseph McElroy, et al., messages on Rhizome and Thingist maillists, 2002.

38. Ricardo Dominguez and Electronic Disturbance Theatre, *Cyberzapatista FloodNet, 1998*, <http://www.medienkunstnetz.de/artist/electronic-disturbance-theatre/biography/>.

websites such as the Frankfurt Stock Exchange and the White House's. Activists would log into the EDT website and run a piece of code that repeatedly opened the websites of a given organization, monopolizing that entity's bandwidth and denying others access to the website.

The 2000 ToyWar³⁹ events emerged around an Austrian conceptual art collective named etoy,⁴⁰ which styles itself as a mock corporation that engages in various satirical functions. That year, American online toy distributor Etoys.com approached them to purchase its domain name. Upon refusal, Etoys sought an injunction against etoy, an Austrian entity, to suspend their domain based on claims of intellectual property confusion. The online art community rushed to etoy's aid, including EDT, @TMark, Rhizome.org, and Thingist.org. Ensuing actions included press conferences at the NY MoMA, virtual sit-ins and press campaigns to discredit Etoys, which resulted in FBI raids of The Thing, a NYC based Internet host that was home to the EDT. Eventually, etoy's actions were found to be illegal, and the etoy domain was restored. Perhaps due to a drop in mass sentiment towards the toy distributor combined with grave mismanagement of distribution methods, Etoys' stock value dropped nearly 90% in under six months. Etoys eventually was taken over and exists today in name only.

This activism occurred before 2001. With the American security panic that ensued thereafter, one would question the nature of media activism in America under the Bush Administration. During the Republican National Convention in New York, activists tactically protested the RNC through rallies and projections around the city. Anne-Marie Schleiner's *Out* employed mobile interventionists armed with bicycles and projectors to show the horrors of virtual war while playing networked first-person computer war games.⁴¹ A host of international artists collected through the auspices of Postmasters Gallery to stage a series of live *Dissension Convention* projections through Furtherfield's UK media mixing server, *VisitorsStudio*.⁴² The Screensavers group also projected a live protest text simultaneously on the RNC convention building in the hotly contested state of Ohio, California and locations in Europe.⁴³ The activist and utopian impetus did not disappear but mutated to match the resources available at the time.

Purism and code

Echoing its predecessor from the first wave, a hotly contested issue within the New Media community is, in fact, a form of purism linked to the idea of code as craft. The gist has to do with the formalist argument that a New Media artist exerts greater mastery of the medium by passing beyond applications such as Photoshop (imaging), Flash (interactive), Dreamweaver (Web), etc. and delving into lower level languages such as JAVA and C++. If this analogy were taken to its logical extreme, the most 'pure' New Media art would be created as Assembler or direct binary machine code. An annual festival of code-based art is held in Russia on a yearly basis, and a recent exhibition of code-based art, *Code-Doc*, is on display on an ongoing basis at the Whitney

39. @TMark Toywar archive, 2000, <http://www.rtmark.com/etomain.html>.

40. etoy, 1996, <http://www.etoy.com>.

41. Anne-Marie Schleiner, *Out*, 2004, <http://www.opensorcery.net/OUT/>.

42. Furtherfield, et al. *Dissension Convention*, 2004, <http://www.furtherfield.org/dissensionconvention/>.

43. Screensavers group website, 2005, <http://ecumedesjours.com/scrnsvrs/>.

Museum of American Art's website.⁴⁴ In the tradition of Minimalism, much of New Media purism's aesthetics are subtle, to say the least, and are perhaps limited to a very specific community, as the agendas of this 'school' are not likely to be perceived by the art world or general public, much less understood.

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A second installment of CODEDOC with eight additional artists was commissioned by Ars Electronica for the 2003 Ars Electronica Festival "CODE -- The Language of our Time." CODEDOC II launched on September 6, 2003. www.sau.edu/CODEDOCII

Lavin Jara	Harper Jara	Foley Jara	Smith Jara	Wattenberg Jara	Wichowski Jara	Kirna VitalBao	Uterbach C	Flanagan Ling	McCoy Ling	Brooks Tan	Gallagher Neil Teal

CODEDOC takes a reverse look at 'software art' projects by focusing on and contrasting the 'back end' of the code that drives the artwork's 'front end'--the result of the code, be it visuals or a more abstract communication process. A dozen artists (each a specific assignment) in a language of their choice and were asked to exchange the code with each other for comments. The assignment was to 'connect and move three points in space' which obviously could be interpreted in a literal or abstract way. The 'core' of the code (commonly referred to as the 'main') was not to exceed 500k, which equates a fairly short text document. The results of the programming are made visible only after the code--what visitors to the site encounter first is a text document of code from which they can launch the front end of the project. The languages in which the code is written are Java, C, Visual Basic, Lisp and Perl. Obviously, this is only a selection of scripting and programming languages; other, (important Markup Languages), the scripting language on which the World Wide Web is based, and Flash Script were excluded mostly for pragmatic reasons (the inclusion of these languages probably would have doubled the number of artists, making the project unfeasible), but all of the artists originally invited were able to participate in CODEDOC due to their busy schedules.

The category of software art, commonly used for artist-written software, is a manifestation of fairly blurry terminology. Software is generally defined as formal instructions that can be executed by a computer, however, there is no digital art that doesn't have a layer of code and algorithms, a procedure of formal instructions that accomplish a result in a finite number of steps. Even if the physical and visual manifestations of digital art distract from the layer of data and code, any 'digital image' has ultimately been produced by instructions and the software that was used to create or manipulate it. It is precisely this layer of 'code' and instructions that constitutes a conceptual level which connects to previous artistic work such as Dada's experiments with formal variations and the conceptual pieces by Duchamp, Cage and Sol LeWitt that are based on the execution of instructions.

What distinguishes software art from other artistic practices, is that, unlike any form of visual art, it requires the artist to write a purely verbal description of their work. In traditional art forms, the 'signature' and 'voice' of an artist manifests itself in aesthetic of visuals and execution. Every medium may have its specific language but in digital art, this language has a quite literal rather than figurative manifestation. In software art, the visual results of the artwork are derived from the language of code. Languages are defined by grammar and complex rules and at the same time leave space for individual forms of creative expression. Our identity and the roles we play are expressed in our use of language. One might assume that the aesthetic of artists who write their own source code manifest themselves both in the code itself and its visual results. Artist John F. Simon, Jr. (who wasn't able to participate in the project) has talked about code as a form of creative writing. Code has also been referred to as the medium, 'the paint and canvas,' of the digital artist but it transcends this metaphor in that it even allows artists to write their own tools--to play with the metaphor, the medium in this case also enables the artist to create the paintbrush and palette.

The projects featured as part of CODEDOC are expressions of distinct artistic signatures: the conceptual approach to the project; the way the code has been written, and the results produced by it reveal a lot about the respective artists. Some of the artists interpret the assignment in a predominantly graphic, visual way; others connect points in the global network of the Internet; one project explicitly treats the language of code as a narrative connecting 3 'characters'; another one creates a meta-layer for profiling the code itself, collapsing the boundaries between front end and back end; yet another project focuses on 'language abuse' and illegal instructions.

Intoxic to software art is a procedural element that allows for reconfiguration and extension, and, as way of commenting on the projects, artists started to 'remix' their work, applying their own code to other projects or combining sections of code into a new project.

CodeDoc Exhibition Website, Whitney Museum of American Art.

Open Source

Tangential to New Media purism, the Open Source movement seeks to open the development of computer programs though the free licensing of code by copyleft, Creative Commons licensing and the GNU General Agreement.⁴⁵ This impetus is due to the encroachments upon intellectual property by private interests and proprietary agendas for software, art or otherwise. These actions are similar to art activists questioning oppressive social power structures, found in work by the Constructivists, Dada and to some extent the Bauhaus. The creative commons' free exchange of ideas also echoes the conceptual movement of the second wave and reifies Manovich's more continuous account of history.

Ritornello, Crisis of the Subject: Realism, Verisimilitude, and the Image

Under the broad definition of New Media we have cast and the cultural parallels we have drawn between modernism and other avant-garde waves, we can now address the issue of representation in the digital. Since the days of Ivan Sutherland's light pen, the doppelganging of traditional

44. CodeDoc, Whitney Museum of American Art Artport, 2003, <http://www.whitney.org/artport/commissions/codedoc/index.shtml>.

45. Creative Commons, 2004, <http://creativecommons.org/>.

GNU General License, 2004, <http://www.gnu.org/licenses/licenses.html>.

Masahiro Mori, *The Buddha in the Robot*. Boston: Charles E. Tuttle Co., 1982.

media including painting, cinema and photography has been a technical holy grail of digital media.⁴⁶ And the rush towards realism in imaging and representation in digital media is seen best in the arena of print and cinema. Throughout the evolution of the personal computer, a key marketing point for any given machine, besides its processing power, is the capabilities of its graphics engine. From the days of the claims of color by the early Commodore and Atari home computer systems, home computers have steadily pushed to improve their color accuracy, resolution and ability to process live 3D environments with ever greater reality.⁴⁷

From *Tron* to *Final Fantasy*: the Mimetic Function Zeroes In

The cultural attitudes towards and technological capabilities for digital mimesis can be seen through a brief comparative analysis of the Walt Disney movie *Tron* (1984),⁴⁸ and Square's *Final Fantasy: The Spirits Within* (2002).⁴⁹ *Tron* tells the story about a computer game hacker who is accidentally dematerialized by a malevolent mainframe computer system and forced to fight for his life (and intellectual property). Although the movie itself was a hybrid of computer graphics and live action (perhaps even in the tradition of Disney's earlier movie *Mary Poppins* (1964)⁵⁰ that merged live and animated action) the execution of the computer graphics, while stylized, were engineered to create a seamless and believable scenario. Although the stylization of the graphics were linked to the limitations of computer imaging at the time, designers Moebius, Syd Mead and Ron Cobb give the movie an atmospheric feel. While there were deterministic agendas behind the integration of computer graphics into cinema (and later computer games), there was also a fantastic component to the world of the Master Control Program.

Conversely, *Final Fantasy: The Spirits Within*, creates an entirely computer generated futuristic world in which the future of humanity itself is in question. Throughout the movie, Square constantly makes self-reflexive cues to the realism of the character design and physics of the world. A prime example is the hardback art book released for movie, which has a cover of an extreme close-up of the protagonist's eye and nose. But because of a listless plot and certain limits to the believability of digital mimesis, the movie was one of the most beautiful failures in film history. Possibly due to the representational nature the graphics, the focus of the movie for aficionados was not the beauty of the whole or the strength of the plot but the detail of the skin textures and the motion of the hair. This is a prime example of what Mori calls the Uncanny Valley in which the suspension of belief in computer graphics drops sharply as it reaches a certain level of verisimilitude before it achieves transparency with reality.⁵¹ This is the breakdown of digital mimesis, and while movies like *Lord of the Rings* and to some extent *Jurassic Park* succeed in passing through the uncanny valley, perhaps the valley itself is another juncture point where the artistic expression of the avant-garde and the technical functions of digital representation rupture.

46. Sutherland Ivan, Image of Sutherland with Tx-2 Computer and Light Pen, 1959, <http://www.sun.com/960710/feature3/tx-2.html>.

47. Various 1970s vintage computer ads, *some interesting examples are at* <http://wotsit.thingy.com/haj/old-computer-ads.html>.

48. *Tron*,

49. *Final Fantasy: The Spirits Within*,

50. *Mary Poppins*,

51. Masahiro Mori, *The Buddha in the Robot*, Boston: Charles E. Tuttle Co., 1982.

The Breakdown of Digital Mimesis: Arnold, Tale of the Floating World, and *The Incredibles*

One of the most unnerving examples of an uncanny verisimilitude in digital imaging is the famous Time Magazine cover in which Arnold Schwarzenegger was depicted with African skin tones. If the subject had not been such an internationally recognized figure, the image might have been believable if not slightly disturbing. This is the problem with the transmodern virtual-as-subject in the digital, or the representation of realism versus that of verisimilitude. And this can be seen again in *Final Fantasy*; once the technical capabilities of an expressive medium reach a certain level of exactitude, its use in the mimetic function fundamentally changes, ceases to be satisfying or merely becomes unnerving. Perhaps today's artist has recognized this, as evidenced by short digital works like *Tale of the Floating World* in which an extremely stylized reflection upon the bombing of Hiroshima incorporating nearly non-representational live action footage with computer imaging makes a dreamlike, yet extremely powerful event.⁵² This may appear to be a trend as animation entries to the leading international computer graphics event, SIGGRAPH, is on a trajectory as of 2002 towards increasingly more stylized and non-objective representation, such as non-realistic rendering.⁵³

Perhaps a metaphor for the breakdown of digital mimesis, if technology has set realism free once more, is to put *Final Fantasy* in context with the 2004 Pixar movie *The Incredibles* (2004). While both attempt an immersive scenario to create a suspension of disbelief, *Incredibles*, while reaching new levels of realism in its modeling of physics, makes no pretenses whatsoever at the level of stylization. In combination with strong concept development, the film suggests that levels of digital realism have been attained in print and motion and that the mimetic function can no longer be relied upon as the goal of this wave of conceptual and technological expression. This representational break is now typified in the contemporary digital arts arena.

Denouement: Difference Mode

The epistemic arc of this essay sprawls across a century, exploring cultural reiterations across three periods, and suggests the emergence of nothing less than a shift in late modernism itself. This project, however ambitious, suggests a cyclical relationship between culture, technology and sociology specific to the modern that continues to this day. Although the various waves differ in their ideas regarding the subject, still the themes of utopianism, technology, ahistoricity and non-objectivity are evident. The question remains as to whether there will be a fourth wave. The question of transmodernism and its possible break with ahistoricity, the issues of the virtual-as-subject and the subject's reconstruction, are too young to be determined with certainty regarding its dispersion throughout Western culture. What is certain is that, as with the fin de millennium, the echoes of the fin de siècle still resonate strongly and throughout the cutting-edge of digital art at the beginning of the Third Millennium.

52. Alaine Escalle, et al. *The Tale of the Floating World*, video, 2001, <http://www.escalle.com/tale.html>.

53. Bonnie Mitchell and Patrick Lichty, personal conversation, 2004.

JUST WHAT IS IT THAT MAKES NEW MEDIA SO DIFFERENT, SO APPEALING?

Rather than take this title at face value, perhaps it is better to consider the cultural underpinnings that prompted this very 'silly' question (according to Italian New Media curator, Domenico Quaranta).¹ Both the historical context of the source of our pun as well as New Media's relevance to art practices today demand that we take the matter with utmost gravity. Why? To paraphrase George Grosz, "This is bloody serious".

What may seem like an offhand reference to Richard Hamilton's seminal collage, *Just What Is It that Makes Today's Homes So Different, So Appealing?* is actually a question that probes into the antecedents of New Media.² In the late 2000's, there was a resurgence of pop in the forms of Japanese neo-pop, Murakami's Superflat paintings, and the American 8-bit movement. Pop cultural phenomena of (micro)celebrity, allowing everyone their 15 seconds of fame on YouTube, and an all-pervasive consumerism also mirror Hamilton's collage. The age of New Media has a curious relationship with Dada and early pop movements, with differences lying in an atomization of social and cultural scales through progressive, rhizomatic distribution in increasingly decentralized networks. However, key similarities remain in place.

Hamilton's collage work undoubtedly emerges from his 1950s research on Dadaism. In 1952, after meeting Roland Penrose at the Institute of Contemporary Arts (ICA) London, Hamilton was introduced to Duchamp's Green Box notes. Hamilton later developed a friendship with Duchamp, which among other things resulted in a replica of *The Bride Stripped Bare by Her Bachelors, Even (The Large Glass)* for Hamilton's curatorial retrospective of Duchamp at the ICA in 1966. From *Just What Is It that Makes Today's Homes So Different, So Appealing?* Hamilton distills Dada collage reminiscent of Hannah Hoch's *Cut with the Kitchen Knife* and juxtaposes it with a mix of post-atomic anxiety and consumer and kitsch giddiness over the excesses of the industrial 50s. This actually makes great sense; given that Hamilton was also active in the Campaign for Nuclear Disarmament, this artwork echoes the moral outrage after World War I that resulted in the emergence of Dada.

Just What Is It that Makes Today's Homes So Different, So Appealing? also echoes a post-World War I elegiac feeling in Weimar culture, expressed through Adorno's *After Auschwitz*.³ Briefly put, Adorno states the impossibility of art's justification after the atrocities of the Holocaust; but

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1. Domenico Quaranta & Patrick Lichty, *Email Conversation*, November 2007. In a personal email regarding the creation of an essay for the *Holy Fire* exhibition at IMAL New Media Center Brussels, Quaranta commented that the original question which frames this essay was "perhaps a little silly, (but asked a good rhetorical question)".
 2. Richard Hamilton, 'Just what is it that makes today's homes so different, so appealing?' <http://artarchive.ucr.edu/displayimage.php?album=517&pos=0>.
 3. Theodor Adorno, *Can One Live After Auschwitz?: A Philosophical Reader*. Stanford, CA: Stanford University Press, 2003.

as with Dada, Hamilton persists. However, in contrast with the brutal satire of Dada such as that found in Grosz's publication *Der Blutige Ernst* ('Bloody Serious'), Hamilton balances his critique with a playful style reflecting the advertising and spectacular designs of America's automotive industry. Here, Hamilton incorporates signifiers of the idealized 'new' life: Ford, Mr. Universe, pulp romance framed as art, a scantily-clad burlesque girl, all in a new California living room. In many ways, Hamilton ironically advertises the marvelous new world of industrial plenty born of dual atrocities. But as Hulsenbeck once said, "we lived in Dada times", so Hamilton's piece speaks to a neo-Dadaist sensibility that can also be heralded as the beginning of pop.⁴ Hulsenbeck lived in Dada times; Hamilton later ushered in pop with a Dada sensibility, and as we'll see, there are echoes of all this in the era of New Media.

Segue: Hamilton, Consumption and Technology

Hamilton represents numerous bridges between the early 20th century avant-garde and fin de millennium technological arts. For example, the Independent Group, of which Hamilton took part, had a keen interest in ideas expressed by thinkers of the electronic age such as McLuhan and the cybernetic theorists. In addition, the ties that the Independent Group had to the ICA London led to Jasia Reichardt's seminal curatorial project at the ICA, *Cybernetic Serendipity* in 1968.⁵ Interesting to note is that Reichardt also consulted with Max Bense, father of the Stuttgart School of computational art – yet another link between Dada and the ICA. ICA also brought about the emergence of early New Media artists such as Roy Ascott, a student of Hamilton who would lead the Caiia-STAR program and the Planetary Collegium, a leading institution for speculative thought in art and technology. From this, it only makes sense that Hamilton's collage is actually a touchstone between Dada, neo-pop and New Media art.

Also, mass production and consumption have pivotal roles in the lineage leading from Duchamp to the digital. For example, the rise of cinema and mass media in the Weimar era prompted thinkers such as Benjamin to question the authenticity of the art object. Hoch and Schwitters perfected shattering art's authenticity as auratic fetish through collage and Merz-assemblage. Duchamp also pioneered this critique with his urinal, snow shovel, and bottle rack Readymades. Therefore, Hamilton's obvious influences from Hoch to Duchamp can be traced in how he remaps mass production and consumption, industrialization and its early avant-garde interrogators onto consumer culture, mass media and the telematic and cybernetic developments of his own time.

Just as Duchamp questioned the mass object in the form of the Readymade, Hamilton also presages the emergence of mass consumer culture in his collage. The signs of mass excess are evident through the invocation of Mr. Universe, the new car, the California home, the girl-as-fetish/fetish-girl, and even the electronic media devices in the collaged room, announcing the great ironies of pop. Pop, as Warhol showed, positions mass media communications technology firmly within the production of contemporary art through the use of film, commercial printing techniques and video. Therefore, the progression from fetishization of the mass object (Duchamp) to mass consumption (Hamilton) and mass media (Warhol) to mass storage (New Media) is not so outlandish.

4. Richard Hulsenbeck, quote from *Germany-Dada* (video), Specialty Video Company, 1987

5. Jasia Reichardt, *Cybernetic Serendipity Catalogue*, New York, New York: Frederick A. Praeger, 1969.

Lastly, there has been a change of scales in the production of objects from the 20th century to the first decade of the 21st. For example, Duchamp's Readymades still imply the centrality of utility: the coat rack, the snow shovel, the urinal. These objects, while mass-produced, are still 'objects of utility' to be consumed by institutions as much as individuals. However, in the era of Hamilton's collage, excess from wartime production created consumer goods focused on pleasure. *Just What Is It that Makes Today's Homes So Different, So Appealing?* exhibits themes of the individual house, the profusion of luxury and comfort items like electronic appliances, entertainment and lingerie that were expanded through Warhol's legends of soup, Elvis and Marilyn Monroe.

A key difference seems to be in the scale of the commodity object in those 40 years. In the mid-50's the economy suddenly shifted to individual consumption as society encouraged individuals to buy new homes, cars, TVs. All of these products are relatively significant in size; they are 'durable' goods, representing industry as such, but they also signal the rise of throwaway consumer culture alluded to by pop and referenced in Hamilton's collage through the framed *Young Romance* pulp magazine displayed on the collage's back wall. This illustration of the coming atomized, ephemeral culture presages the 'micro' or even 'nano' cultures of New Media.

New Media Pop: Microatrocidity, Microcelebrity and Snack Consumer Culture

Up to this point, I have constructed a matrix of similarities between developments in art and cultural milieus. From the Dadaists, including Grosz, Hoch, Schwitters and Duchamp, to Hamilton and the decades of pop and cybernetics, trajectories of production, concepts, cultural trends and technological changes create vectors towards the current New Media age. There seems to be a cyclical relation between significant aesthetic developments, cultural upheavals and resultant market effects that engage with recurrent subjects. The cultural outcomes of fame, atrocidity and consumption have become deconstructed, 'miniaturized', and ephemeralized. These nano-effects, as we'll see, are essential to understanding *Just What Is It that Makes New Media So Different, So Appealing?*

MicroCelebrity

One of the defining elements of the pop movement is its play with and criticism of exploding mass media. Hamilton opens this dialogue by referencing the profusion of media, the pulp magazine as painting, the tape deck, TV and the formal nature of collage itself. This is only logical, as Dadaists like Hausmann and Grosz were some of the first to hint at tactical media by using mass media to create notoriety. Of course, Warhol would further expose the link between media and celebrity through silkscreens, films and publications (*Interview* and his *Screen Test* series), and by pronouncing that in the future everyone would have '15 minutes of fame'.

Now fame lasts seconds at a time, at best. A recent issue of *WIRED Magazine* speculated about microcelebrity in which people develops a media following through their blog, YouTube posts, Second Life or World of Warcraft exploits, and even entire art movements emerge through tumblr social image blogging accounts.⁶ A few hundred to a couple thousand individuals today mirror the niche culture of cable television, blog aggregation and customizable media. In short, the

6. Clive Thompson, 'Clive Thompson on the Age of Microcelebrity: Why Everyone's a Little Brad Pitt', 2007, http://www.wired.com/techbiz/people/magazine/15-12/st_thompson.

fracturing of mass media is 'you-media' as once-centralized broadcast and distribution channels have become targeted at individuals who need only to consume what they desire, in bite-sized chunks. Notoriety and celebrity are now fifteen fan emails, pingbacks to your blog or a thousand hits on YouTube.

In addition, the New Media age is a recursive pastiche and mash-up of styles and influences in which the movement – the 'ism' – has imploded, where neo-pop (including Superflat and 8-bit) means consuming anime, fan culture and video games and expressing concepts in terms of the local context, and where the contemporary art world mirrors the net and cable television by splintering into hundreds of micro-genres. We now have 500 channels, but is anything on?

Microatrocitiy/Microeconomy

Both Dada and pop, if we extrapolate from Hamilton's influences, sensibilities and status as seminal progenitor of pop, were born of atrocity: World War I, the Holocaust and Hiroshima. However, we live in the era of New Media and micro-atrocity in which the notion of terror is simultaneously atomized and ubiquitous. While conflicts or genocides such as Rwanda, 9/11, Kosovo, Darfur and Iraq (wars one and two) create horror, their media attenuation and visibility only make them seem more frequent and elicit a feeling of abjection in viewers. In line with Baudrillard's assertion that "The Gulf War Did Not Take Place",⁷ perhaps *abstraction* via distortions created through mass media (CNN) turned the first Gulf War into a video game. In addition, while the two World Wars were life-altering events and major disruptions, G.W. Bush encouraged people after 9/11 and in the early days of Iraq War II to "get back to normal" and go shopping so as not to disturb the American consumer economy.

The irony of neo-pop culture is that its legacy of pop, consumerism based on post-war excess industrial capital has proliferated through networks and become distributed through global production. This state is a counterpoint to Baudrillard's idea in the *Transparency of Evil*⁸ that cultural functions have been rhizomatically distributed everywhere except their source: politics becomes sex and sport, sport becomes war and politics, etc. Everything has semiologically decentered, or as McLuhan said, the walls are all knocked out.⁹ As a result, cultural artifacts, war, economy, art movements and consumption, are (largely) ephemeral. Pop's 'quick hit' and flatness have created an equally flat culture equivalent to a sea of quantum noise where events' importance are ultimately devalued and art cannot demand more than fifteen seconds of attention, let alone fifteen minutes.

Microproduction

It may seem shocking, but the ephemerality of attention is a result of the excess capacity of media production by networked culture. Chris Anderson's book *The Long Tail* states that the explo-

7. Jean Baudrillard, *The Gulf War Did Not Take Place*, trans. Paul Patton, Bloomington, IN: Indiana University Press, 1995.

8. Jean Baudrillard, *The Transparency of Evil: Essays on Extreme Phenomena*, New York, New York: Verso, 2009.

9. Marshall McLuhan, *Marshall McLuhan on YouTube*, Clip compilation, posted October 12, 2006, <http://www.youtube.com/watch?v=A7GvQdDQv8g>.

sion of media production will create increasingly specialized niche cultures and genres.¹⁰ If one is to apply the principles of supply and demand, products in expanding niche markets will devalue and proliferate like dust. The movie goes from the episode to the webisode to the podcast to the YouTube clip. The record album returns to the single track or even the sample of three seconds or less (if one is to avoid copyright issues). The mass-market toy becomes the limited edition (think of designer vinyl toy boutiques) and one-off fabrications made possible by home rapid prototyping technologies. It is the smorgasbord of culture, reducing fame to microfame, production to microproduction, and consumption to microconsumption.

Microconsumption or 'Snack Culture'

As culture flattens and atomizes into the long tail and niches increase due to exponential production, the neo-pop era becomes one of microconsumption or 'snack culture', as proposed by Nancy Miller in *WIRED*. 15 second clips, 99 cent singles, free wallpapers and do-it-yourself weekend science projects.¹¹ Online environments like *Second Life* value their currency at a virtual dollar equaling one fourth of a cent; entire clothing ensembles are a dollar. It is the era of the dollar menu at McDonald's, a dollar music track, a dollar burger, a dollar car in your virtual world. Everything's a dollar or less (metaphorically speaking). It's YouTube and YTMND.com (a website with single-page web media 'vignettes', largely of pop cultural and crass social themes) and experiential snack culture of the quick, fun and ephemeral. As Anderson states, there are shiploads and servers full of it; immense quantities of cultural fodder for pennies on the dollar that consumers can graze upon. Welcome to the cultural Value Menu!

Conclusion

Ironically, what was first posed as a tangential question became a knife that cuts to the heart of issues in the New Media era. *Just What Is It that Makes New Media So Different, So Appealing?* gets to the quick of quantum media culture, where one is continually bombarded with streams of snack-sized cultural content, celebrity, microcurrency, micro-holocausts, pocket toys and forgettable webisodes. Forget fifteen minutes, we all get fifteen die-hard fans, from Bruxelles to Bangalore. That's actually very democratic: everyone and everything is roughly equal, culturally speaking. Grab your favorite media clip, then format your digital video recorder and get ready for the next snack. New Media has the capacity to be what you want it to be, when you want it, where you want it, on whatever platform you wish. That's sexy. It's different. It's appealing! But Duchamp and Hamilton saw it coming. It's bloody serious, but what fun!

Here, have some culture. Have all you want. Don't worry, we'll make more.

10. Chris Anderson, *The Long Tail: Why the Future of Business is Selling Less of More*, New York New York: Hyperion Press, 2006.

11. Nancy Miller, 'Manifesto for a New Age', *WIRED*, 2007 <http://www.wired.com/wired/archive/15.03/snackmanifesto.html>.

RECONFIGURING A HISTORY OF NEW MEDIA

In historical practice of the technological age, questions about the formation of critical discourse arise when there are significant changes in cultural practice or technology. The historiographical question of radical shifts in artistic practice during a period of rapid technological change creates particular discursive and analytical challenges for the scholar or theorist. How can there be discussion about bodies of work that are currently in a state of constant revision or even stages of nascent development? The institutional lag between practice and analysis that accompanied the advent of video art in the 60s and 70s is even more pronounced in contemporary trends of technological acceleration in the arts. Historiographical praxis in contemporary art is further complicated by the rapid emergence and mutation of genres and memes within computer-based (digital) art, as well as works exploring biotech, robotics, social media, distributed networks and electronics. The current environment of rapid change questions the viability of any master narrative or common taxonomy or grammar when the constant flux of the subject in question suggests the need for in situ revision of analytical methodologies. To address the issues of the currently unabated milieu of change, analysis must reconsider modes of engagement with the subject to incorporate certain qualities and strategies that its 'objects' of inquiry exhibit.

When looking at historiographic methodologies in regards to New Media art, one must consider the contextual frame in which previous genres have been placed. One can cite master narratives of iconography, symbolism, and the like. But 20th century theorists such as Barthes write of the camera lucida in terms of technique and the emergence of technological tools that often overshadow the more complex contextual matrix within which the work is situated.¹ It would be reasonable to assume that scholars such as Newhall, by virtue of their given field of study, would place some emphasis on the developments of photographic technology.² However media scholarship of the last century or so frequently classifies works through scientific advances and technological innovations, e.g. studies of perception and the nature of light, in context with the fin de siècle movements such as Impressionism, and so on.

Contemporary practices of the latter half of the 20th century have had the luxury of relatively well-defined technological advances; the most striking of these would be the video art in the 1960s. However, with the multivalent nature of technological and 'new' media as such,³ the technical nature of engagement with the subject varies widely, changes rapidly, and creates very porous boundaries between previously distinct disciplines such as robotics, telepresence, performance art, net art and so on. What may be needed are approaches to the analysis and criticism of New Media art that reflect structural or representational aspects of the works themselves.

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1. Roland Barthes, *Camera Lucida*, New York: Hill and Wang, 1982.
 2. Beaumont Newhall, *The History of Photography: From 1839 to the Present*, The Museum of Modern Art, New York, New York, 1982.
 3. Lev Manovich, *The Language of New Media*, Cambridge: MIT Press, 2000, pp.18-55.

An ongoing thread in the discussion of critical and historiographic practices of New Media art relates to whether any meaningful discussion can be achieved with extant vocabularies. Robbin Murphy, during the Walker Art Center's *Shock of the View* online forum in 1998, argued for the creation of new descriptors for this field of media, at which time many artists were, and are crafting neologisms to attempt to describe the attributes of their work.⁴ Notable amongst these is New York-based virus artist Joseph Nechvatal, who has coined the terms 'Viractual' and 'Cybist' with very clear definitions, thus creating a localized discursive strategy for his body of work.⁵ In fact, during a Crumb New Media curation maillist discussion of such taxonomies, curator Steve Dietz paraphrased Hakim Bey by suggesting that in order to talk about such radically fluid media, what might be needed is a 'Temporary Autonomous Nomenclature' for the discussion of works at certain times.⁶ Such tactics would be useful in the localization of discourse within a tightly defined context, as suggested later. In light of this, the usefulness of ad hoc vocabularies must balance with the potential for a taxonomic determinism that implies a need for expanded vocabularies for fashion and affectation.

An expanded terminology may be of some use in the critical analysis of emergent technological art forms; such verbal tools are but tactical means of expression for a larger strategy. As the topic at hand is critical methodologies that reflect properties of the medium itself, it is crucial to think about the criteria under which any historiological framework of New Media analysis can be conceived. Perhaps we could consider the distinctive qualities of New Media, paying homage to David Antin's early essay on video art.⁷

What then distinguishes New Media from previous cultural forms? Lev Manovich, in *The Language of New Media*, suggests five principles of New Media that are specific to its very nature.⁸ The first is numerical representation, or the digital quality of New Media. Second is that of modularity; the fact that New Media works are not continuous but made up of modular chunks of information, program code and media 'lexia'. Next is automation; or the use of computational processes in the functioning of these works. The fourth is variability, or that New Media can have very large sets of possible representations of the same work. Finally is that of transcoding, the quality of New Media to have multiple translated levels of meaning, both human and machine, depending on their various levels of interpretation. Although a full expansion of these principles is beyond the scope of this discussion, we can ponder these distinctions as well as some of the resultant properties, such as ephemerality of the medium and rapidly shifting representational or developmental methods (closely related to variability) as building blocks of a historiological methodology of New Media.

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4. Robbin Murphy, *Shock of the View* online forum, Walker Art Center - Gallery 9, Minneapolis, MN, 1998, <http://www.walkerart.org>.
 5. Joseph Nechvatal, *Towards an Immersive Intelligence: Essays on the Work of Art in the Age of Computer Technology and Virtual Reality*, New York: Edgewise Press, 2009.
 6. Dietz, Steve, Artist/Critic/Curator thread, Crumb New Media Curating online maillist, 6 February 2002.
 7. David Antin, 'Video: The Distinctive Features of the Medium', *Video Culture: A Critical Investigation*, ed. John Hanhardt, Layton, UT: Gibbs Smith, 1986.
 8. Manovich.

Following the modularity principle, syntax and distinctions are essential components in a methodology, but only components. To synthesize these elements as possible critical strategies, a basic example would make a localized study of the work in its specific cultural context and time of its implementation in terms of the surrounding social/political/economic/etc. matrix in which it operates. Some tactics for such an approach could include consensual ad hoc definitions and nomenclature adopted for the examination of specific works or events. This would reflect the modularity and variability of New Media but also has limitations in its very specificity.

Although tightly focused and localized studies can help us understand the function of New Media works in a given cultural environment, the dynamic nature of many genres such as net art problematize such approaches. A conversation with curator Christiane Paul revealed that much contemporary technological art, especially those using networks and game engine technologies, are in a perpetual state of 'beta'.⁹ In these 'works', there is an ongoing process of project development of an indeterminate length and frequency, making it nearly impossible to quantify many projects as discrete bodies of work. An apt metaphor for this is one that a colleague gave me, that of trying to nail half-congealed gelatin to a wall. Of course, the gesture itself is one of futility, as the gelatinous mass slides downward a certain amount with the driving of each nail, resulting in a series of records (nails) documenting the trace of the wayward confection in its travel downwards.

Although this analogy may seem fanciful, it can offer some insight into how one could document ongoing works, especially net art. In the previous example, a given process was studied at intervals, in terms of significant events and developments for the given period. The result might be an epistemological arc for that work. This interstitial methodology could create interpretive maps of the development of process- or conceptually-based artwork. In my case, the cultural context of a project would be examined at each interval, creating a larger discursive matrix across time to describe the procedural nature of the work.

If the analogy of documenting a process through interstitial analysis is taken further, it is possible that the analysis becomes an ongoing dynamic process in itself. This differs from traditional historiographical methods because the analytical process would not generate discrete documents over time. The result would perhaps be a continually revised record or set of records, databases, etc. that would be in continual revision as a singular or collaborative process, reflecting the process-based nature of the work under scrutiny. Simple examples would consist of maillists like CRUMB, Thingist, or Nettime but could expand in complexity to online collective journals.¹⁰ My metaphor would incorporate some of Manovich's principles of New Media, such as modularity, automation or variability. Such documents would be broken into discrete lexia like the paragraphs and media clips as in my *Grasping at Bits* essay,¹¹ or ones that would be continually revised or

9. Patrick Lichty, personal correspondence with Christiane Paul, May-August 2001.

10. CRUMB New Media Curating maillist, <http://www.crumbweb.org>; Thingist maillist, <http://list.thing.net>; Nettime maillist, <http://www.nettime.org/>.

11. Patrick Lichty, *Grasping at Bits: Art and Intellectual Control in the Digital Age*, Cyberarts 2000, Ars Electronica Center, Linz, Austria 2000.

expanded or possibly parsed by algorithmic means.¹² Taken to logical extremes, this methodology would become parasitic databases linked directly to a given online work continually updated in

12. Personal conversation with Martin Wattenberg and Marek Walczak, NYC, November 30, 2001. The possibility for a dynamic document that updates itself relative to other documents using computational techniques such as discrete rhetorical analysis would be one experimental model.

tandem with scholarly interaction. This approach would tightly integrate principles of New Media practice within its own critical analysis.¹³

Variability as defined by Manovich is the principle that a New Media work can exist in 'different, potentially infinite versions' given the technological and representational context under which the given work is experienced.¹⁴ John Ippolito has also transposed this principle into curatorial practice with the Variable Media Initiative in which general parametric guidelines are created for the representation of a given work.¹⁵ One case study is Dan Lavin's fluorescent work. To allow for upkeep, spare fluorescent tubes were stored for the more obscure colors, but in the late 90s a tube that was extremely common at time of inception had been phased out of production. Therefore, the Variable Media Initiative attempts to work with artists to determine general guidelines for display and curation, not in antiquarian terms, but as sets of parameters for the representation of a given work.

I would posit that a case could be made for some form of variable historiography or epistemology of New Media that adjusts its discursive strategies to fit the localized context of a given piece of work and the milieu in which it is being discussed. On the surface, this may seem like poststructuralism, but this strategy could allow for multiple, simultaneous interpretations that vary over time as the work's context within the given cultural and intellectual environment changes. Perhaps, to follow from Bey to Dietz, one could extrapolate a form of Temporary Autonomous Epistemology to allow for localized discourse of works over time.¹⁶ This is probably the most nascent of the methodologies under discussion, and it is itself in a dynamic state of development.

Before concluding, another point of note is that the majority of new theory regarding New Media art originally did not come from historians, but from artists, theorists, philosophers, critics, etc. This can be seen throughout the modern era with Benjamin, Adorno and the Frankfurt School, Foucault and other postmodernists, and practitioner-theorists like Ostrow and Manovich. From my experience, the role of many historians since the modern era appears to be the creation of narratives and classifications through various methodologies, and not from building new frameworks within which art can be discursively situated. Perhaps through Manovich's inference, art and language have become synonymous under electronic media, and it will be necessary for historical practice to operate within a more theoretical context to address contemporary practice.

The scope of alternate discursive methodologies for analyzing New Media discussed here is far from encyclopedic, but these discourses allow historiographical practices that may more aptly resemble the cultural forms that they address. The need for new taxonomies and critical strategies stems from the emergence of cultural forms that can be slippery to classify but require vocabulary and syntax for a discussion to take place. However, in order to more aptly describe frequently vague new genres, there is the possibility that conventional metanarratives may fail, resulting in highly dynamic histories and tightly contextualized discourse. Could Bill Jones be correct in say-

13. Such an approach would satisfy Manovich's principles of automation and modularity.

14. Manovich.

15. Ippolito, Jon, Variable Media Network, <http://www.variablemedia.net/>, 2000.

16. Dietz.

ing that art is indefensible, and that New Media art is odd for eluding clear boundaries of genre and classification?¹ Some artists would argue that this is the case. But in the meantime, there will be those performing critical inquiry that will require historiological and theoretical strategies with which they can better articulate their ideas. In so doing, they will need to consider these epistemological questions in terms of the nature of the subject itself. As the field of technological arts continues to develop in distinctive ways, equally innovative strategies will be required to address the dynamic and novel natures of these cultural forms.

1. Bill Jones. *Interaction: Artistic Practice in the Network*, p. 85, Scholder & Crandall, ed. Distributed Art Publishers, NY NY, USA, 2001.

DE-REZZING HISTORIES: NEW MEDIA AS EPHEMERAL RECORD

Letters in the Ether

The objects accumulated on my computer desk frequently accentuate the paradoxes of the technological age, particularly how Infoculture relates to the physical world. In this case the item in question is a beautifully bound volume of correspondences between early 20th century German artists Wassily Kandinsky and Gabriele Munter.² Letters and sketches such as these are often referred to as ephemera, those transient, incidental documents that surround a person but are not necessarily related to their life's work. As I thumb through the letters exchanged between the two lovers, I realize their importance to me is not so much due to the historical relevance of the writings but to the fact that the book exists at all. This volume, or others such as *The Letters of J.R.R. Tolkien*, cause one to wonder about the nature of communication in virtual society whether historicity is even possible after the Web.³ What is the nature of historical traces in the digital age, and how will history be constructed by transient online archives that evolve over time? Will the loss of materiality in daily communication mirror times of oral transmission?

Some of these answers can be ascertained by examining the idea of ephemera and the digital record. The late 20th century is not unique in questioning what cultural shifts stem from rapid technological change. Perhaps more relevant is the relative increase in change between industrialization at the turn of the 20th century and the digital era. For example, the turn of the last century witnessed the rise of photography, film and cinema as new expressive forms that called into question the authenticity of an art work, as discussed by Benjamin in his seminal essay. In the following years, communications media has proliferated with video, the Internet and distributed technologies. There appears to be a trajectory moving towards even greater 'ephemeralization' of media, a trend reflected in the media arts.⁴ This path appears to stem from obsolescence, technological determinism and an increasing lack of materiality in the production of cultural artifacts.

Obsolescence and Ephemerality

Verifiable, accurate references have traditionally been held as a cornerstone of scholarly rigor. Primary sources such as books, journals and newspapers as well as personal letters such as Kandinsky's and Munter's are the foundations of such scholarly work, since historical accounts of the traces that individuals, institutions and societies left for posterity can be assembled from them. Until the last hundred years or so, archival records have been considered 'authentic' in light of their materiality and

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2. Annegret Hoberg, *Wassily Kandinsky and Gabriele Munter*, Munich: Prestel-Verlag, 1994.
 3. Humphrey Carpenter, *The Letters of J.R.R. Tolkien*, Boston: George Allen & Unwin/Houghton Mifflin, 1981.
 4. My term is based on Baudrillard's concepts of the progressive shift of information-age society into simulation, which are repeated in nearly all of his written works. Examples given are the emergence of i-mail, web texts, telepresence through remote cameras (such as *The Amazing Fish-Cam!*), and other simulated spaces that stand in as doppelgangers for traditional modes of interaction.

the legitimacy imbued upon them by publishers and media producers. But the protocols of the dust-filled past no longer apply to digital information entirely free of the material bonds of paper or film.

Periodicals and newspapers such as the *New York Times*' online platform contend with the Silicon Valley media organs *WIRED* and TechCrunch for the eyes of the online public. Academia is investing huge sums of money into online archives and curricula. These projects suggest vast archives existing without any hardcopy referent whatsoever. However the online archive is already revealing its capriciousness and fluidity, foreshadowing the challenges of the historical record in a digital milieu.

Many of these challenges relate to the legitimacy and materiality of the archive. Benjamin posited that authenticity in art or other cultural spaces is related to the existence of an original that may then be reproduced.⁵ This apposition requires a physical referent, but in a purely digital setting the closest analogue to a physical record are microscopic engraved pits in an aluminum disc or opposing charges on a piece of magnetic media. This condition has some importance, as mass storage represents a more impermanent form of a physical archive, but the data on an Internet server does not constitute an 'original' per se, no more than any block of data, in its infinite reproducibility, can make a claim to originality. Legitimacy then returns to the testimony of 'expert' individuals or institutions that confirm such veracity.

An apt metaphor for the construction of history, legitimacy, and the ephemeralization of the record comes from George Pal's 1950's film adaptation of H.G. Wells' classic novel, *The Time Machine*.⁶ During a passage set in the far future, the protagonist accompanies one of the childlike, surface-dwelling Eloi to a temple of sorts, where she removes a small silver disc and twirls it on a translucent tabletop. The platform activates and plays recorded media chronicling past events in what we assume is the history of the Eloi (or perhaps the distant past of the subterranean Morlocks?). The resemblance of the silver disc to a DVD-ROM is striking, and the setting of the temple is fascinating, as it signifies the legitimacy that contemporary society ascribes to technological media. In this scene, what was recorded, by whom, for what purpose and how long would was that record designed to last?

Diverging slightly from considerations of legitimacy, I want to explore the transient nature of digital media itself. This transience is due not only to the physical structure of the media, but also to the mode in which its information is interpreted and its subsequent obsolescence. In my two decades of involvement with computer technologies, at least five forms of floppy disk data storage, six entire computer operating systems and three digital alphabets have become obsolete.⁷

5. Walter Benjamin, 'The Work of Art in the Age of Mechanical Reproduction', *Illuminations*, ed. Hannah Arendt, New York: Schocken Books, 1988.

6. George Pal, *The Time Machine*, film adaptation of the H.G. Wells book, MGM, 1960.

7. Floppy disk types: 8" single-sided 8" double-sided 5-1/4" single-sided (single density - 170k storage capacity), 5-1/4" double-sided (single density - 340K capacity), 5-1/4" double-sided (high density - 1.2M capacity), 3-1/2" double-sided (single density - 720K capacity). Operating Systems: PrimeOS (Prime mainframes), TRS-DOS (Radio Shack personal computers), AtariDOS (Atari personal computers), Amiga Workbench (Commodore Amiga computers), CP/M (Various Z-80 based computers), C64DOS (Commodore 64 personal computers), GEM (various computers, notably Atari ST series). Alphabets: ATASCII (Atari's extended ASCII code). The following computers also utilized extended ASCII alphabets: Timex Sinclair Z-80, Commodore PET, Commodore 64, Commodore VIC-20.

I may exaggerate, but in many ways this represents a similar transition from cuneiform to modern Portuguese or from papyrus to memory stick in slightly less than one human generation. When American society has lost the records necessary to reconstruct the thrusters for the Saturn V rockets, will there be a Rosetta Stone translation device for ancient digital records that have not degraded? How will legacy media be read? The obsolescence of the commonplace CD-ROM is now evident with DVD-ROM and Blu-Ray standards.⁸ In fact, technological luminary Nicholas Negroponte⁹ and the *WIRED* editorial staff have heralded the death of the book and of the World Wide Web as we know it.¹⁰ In their place, ubiquitous communications technology that we need never log off of will follow us wherever we go and surround our living spaces.

I have experienced the ephemeral nature of communications and discursive practices on the Internet on many occasions from first-hand experience. Some years ago I looked up a topic on a search engine.¹¹ The exact topic is not important, but before me were three hundred and seventeen matches to my query, inviting my visit. However, as I clicked each entry, I found that thirty-five percent of the listed URLs were no longer present, and a number of these were academic listings for reference material. Apparently, entire bodies of work had disappeared into the ether of the Internet with the touch of a delete key.

This is most evident from the ramifications of the June 2001 United States Supreme Court ruling on *New York Times Co., Inc., et al. versus Tasini et al* stating that online publishers were required to pay freelance journalists separately for articles republished in both print and online formats.¹² The result of this outcome is that the *Times* was left with the choice of renegotiating with 27,000 writers for over 115,000 articles or merely deleting all these articles from the *Times* website unless the writers signed a release, which was the case. Consider that the analogue equivalent of this action would require thousands of *Times* representatives locating and destroying every printed issue and summarily excising its text. The digital archive disappeared from the web with a much simpler 'search and delete' mission.

We can nevertheless find grassroots proponents for a mass Internet archive of cultural data. Cultural lobbyist Brad Brace suggests a Xanadu-like archive composed of small redundant archives on personal machines to be accessed by anyone who wishes to do so.¹³ However, intellectual property, personal initiative and the implementation of the technology itself make such ambitions elusive. So, the digital archive, while maintaining aspects of its physical predecessor, remains ever in flux – an issue that cultural practitioners must be aware of.

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8. Although DVD technology makes allowances for CD-ROM technology, we cannot assume that future technologies will support legacy (older) forms of media. The likely scenario is that by 2015, most CD-ROMs may be considered legacy technology supplanted by newer technologies.
 9. Nicholas Negroponte, *Being Digital*, Cambridge, MA: MIT Press, 1995.
 10. 'Kevin Kelly and Gary Wolf 'Push!', *WIRED Magazine*, San Francisco, CA, April 1997. http://www.wired.com/wired/archive/5.03/ff_push.html
 11. 21 May 1997.
 12. *Tasini vs. New York Times*. Available online at Cornell University's Legal Information Institute: <http://www.law.cornell.edu/supct/html/00-201.ZS.html>.
 13. Brad Brace, various online conversations in 2000 regarding the nature of the archive in online spaces, on rhizome.org's listserv.

Digital media degrade at a fairly rapid rate, in less than a couple years, even stored under the best conditions. I have had DVD-ROMs separate and decay in under a year and a half. Not only is there archival degradation of online media by its very functioning, but every advance of technology requires upgrades to the archive, or it will disappear. We require resources of time and money for every change of a computer system's storage medium or for translating between operating systems. On the institutional and corporate scale, the expense may overwhelm fiscal policies and academic budgets, and frequently this is an opportunity for executives to excise data that are not in line with that institution's interests.¹⁴ At best, this could be taken as the elimination of valuable source works and at worst, blatant revisionism.

Fighting in the Graveyard: Dead Media, Books of the Dead, and net.ephemera

Much critical thought has been devoted to the cultural effects of the Internet's rapid growth, especially since the WWW came to widespread use in the early 1990s. Author Bruce Sterling, in response to the increasing number of outmoded media, wrote an essay entitled *The Dead Media Project: A Modest Proposal and a Public Appeal*, published in the cyberzine *boING boING* in the days before its evolution into a blog.¹⁵ In his text Sterling calls for the exhumation of past and present media to compile in a 'Media Book of the Dead', a tome designed to serve as a media paleontologist's guide to the Information Age. Sterling's reservations towards the virtual shift are obvious as he writes:

Think of it this way. How long will it be before the much-touted World Wide Web interface is itself a dead medium? And what will become of all those billions of thoughts, words, images and expressions poured onto the Internet? Won't they vanish just like the vile lacquered smoke from a burning pile of junked Victrolas? As a net.person, doesn't this stark realization fill you with a certain deep misgiving, a peculiarly postmodern remorse, an almost Heian Japanese sense of the pathos of lost things? If it doesn't, why doesn't it? It ought to.¹⁶

Currently, over 400 entries of extinct media have been submitted and catalogued to the Dead Media Project by various participants. The fact that the project evokes such a response by 'net. people' is a compelling argument for rethinking our relationship to machines and the media we employ. Ironically, only online archives of Dead Media Project entries exist at this time, and no Media Book of the Dead has yet been published.

Agrippa

Dennis Ashbaugh and William Gibson created a metaphor for the rapid degradation of technological memory in the electronic work, *AGRIPPA: A Book of the Dead*.¹⁷ The work consists of a diskette containing poetry by Gibson and a series of etchings by Ashbaugh. The diskette was created so that as the reader progresses through Gibson's poetic description of his father's life,

14. Marcia Goldstein, New York based corporate archival consultant. Personal conversation, August 1996.

15. Bruce Sterling, 'The Dead Media Project: A Modest Proposal and a Public Appeal', *boinG boinG Magazine*, pp. 10-12, 1995. http://www.alamut.com/subj/artiface/deadMedia/dM_Manifesto.html

16. *Ibid.*

17. William Gibson, *AGRIPPA (A Book of The Dead)*, Etchings by Dennis Ashbaugh, New York: Kevin Begos Publishing, 1992.

the program would erase each line until nothing is left except a blank disk. Conversely, the etchings were also chemically treated to fade in time, so that the person is left with blank media and only a subjective memory to refer to. The reader is reminded that a textual or visual record is far more dynamic now than in previous eras, changing rapidly over time or disappearing overnight.

Flux Records and Net.Ephemera

The practical aspects of 'backing up' the entire online world in hardcopy (despite speculative conversations with textile weaver W. Logan Fry¹⁸) are not viable due to the Web's dynamic nature and the sheer volume of information produced at a daily rate. Personal ephemera in the form of online photographs, online chat, e-mail and personal web pages problematize archival practice and question how much of the record will be offloaded in the form of print or other non-digital media. At the turn of the millennium, this author notices a 'carpe diem' approach to chronicling online culture at both personal and institutional levels through a compromise of digital and material practices.

The irony is that although technological culture increasingly takes the form of immaterial media, the legitimation of discourse or cultural event is still based on the printed page. *Net.condition*, one of the largest exhibitions of Internet-based art at Karlsruhe, Germany's Center for Art and Media (ZKM), was archived in a lavishly illustrated program.¹⁹ Reading the print catalogue for the SFMoMA's *010101: Art In Technological Times* exhibition caused me to wonder why a disk alone was not published.²⁰ It appears that Institutional practice must still legitimate itself through the materiality of printed objects.

This is no more evident than in the case of the Moving Image Gallery's net.ephemera exhibition, curated by Mark Tribe.²¹ In this exhibition, Tribe critiques the museological practices of exhibiting Internet-based art by way of physical ephemera. The gallery exhibits drawings, diagrams, notes, receipts and other physical artifacts involved in creation of works by artists who make some of the most ephemeral art to date, which reveals both the physical aspects of the virtual artist's practice, as well as the legitimating function of the physical referent. In the case of net.ephemera, the ephemera become Benjamin's authentic original and thus overshadow the virtual work.

The Variable Media Project draws from techniques used in conceptual, process and performance art to actively develop museological protocols for preserving and displaying media art.²² These criteria determine whether a work utilizes nonspecific (variable) media, the flexibility of its implementation, whether the piece is ephemeral in itself, the acquisition of ephemera helpful to restaging the piece and how to make this information available to potential re-users of a work. Although this initiative does not answer many questions about the authenticity of the digital piece

18. In conversations with W. Logan Fry, he makes the case that weaving is one of the first digital languages, and that computer information could be encoded into the weft of a cloth for later retrieval. Extremely intact fibers have been unearthed in Egyptian tombs, so this infers that information from the Internet could be encoded into cotton fiber for retrieval long after digital technologies that could read the textile have been long out of date.

19. Timothy Druckrey and Peter Weibel, *Net.Condition Catalogue*, Cambridge, MA: MIT Press, 2000.

20. SF MoMA, *010101: Art in Technological Times Catalogue*, SFMoMA, San Francisco, CA, 2001.

21. Mark Tribe, *Net.ephemera exhibition*, Moving Image Gallery, NYC, 3-31 May 2001.

22. Fran Cohen and Jon Ippolito, *The Variable Media Project*, New York, 2000, http://www.three.org/variable_media/.

(Variable Media renders this moot), by considering technological media as a process-based form of expression and by offering ways these works can be archived, the Project compellingly argues that new paradigms are needed to hold a digital record to any form of veracity.

But for now, I return to the material and immaterial cultural traces at the site of the archive. On a personal level, the dynamic nature of the Internet and the transient nature of the online record necessitate local archives. For example, I rarely delete any of my personal e-mails and make periodic backups of my mail archives, and have even begun to print them. In like fashion, a number of colleagues print hardcopy records of news articles and relevant texts immediately upon finding them, unless the winds of the Internet blow them away. Perhaps a compromise will be struck between the immateriality of virtual practices and a 'metatext' of the online world in hardcopy form in personal archives, similar to museum and gallery practice.

However, examining Kandinsky's and Munter's personal correspondence as historical record makes the ephemerality of digital history more poignant, given that millions of potentially important cultural referents are deleted each year. But then, faced with the abundance of anything (information, life, affluence), what is the lost potential of the omitted subject? The answer may lie in the subject's context, but then the importance of any record lies in a time that has not, or may never come. Technological society, at personal and macrocosmic levels, must utilize the best judgment possible to determine the importance of the historical record in light of its own ephemerality. In the future, will one be able to buy a multimedia reference work containing a critical analysis of a notable person's e-mail? Even if we can create archives of digital media, the life span of that medium, its tendencies to obsolescence and physical degradation, must be taken into account and made part of its subsequent use.

In The End

Don't misunderstand me. I was raised on technological determinism. I was given my first electronics kit as a child decades ago; the digital milieu is my home, and I am a native of that cybernetic land. The Pandora's Box of New Media opened and there is little turning back to pen and paper. A critical awareness of technological culture and the construction of the historical record is therefore essential. We must recognize the ephemeral nature of the online world and the pertinent issues shaping technoculture.

Could a book like Hoberg's *Wassily Kandinsky and Gabriele Munter* exist in the ephemeral world of E-mail? I think not. Poe's *The Purloined Letter* also seems unlikely in any other form than broad parody.²³ This is the nature of the beast, but as part of the culture that spawned these technologies, I admit my ambivalence. Electronic communication offers unrivalled speed and ease of use and is a great social leveler, putting anyone within reach of another's mailbox at the touch of button. But somehow, in return for fluidity and efficacy, technological society may have traded some of the tangible records of the past that today will become, and I feel a sense of great loss

23. Edgar Allen Poe, *The Purloined Letter*, 1845, <http://xroads.virginia.edu/~hyper/poe/purloine.html>.

BUILDING A CULTURE OF UBIQUITY

(This paper was presented as part of the Banff New Media Institute's Emotional Architectures summit in 2000. Although ubiquitous computing has become what we know as pervasive computing, the migration from the desktop to everywhere else still seems prescient. In some places, I have updated examples or eliminated anachronism, but the text remains relatively intact.)

Much of my personal interest in artistic practice concerns the exploitation of the 'cracks' in contemporary culture, including interstitial possibilities to deliver cultural content on platforms such as screensavers, Personal Digital Assistants, intelligent agents and microcontrollers, to name a few. In a talk called *The Next "Little" Thing* in 1999 at the Invenção symposium in Sao Paulo, Brazil, a lecture was given about artwork using these interfaces as cultural gaps that challenge monumental aesthetic forms, calling them 'small systems initiatives'.¹ Small systems initiatives use handheld, inexpensive technologies to communicate a cultural or aesthetic experience through a sense of personal engagement. My practical inquiry since that time has broadened to include information appliances, responsive environments and cybrids, or technologies that span across the virtual and physical.² Such a practical turn has revealed that through 'small systems initiatives' we can actually explore a culture of computational ubiquity.

As praxis shifts from the screen, to the palm, to the body, and into space, representations of aesthetic content also change. The interface may be a screen, dataglove, head-mounted display or responsive space, but representation on each display or input device indicates unique interactions and expressions. Perhaps the arc of computational interfaces can create some insight into how a culture of technological ubiquity will be constructed, and what modes of expression may emerge from it.

The proliferation of handheld information devices, personal computers and technologies such as augmented reality has already established a culture of the digital. Yet to claim that the simple presence of any technological agency will create its own cultural milieu is ill-founded, since widespread attention to technological art forms was not evident until the late nineties.³ The catalyst for the rapid expansion of a technological aesthetic has undoubtedly been the Internet, with its predilection for community building. For instance, the Walker Art Center's now defunct Gallery 9, with its extensive online archives and exhibitions, reflects art's move in the digital age to exploit a com-

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1. Patrick Lichty, *The Next 'Little' Thing: Small Platform Installation and New Media Art*, Presentation at Invencao 1999, Itau Cultural Center, Sao Paulo, Brazil, 1999.
 2. Peter Anders, *Envisioning Cyberspace*, New York: McGraw Hill, 1998. Anders uses the term 'cybrid' throughout his text to connote space in which the virtual and physical exist concurrently to the user. Augmented reality is an example of this concept, but is only one possibility of a cybrid space.
 3. In my involvement in technological art since the late eighties, it has taken until 2000 for institutions like the Whitney Museum of American Art to include predominantly technological art forms like Internet Art in their Biennial. Furthermore, the lack of a material referent for archival and objectification once again problematizes the institutional acceptance of these forms.

municative mode of expression. In fact, Steve Dietz of the Walker voiced his awareness of such a culture's emergence and his desires to support it: "If we are at the formation of a next phase of technological society, then let us partner with developers and scientists as practitioners of the arts to create a cultural content which is thoughtful and incisive to conditions of the society."⁴

These words reflect that a portion of the world is so saturated with information technology that a culture or set of cultures, niche to mass, has arisen that is unique to the electronic milieu. We are now surrounded by personal information devices, PDAs and the pervasive embedded chip like so many nanomite devices circulating in the air of Stephenson's *The Diamond Age*.⁵ As alluded to before, the catalyzing forces behind this cultural shift are connectivity between individuals and decentralized distribution of communication and content. As parts of the world move towards a culture of ubiquity and pervasiveness, a series of localities may serve as points of analysis for how cultural codes are communicated. Each locality (the screen, palm or pocket, body and public space) has a unique mode of representation that, as pointed out by Katherine Hayles, links the subject to both its signification and to embodied experience.⁶ These localities reveal systems of production, consumption and representation that create a possible ecology of signs within a culture of ubiquity.

The Screen

The screen is the most familiar mode through which we engage with the digital and technological, and as such, exhaustive studies have been made of our interactions and representations of it, so that more than a brief discussion falls outside of the scope of this article.⁷ Seminal works include titles by Sherry Turkle (*Life on the Screen*) and Brenda Laurel (*Computers as Theatre*). Most examinations of the ontology of the computer monitor reflect on its two-dimensional visual plane, just as many critiques refer to textual and cinematic analyses of the virtual screen. This is to be expected, as much of our familiarity with the computer screen is a cinematic engagement through games, graphics and animation or via the textual world of the word processor.

Another aspect of the screen, which we will see in other human-computer interfaces, is its performative quality. Following from Barthes' argument that the reader takes an active role in the construction of meaning, so now the computer user creates signification as much as the programmer or media producer.⁸ Case takes this position further by positing that the electronically augmented writer and reader have to follow certain ritualistic procedures inscribed by the program and operating system, creating a 'performative' aspect to mediated electronic interaction.⁹

4. Steve Dietz, Introduction for Mitchel Resnick's 'Perpetual Kindergarten' lecture, *What's Next Lecture Series*, Walker Art Center, Minneapolis, Minnesota, USA, 1999.

5. Neal Stephenson, *The Diamond Age*, New York: Bantam Books, 1995.

6. N. Katherine Hayles, *How We Became Posthuman*, Chicago: University of Chicago Press, 1999, p. 28.

7. The various disciplinary inquiries called forth by considering computer culture are vast and far beyond the scope of this paper.

8. Roland Barthes, 'The Death of the Author', *Image, Music, Text*, Ed. and trans. Stephen Heath, New York: Hill, 1977.

9. Sue-Ellen Case, 'Performing Lesbian in the Space of Technology: Part I', *Theatre Journal* 47(1):2, March 1995: 5-10.

I am positing that through any embodied form of information, the mode of representation, interaction and feedback creates a specific environment and context for communicating cultural content. In the case of the screen, we can see that it operates under certain rules – two-dimensionality, temporality and interfacing protocols such as the mouse, keyboard and its size – that present its unique ontology to us.

The Hand

Let us shift from the screen to the hand. From the creation of Mattel Electronic Grand Prix to the Nintendo GameBoy, PlayStation Portable and Tamagotchi, electronic games are the precursors to information appliances and have been with us for decades. The introduction of information processing (PDAs) and smartphones (distributed networks) allow aesthetic experiences in the interstitial 'cracks' of these highly localized cellular devices. Handheld devices and smart phones have become cultural content delivery platforms. These tools are technologies rich for exploration due to their diverse operating systems and their manifold sets of affordances.¹⁰

However, Wi-Fi networks bridge the gap between the Internet and cellular networks and are the next logical step towards ubiquitous transmission of cultural codes. The information appliance (handheld or smartphone) is a more intimate space than the larger, paper-like or cinematic space of the screen. Even at the level of the chip on a board-embedded microcontroller, they biometrically link the body to digital aesthetic space. A single experience could be distributed across numerous small devices in large collaborative interactions. On another level, their platforms can be precious and fetishistic, as is evident in specialty items like Japanese gadget watches and PDAs for teenagers of the 90s.¹¹

Yet I am interested in the information appliance as a site to subvert the intimate (both through violating the 'trust' of the OS/user interface and creating distributed collaborative spaces), to create networked experiences and to become emotionally involved in information structures. An example of this kind of subversion is a networked project developed by the generative music company Sseyo, the SseyoPhone, a cellphone 'app' that turned the phone into a generative DJ appliance.¹² Importantly, the phone allows individual expression through the appliance as its generative music algorithms create unique 'signature' ring tones and networked collaborative jams. The app's collaborative interactions in distributed environments blur the line between the artist and musician and the sampler artist and interactor. The phone itself illustrates the aesthetic object as McLuhanist prosthetic and its transparent (yet still physical) interface to the digital sphere. Its mode of representation is still rather straightforward, following semi-traditional compositional and game play processes.

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10. As of September 2000, I have only seen a mention on the Rhizome list of a PalmPilot-based poetry project and talk of using WAP-based cellular phones. Of course, handheld technology has exploded as the narrative of this essay unfolds in time. I have eliminated that anachronism from the original text while attempting to preserving its tone.
 11. On a trip to one of the local office supply superstores, I noticed a PDA-style information appliance that centered around playing GameBoy-style games and sharing notes between owners. The television ads consistently showed teenage girls using them, which is an interesting shift in demographic focus from the usual male audience. Unfortunately I do not remember the brand of the device.
 12. Tim Cole, Tim Didymus, et al. Sseyo Concept Phone, 2000, <http://www.sseyo.com> (Now Intermorphic.com as of 2009).

What is even more exciting is culture jamming possibilities for this type of platform, like Ricardo Dominguez' *Transborder Immigrant Tool*¹³. Dominguez' app runs on a \$30 GPS-enabled Motorola i455 cell phone, cracked so that a custom program can guide northbound border crossers. The *Transborder Immigrant Tool*, says Dominguez, would guide immigrants "to find water left by the Border Angels, where to find Quaker help centers that will wrap your feet, how far you are from the highway." The announcement of the Tool, not surprisingly angered xenophobic border protection groups like the Minutemen, and created a great deal of controversy at Dominguez' institution, UC San Diego. However, what is important in regards to the Tool is that it subverts the conventional role of the handheld, although it does retain the form of a personal helpmate.



Transborder Immigrant Tool, Image Courtesy Ricardo Dominguez.

Another concept that short-circuits the intimate level of trust implicit in the operating system is my series of Alpha Revision interventions called *The Graphic User Interface*.¹⁴ In this project, based on Perry Hoberman's *Error Message* series, the user is greeted by hostile and ambiguous error messages when the applet is enabled. Instead of the usual error message, the user is treated to insults, arguments about Microsoft and other comments that problematize the role of the smart device as subservient assistant. In the other *Graphic User Interface*, the desktop is replaced by the image of a mangled corpse, and the space of interaction is transformed into a forensic dissection table as parts of the dismembered body replace the program icons.

The Hand, Part Two

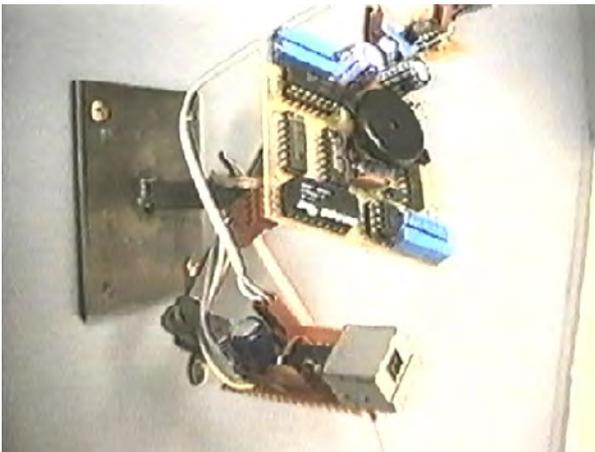
However, culture jamming and generative music collaborations represent only two examples specific to the hand or pocket device in which representation, interface and feedback combine. A

13. Mark Frauenfelder, *Transborder Immigrant Tool helps Mexicans cross over safely*, boING boING, <http://boingboing.net/2009/11/13/transborder-immigran.html>, 2009.

14. Patrick Lichty, *Alpha Revisionist Manifesto*, Leonardo, MIT Press, Cambridge, MA.

1998 work by Simon Penny and Jamieson Schulte entitled *Sympathetic Sentience*,¹⁵ creates “complex patterns of rhythmic sound through the phenomenon of ‘emergent complexity’” through a spatial matrix of twelve dedicated microcontrollers equipped with infrared transducers. Each device emits its own musical code through an infrared transceiver, which is then represented by audible tones. When the signal reaches the next device, its own algorithms add or subtract from the tonal sequence. The process continues until the tonal stream meets a certain informational saturation, and then it continues its mutation.

Although this installation has little interaction with the human onlooker, the devices exhibit a hand-sized dimension, and illustrate an embodied experience in which information in the gallery produces the mutating stream of musical tones, which become an aesthetic metaphor for the data itself. Such a space alludes to small Tamagotchi-like ‘love pendants’ of the late 90s that display various actions dependent on the attributes of the surrounding ones (programmed personality traits, gender, etc.). To take the metaphor even further, such a space could be taken to venues where Pocket PCs or other PDAs would establish their own emergent communities by transmitting contextualized data. The intimate experience duplicates itself as a local or handheld form, encompassing the local network and hopefully creating emergent communities based on further interactions with that data.



Video frame, *Sympathetic Sentience*, Image Courtesy Simon Penny & Jamieson Schulte.

Toys can also embody informational structures. Any number of intelligent toys has come on the market, but of interest are open-ended toys like the LEGO Mindstorms home robotics system developed at the MIT Media Lab.¹⁶ Mitchel Resnick works with small microcontrollers similar to those in the Mindstorms kit and used with the LEGO block system, to promote learning through cognitive computational tools.¹⁷ These toy-like tools create a culture of computational ubiquity

15. Simon Penny and Jamieson Schulte, 'Sympathetic Sentience', *Digital Traces*, Pittsburgh Center for the Arts, Pittsburgh, PA <http://www.pghcenarts.net/digitaltraces/index.htm>, 1999.

16. LEGO Mindstorms Robotics System, <http://www.legomindstorms.com>.

17. Mitchel Resnick, home page, <http://web.media.mit.edu/~mres/>.

and transparenance in the form of 'smart' beads, differing sensor blocks and mini-bots. Resnick fuses cognitive patterns of construction with LEGO blocks to impart knowledge about abstract concepts such as complexity and to create a more accessible technological interface for groups such as disadvantaged children.

Resnick's *Beyond Black Boxes* project also bridges the space of the body and handheld appliance.¹⁸ The devices consist of small microcontroller-driven LEGO bricks that exhibit simple functions. These blocks, called Crickets, are programmable devices that communicate, sense or perform other functions such as telemetry or research on social patterns such as viral transmission and so on. The Cricket devices use the toy as an intimate interface of information, and possibly could even slide between desktop computation and technologies such as smart clothing. They reflect the tool as agent of expression and resonate with the human sense of play with symbolic objects.

The Body

Resnick's work leads this investigation to the next step on our epistemic arc from the screen to the body. Just as the modes of communication, representation and interaction shift from desktop computation to handheld devices, what happens when the site of engagement moves from the hand to the body? What issues arise when the corpii of flesh and information are so closely signified? Technological artists have been wrestling with these concerns in virtual reality for some time, but I am less interested in the HMD-based sensorium than in the embodiment of information in the flesh itself.

In a 1998 lecture Jaron Lanier spoke of his interest in certain cephalopods in the South Pacific that communicate by changing the pigmentation and phosphorescence of their bodies.¹⁹ In this case, the display device is more akin to one that transmits between individuals than between the individual and the informational space itself. Lanier's metaphor seemed prescient when it was applied to a Philips Design project; it consisted of a jacket with a fiber-optic based display woven directly into the garment. Although the area covered on the jacket was relatively small and low in resolution, it illustrates the communicative potential for garments to overlay information relating to the individual's status, expressive nature or other metaphors for 'body language'. In such a device, the informatic realm could manifest externally and display 'bodies of text',²⁰ biometric information for those under medical care or concurrent levels of communication with human and electronic counterparts.²¹

18. Shown at Resnick's presentation at the Walker Art Center's *What's Next* lecture series, March 1999.

19. Jaron Lanier, Keynote lecture at Arts & Technology conference, University of Maryland College Park Center for Baroque and Renaissance Studies, October 1998.

20. Katherine Hayles in *How We Became Posthuman*, Laurie Anderson in *The Ugly One With the Jewels* and Gregory Little in his *Bodies Without Organs* project muse over the similarities between bodies of text (books) and bodies as text.

21. I posit throughout much of my writing that we communicate on concurrent channels in person, and when we create media, this may consist of various gestures, body languages, subtexts or concurrent media texts.

A work that engages with the concept of concurrent layers of meaning through the use of embedded technology on the body is the author's *Internal Monologues* work.²² In this piece, a Magritte-style bowler is outfitted with three components: a fluorescent alphanumeric display mounted on the front of the hat, an embedded microcontroller and a voice recognition unit that sends information to the first microcontroller based on certain predefined patterns of speech. In the initially proposed configuration, the hat would overlay a 'subtext' onto the display, playing with cultural idioms like 'talking out of your hat' and 'it's written all over your face'. The hat then embodies an informational space.



Patrick Lichty, *Internal Monologues*.

Each of these wearable aesthetic technologies stress the device as a communications display (an outward flow of information from the wearer). A discussion of this particular genre must also include wearable computing, so it bears mentioning the MIT wearable computing group.²³ The MIT group is significant for presenting wearable computing as fashion or as a platform for distributed performances like Tina LaPorta's *Call and Response*, which involves several individuals across a webcam link.²⁴ Here, wearable computing conflates the gaze of the interactor with the primacy of the user, not of the onlookers, as in our previous examples.

When linked to technologies such as fiber optic cloth or even LED and electroluminescent clothing, wearable computing could provide powerful platforms for personal expression. In their current state, however, they say more about commodity power and represent only a slight paradigmatic

22. Patrick Lichty, *Internal Monologues Project*, 1998.

23. MIT Wearable Computing Group, <http://mevard.www.media.mit.edu/projects/wearables/>.

24. Tina La Porta, *Call and Response Performance*, The Kitchen, NY, New York, USA, 26 September 2000.

shift from the desktop. The bulk of these projects produces viable wearable computing products rather than questions the panoptic quality of computation or exists as artworks in themselves.

Between Body and Space

One genre that allows wearable computing to surpass its objectified commodity power is augmented reality (AR), in which a head-mounted display or wearable computer lays graphic information over the user's view in real time. It is an inversion of the informatic overlay on the body suggested by the Philips fiber jacket, as the body of information now is superimposed upon the world and presented to the individual. The Infosphere becomes a representational specter moving in real time, and the physical world is now the interface, creating tightly linked heterotopic spaces instead of multiple bodies.

At SIGGRAPH 2000, an ATR Japan project entitled *Augmented Groove*²⁵ utilized simple machine vision linked to paper marker cards that controlled musical and video elements on a monitor, as participants manipulated physical objects in a booth. Multiple participants could mix the audio and video to create a live dance mix, producing a cybrid collaborative dataspace consisting of physical implements, performers, the interface, and the resulting entertainment media space. This piece actually creates a number of such spaces, each unique for the user but still representative of the doppelganger informational space intersecting with the performers.

An important note is that the SIGGRAPH 2000 website stated that the installation uses head-mounted visors. The actual installation utilized a large-scale projection screen as well as the audiovisual media output monitor, and thus alluded to infosets inscribed onto physical architectures through responsive spaces rather than the AR interactions previously intended.



Augmented Groove, Image Courtesy Rodney Berry/ATR.

Space

Augmented Groove, seen as a projection rather than with a visor/goggles suggests an aesthetic experience in which the body inscribes space itself. In this case, the wearable display garment escapes the body, becoming architectural. Unlike augmented reality, in which the informatic world is still mediated by goggles or a smartphone, the physical environment is now the tangible interface

25. Ivan Poupyrev et al., *Augmented Groove*, ATR Research Labs, Kyoto, Japan, <http://www.mic.atr.co.jp/sspace/>.

in which affordances are embedded. The body needs few other interfaces such as keyboards or mice, as the space itself increases opportunities for interaction. Technology has thus become transparent, since responsive spaces interface with the body of information.

The body reinscribes cybrid physical and media space through sensing and telemetry. Body and space can be correlated through embedded sensors, translating the body directly into the surrounding architecture. The body projects the informatic corpus onto the environment, imbuing a synesthetic quality upon the blurry intersection of architectural, informational and corporeal worlds. By the time this discussion reaches responsive architectures, space itself transforms until the distinction between areas of engagement grows duplicitous and unclear.

This transmutation of space is evident in the Sponge/FOAM work *M3 T-Garden*.²⁶ As stated in their description: "T-Garden is a responsive environment where visitors can put on sound, dance with images and play with media together in a tangible way, constructing musical and visual worlds 'on the fly'. The performance dissolves the lines between performer and spectator by creating a social, computational and media architecture that allows the visitor-players to sculpt and shape the overall environment...The media uses a dynamic language that can be compared to the movement of verbs instead of the symbolism of nouns."²⁷



TGarden, Image Courtesy FOAM.

The *T-Garden* is a multifaceted performative dataspace in which body sensors in the participants' costumes allow them to sculpt a grammar of architectural space through performance. According to Kuzmanovic, the work refers to the transmutative qualities of alchemy, as a space and its inhabitants form a fluid environment, and distinctions between performer and audience, language and media and the traditional grammars of representation are left up to reinterpretation moment to moment.²⁸

26. Maja Kuzmanovic, et al. *M3 TeaGarden*, http://www.deepfoam.org/sponge/tg_siggraph/sig_html/play.html.

27. From Personal correspondence from Maja Kuzmanovic.

28. Kuzmanovic.

Space, Part Two

In Lichy, et al's *GRID* installations sound and video transform a space by allowing communication, play and collaboration between participants.²⁹ The sonic and visual environment represents a stylized pastiche of contextually based or completely surreal experiences such as swimming as a peer in a school of whales. Tracking occurs through embedded sensors placed throughout the space, creating a ubiquitous computational interface that allows architectural structures to interact with datasets, whether virtual (immersive) or cybrid (mixed mode, AR, etc.).

The *GRID*'s objective is an interactive architectural space in which the participants can shape its audio, visual and possibly even structural components as it responds to the group's actions. Information becomes transparent as the installation itself is the display and the interface. The bodies performing within it are as inscribed by the reactions of the installation as they inscribe upon the piece.



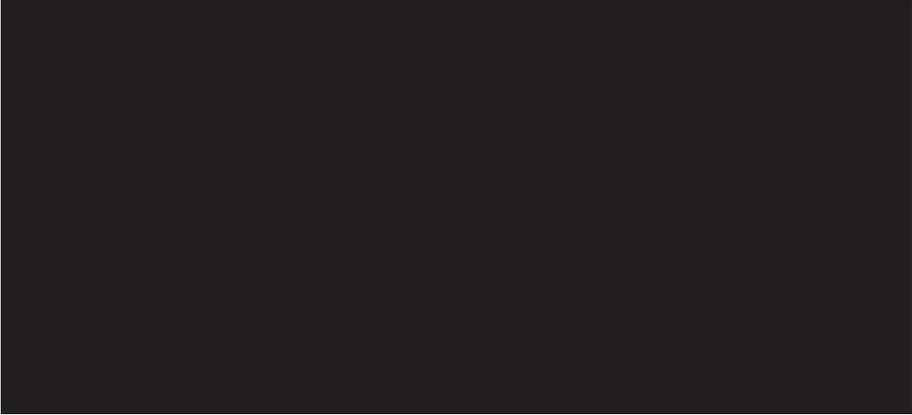
Patrick Lichy, *The Grid*.

TGarden and the *GRID* highlight how the responsive element of a space has some sort of direct correlation to the actions of the visitor, whether representational in nature or not. The embodiment of experience extends further into technologically ubiquitous spaces when an autopoietic element is incorporated into the environment. This breaks the direct representational linkage between body, action and space and creates a milieu in which the informatic corpus as aesthetic dataspace exhibits limited autonomy when performed with the audience.

In *Space Without Organs* by Gregory Little, the bodies of the participants are remapped back upon the space through projections of dataset representations of three-dimensional bodies, organs and internal sounds of the human anatomy across three responsive areas in a room. Two virtual worlds, one 2D, one 3D, are linked as the participants generate sets of metaphorical bodies and organs that are then mixed in real time as projections in the installation space. The projections infer a reflexive inscription of the space by the very bodies that are within it. In addition,

29. Patrick Lichy, *The Grid*, 1996-2000, <http://www.voyd.com/grid>.

a central grid of sensors uses the actions from both worlds and the motion of participants within the gallery area to create audiovisual responses and build cumulative datasets from the worlds' interactors. *Space Without Organs'* metaphorical translation of signs creates a series of semiotic recursions between the body and its responsive environment. This cumulative element allows the work to self-generate its own set of information, which then collaborates in the performative component of the installation itself. **Illustration: BOOKBwo.png**



Space Without Organs, Image Courtesy Gregory Little.

Summary

In this discussion, we have discussed how aesthetic content can be transmitted with technological ubiquity and pervasiveness, whether from the ever-present screen or with the disappearance of the interface in space itself. In each case, expressive modes are proscribed by the information's representational form (screen, hand, body, space). The work's aesthetic and epistemological concerns are also tied to the space of interaction and to responses from the audience, whether individual or collective. These factors define how a culture of technological ubiquity may build its infrastructure, but it does not foresee all the interstitial crevices that the artist may exploit for aesthetic purposes.

As with most applications of new devices, technology is frequently used for radically different uses than originally intended. The artist, through critical inquiry and diligence, will likely be the first to find the niches and cubbyholes in expanding global networks. As McLuhan said, it is the artist who is out on the firing line since they are the early adopters. Dietz's call to fashion the artistic blueprint of the coming age is for practitioners of all disciplines who consider the cultural dimensions of digital society. Our culture is a key reflection of our society, and through the study of this series of works, it is my hope that this text offers a vision that could build a coherent culture of technological ubiquity.

CONFESSIONS OF A WHITNEYBIENNIAL.COM CURATOR (2003)

Being an independent curator breeds strange bedfellows. Sometime late in 2001, I received an e-mail from Milto Manetas, an artist of my acquaintance for some time, asking for my participation in a project of his called *whitneybiennial.com*. The concept was to create an 'exhibition' concurrent with the opening night of the 2002 Whitney Biennial; it would consist of U-Haul trucks that circled the museum while projecting Flash-based snippets via rear-projection screens. The idea was to question the relevance of both the Biennial and the gallery setting by re-contextualizing these cultural spaces in light of online art, which the Biennial had first accepted in 2000.

whitneybiennial.com agitated discussion about the use of Adobe (then Macromedia) Flash to create online art (which Lev Manovich would address in the essay, *Generation Flash*, his criticism of the Whitney Biennial) and whether the project was truly subversive. After all, questioning materialism in artistic practice has been extant at least since Duchamp's famous urinal as well as the Conceptualist movement. The artist's circumspection about the gallery or museum as a valid entity is also nothing novel. However, the seductiveness of the 'new' (as in New Media) and the increasing acceptance of technological art allowed a cultural 'Trojan Horse' to infiltrate the high art world.



ENTER THE WHITNEYBIENNIAL.COM

There were also personal issues in play while considering the socio-cultural matrix surrounding whitneybiennial.com. A significant part of my stance towards the art world involves critiquing traditional museological practice and how it legitimates, provides access to, and archives technological art, including 'net art'. This body of criticism began in 1998, with my essay *The Panic Museum* and continues with related articles and three independently curated online exhibits that propose alternative, emergent models for representing New Media works.¹ My 'alternative voice', coupled with my curatorial practice and participation (under pseudonyms) in some of these exhibitions, elicited circumspect feelings about collaborating on this project. At the same time, I was intrigued by Manetas' work, particularly his exploration of branding, so I accepted.

The concept behind the project was that several independent curators and 'chosen' New Media intelligentsia (or 'Neensters', as Manetas put it) would suggest Flash-based artists from the online community. These artists were to create Flash snippets that would be mixed together with a program coded by New York artist Michael Rees and projected from the rear aperture of a circling U-Haul truck on the opening night of the Biennial. The scene would be a surreal circling-of-wagons around the Whitney – only not by a bulwark as in Western movie tropes but an elision of visual trends from the online art culture at the time.

Much of the discursive function of this intervention had to do with the technical underpinnings of net-based art. A great deal of heated discussion was then transpiring on Rhizome.org about Macromedia Flash as a creative tool and whether it was a constraining factor in creating work. Much of the argument polarized over virtuosity and craft in terms of code as an art object or a medium for articulation. The split between code-based artists and Flash artists usually fractured along lines of traditional disciplines and technique.

To frame this argument it might be useful to consider that no technology is neutral, as legendarily illustrated in the fable of Thamus and Thoth (in this myth about orality versus writing, writing decentered the importance of memorization).² This isn't to say that the use of Flash gives or takes from the creative process, but it does beg the question of whether an authoring tool necessarily shapes the content. A continuum of possibilities exists in this regard, from more open-ended software or programming languages that serve mainly to create other software, to highly specialized programs such as Bryce or Poser, which tend to produce landscape or figurative works by virtue of their form. Which contrasting end of the continuum allows the digital artist to articulate a concept more fully and make greater use of the platform? And does (more) tightly focused software inscribe certain agendas of form and style in the work of the artist?

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1. Patrick Lichty, "The Panic Museum", International Symposium on Electronic Arts Liverpool, UK 1998. This body of work includes museum criticism and essays such as 'Histories of Disappearance' (*Arte e vida seculo XXI*, D. Domingues, ed. Camara Brasileira do Livro, SP Brazil, 2004), 'Through the Looking Glass: Technological Art at the Turn of the Millennium', 2000, Beechwood Arts Center, Beechwood, Ohio USA (online catalogue: <http://www.voyd.com/ttlg>), and '(re)distributions: Nomadic Art as Cultural Intervention', (2001) (online catalogue: <http://www.voyd.com/ia>).
 2. Neil Postman, *Technopoly*, New York: Vintage Books, 1992.

Although a discussion of digital art production may appear tangential to the thrust of *whitneybiennial.com*, it actually raises a disciplinary issue. Formalist technical distinctions among artworks created with custom code and prepackaged programs can be likened to the differences between compiled (low-level) and interpreted (high-level) languages. Although the similarity may be dwindling in the 2000s with development environments like Processing and Open Frameworks, conversations in the eighties and nineties within the programming community distinguished low-level languages, which, although more difficult, allowed greater flexibility and control of processes, from the higher-level languages that gave greater ease but did not fully utilize the computer's resources. However, both techniques were suitable for different applications, but BASIC or LOGO, are not well suited to crafting operating systems, whereas C++ or Assembler is perfect for the job. A similar debate rages over the validity of raw code versus 'environment-based' applications, raising questions about intent and the implication of craft, which is a discussion for another time.

Another controversy over Flash-based online art is the old interdisciplinary dispute between art and design. Flash was originally developed as a tool for animating online content and was subsequently adopted by many graphic designers. On the CRUMB mailing list in 2001, for instance, one reason given for the proliferation of Flash-based net art is that post dot-com boom designers used this software to try to distinguish their commercial portfolio online, thus the 'art world' didn't take these Flash creators as serious artists, although this is a somewhat reductive discourse.³ Many of the artists propositioned for *whitneybiennial.com* were, in fact, better known as design practitioners, possibly in part due to their use of Flash.⁴

So, would *whitneybiennial.com* ask what role design can play in online art? This was one aspect of Manetas' query, even if it reframes an old argument in the context of the new online environment.⁵ Would Flash-based art, work created with what is often considered a medium for designers, be considered seriously by the art world? Or perhaps more accurately, would online work by designers be reframed as conceptual art if an artist with an established track record presented it? These questions would be posed by a fleet of U-Haul trucks on the opening night of the Whitney, or so we hoped.

Why the Whitney Biennial? Why not critique the Carnegie Triennial, Documenta or even the Biennale de Venezia, all of which have introduced New Media works? The reason lies in the role played by the Whitney in raising the visibility of New Media artists in the US art scene. The Whitney Biennial gained much attention for its inclusion of an Internet/New Media category in 2000, considered in the net art community as one of the 'break-out' institutional exhibitions for the genre.⁶ By delineating a category for that particular genre, the Whitney created a venue for critically engaged discussion about issues of New Media and its legitimacy in a high art institutional

3. Crumb New Media mailing list - www.newmedia.sunderland.ac.uk/crumb/.

4. Although the lines between design and art were radically blurred in the case of the Flash artists in *whitneybiennial.com*, artists like Amy Franceschini (Futurefarmers) at the time were receiving almost as much attention for the design of their pieces as the content.

5. Miltos Manetas, 'Whitneybiennial.com call for works', Newsgrist, <http://newsgrist.net/newsgrist3-6.html> (website no longer online).

6. Whitney Museum of American Art NYC, Whitney Biennial 2000 Exhibition, NYC, 2000.

context. When asked if an intervention like *whitneybiennial.com* would have any validity, acquaintances within the New York art community affirmed that criticizing the Whitney Biennial is fashionable, whether this meant questioning the cultural agendas that the Biennial used to reinscribe its own importance, or calling it a trendsetter within the American art scene due to its notoriety.

Of course, the whole notion of fashion as concept fits well with Manetas' work. Taking a nod from Warhol, he used fame as aesthetic construct and let it morph into a legitimate artifact of late capitalist marketing. Manetas engaged with corporate branding culture and meaning's virtualization as pure image, taking a Baudrillardian stance towards the simulated 'image' of fame. Just as companies hire advertising firms to propagate brand names, Manetas had once hired Lexicon Branding to devise his 'Neen' conceptual brand. 'Neen' was "not exclusively about technology in art, but more about the style, about the psychological landscape" as he related to Salon Online.⁷ Manetas' conceptualism illustrates the contemporary focus on image and style as content itself.

An analogy from the private sector helps us analyze differences between Warhol's time and Manetas'. In Warhol's time, cultural production was still linked to a product. Andy was affiliated with Brillo boxes and paintings of Campbell's soup cans. Even the silk-screens of himself, Jackie Onassis, Elvis and Mao Tse Deng still exhibit an all too concrete link to 'fame as product'. In fin de millennium markets, corporations are often hard pressed to justify their stock valuations simply by their holdings and net worth. Therefore a corporate entity is evaluated not so much in terms of their material worth but by their 'brand value'. Naomi Klein's seminal book *No Logo* documents this cultural shift, expressed in the declaration 'Brands, not products'.⁸

By the late eighties, corporate culture had begun an inexorable shift into the ephemeralization of cultural products through ubiquitous branding, or image-as product. Artists such as Wyland and especially Kinkade earnestly engaged with the lifestyle branding concept through mass production of populist cultural artifacts; Kinkade made 'hand embellished prints', sculptures, and calendars, most of which were never seen by the artist himself. The product has become the feel-good paradigm it embodies, whether a Christian 'Painter of Light' or the artist of the oceans, giving the consumer the impression of identifying with a sympathetic ideology.

Manetas takes it one further, linking 'Neen' to the 'style of the virtual' itself. Neen moves from the Warholian fame that once invested in capitalist agglomerations to the simulated landscape of brand perception. The brand is now the star. In effect, Neen exposes the Emperor's new clothes, that "there's no 'there' there". But instead of invalidating the absence of the concrete, Neen revels in it, reinforcing the brand as concept.

With such a framework, what was going to transpire with *whitneybiennial.com* on opening night? Meanwhile, the event was looming.

'Hey Kids, Let's Put on a Show!' – Whitneybiennial.com in NYC

7. John Glassie, 'The Man From Neen', Salon.com, 21 March 2002, <http://www.salon.com/people/conv/2002/03/21/manetas/>.

8. Naomi Klein, *No Logo*, New York: Picador Press, 2002, p. 21.

Significant changes were taking place around the time of *whitneybiennial.com*. As mentioned the previous 2000 Whitney exhibition included one of the first Internet/Digital categories at any major biennial. Opening invites in 2000 were highly sought after, and the New York art scene was abuzz over how the museum would treat the nascent medium. Included that year were notable New Media artists Mark Amerika, Fakeshop, Annette Weintraub, John Simon, and Internet pranksters @TMark, who would set Manetas' stage for subversion via technological art.⁹

@TMark followed through, true to their Dadaist and Situationist roots, by repurposing and lampooning the agendas of late capitalism well before the exhibition had even begun. Preceding the show the collective received a number of prized invitations to artist openings, since the Biennial's new Internet luminaries were suddenly in social demand. @TMark promptly placed the invites on auction website EBay, where they reportedly sold the tickets for over \$8000 to an Austin-based adult video producer who went by the name of 'Sintron'. This wasn't the only playful exploit using their newfound cultural capital; in the actual installation, @TMark announced that "being included in the Whitney Biennial touches us..." but "@TMark is passing on its Whitney Biennial 'real estate' to any artist who wants it." As "a pretty clear way to say 'thanks,'" @TMark exhibited the website of any 'artist' who wished to be involved as a cultural dividend for past support.¹⁰ The installation included links to Bob Jones University, the Cockettes and ourfirstanalx.com. @TMark questioned the nature of Internet art in the gallery and the context of art practice as a whole, as well as the role of the museum as an agent of cultural representation.

Against the subversive elements at the previous Biennial, what would be the purpose of 23 U-Haul rental trucks equipped with projection equipment, circling the building on the night of this year's Patrons' reception? Perhaps it would be to gesture towards the problematic nature of Internet art shown in the museum, or to underscore the solidarity of the online art community or possibly to blue the traditional boundaries between 'high art' and design in light of Flash-based Internet websites Entropy8Zuper and Praystation, which transgress these borders.¹¹ Perhaps *whitneybiennial.com*, as a cross-disciplinary intervention on an emerging medium, would confound these distinctions. We wouldn't find out until opening night.

Execution of a Concept/Explosion of an Idea: Opening Night for *whitneybiennial.com*

The media hype for the project had taken hold. In fact, briefly before the opening, Matt Mirapaul of the *New York Times* gave more attention to *whitneybiennial.com* than the actual exhibition itself.¹² Artists and other participants in the intervention were on site, including contributors from the Archinect mailing list and other New York-based practitioners. Artists and patrons started arriving at the museum for the opening, but one thing was missing. Where were the trucks?

9. Whitney Biennial 2000 Exhibition.

10. @TMark, *Whitney Biennial 2000 installation*, <http://www.rtmark.com/exhibit/>.

11. Many of these sites, like www.prystation.com, have undergone significant changes and do not represent the same aesthetics they did at the time of the opening of the *whitneybiennial.com* site.

12. Matt Mirapaul, 'If You Can't Join 'em, You Can Always Tweak 'Em', Arts Online, *New York Times*, 4 March 2002, <http://www.nytimes.com/2002/03/04/arts/arts-online-if-you-can-t-join-em-you-can-always-tweak-em.html>.

Time passed on, and no trucks arrived. The Whitney Biennial opened as planned, but after this the recorded timeline of events and reactions to Manetas' act is sketchy. Online news through Rhizome and Thingist reported irate participants who had shown up for the unveiling, and Manetas subsequently buying copious amounts of drinks at a questionable Russian bar until the wee hours of the morning. However, this documentation precisely fits neatly into Manetas' brand mythology and his focus on the centrality of the image.

In the following days, Manetas claimed the event a success in organs such as Salon.com and *WIRED* Magazine. Although the trucks that were promised in the news releases had failed to materialize, Manetas claimed they were there, 'in your mind', and that the intervention had gone off as planned.¹³ In reviewing Manetas' manifesto on Neen, his original concept was to problematize physical representation with virtual representation, translating sixties conceptualism into nineties online art, although he would not say this originally. By linking conceptualism to the virtual realm by way of corporate branding paradigms, Manetas posed a challenge to strict disciplines and institutions in the art world. But by focusing the discourse that surrounded *whitneybiennial.com* on himself as an artist, or as Tribe would refer to Beuys as a 'Social Sculptor'¹⁴, he went beyond Warholian notions of fame towards neo-corporate 'name branding', collecting this body of work, atelier-style, under his mark.

I personally felt ambivalence in having participated in a rather opaque process, and I had no idea whether the ruse was real or not. Given that I have taken part in numerous hoax-based interventions, the irony of my feelings in this case was not lost. Of course, Manetas' play with private sector culture was similar to these other projects. Manetas, while claiming to supply the trucks, had not really mentioned whether he would actually *hire* them. Most of Manetas' claims at the time were tightly framed, and, one could argue, if taken under a certain framework, were all essentially *true*. While there was significant ambiguity, when viewed through Manetas' conceptual lens the fine print of *whitneybiennial.com*'s cultural contract was pretty clear. In short, *whitneybiennial.com* was the epitome of everything Neen.

Post Mortem of an Undead Intervention

This reflection on *whitneybiennial.com* resulted from a query by Manetas himself, who asked me in January 2003 to write an essay for its CD release the following February or March. The deadline was tight, and the original request was for a quick analysis of the piece. However as part of the intervention, I felt entitled to go behind the scenes and put *whitneybiennial.com* into greater context. Manetas opened no such backstage door, and my investigation was met with a murky opacity behind Neen's corporate obsidian sheen. As long as *whitneybiennial.com* continued to develop, it was as if the Tinguelyian 'machine to destroy itself' remained in its last smoking, dying moments. I was still a part of Manetas' social sculpture. The experiment continues even as I write, its corpse an ongoing shamble as of 2004, and the idea of adopting DeCerteau's 'in-between'-ness while participating in the closing movements of Manetas' symphony of an

13. Benjamin Bratton, Nettime, <http://amsterdam.nettime.org/Lists-Archives/nettime-l-0204/msg00068.html>.

14. Mark Tribe, *Arts Administration as Social Sculpture*, National Conference for Professionals in the Cultural Sector, Chicago Cultural Center, Chicago, Illinois, 2001.

identity seems, if anything, a little more interesting when taking one last ride on this conceptual Matterhorn.

What are the questions the project continues to put forward? Does it posit a fundamental shift in the art world in light of online art, with its radical implications for future exhibitions? Does it herald the invalidation of major shows like the Whitney Biennial through *whitneybiennial.com*'s capacity to create media attention via tactical means? Does it suggest that with the advent of New Media art, the space of representation can now become nomadic and free from institutions? Could *whitneybiennial.com* have simply been an expansion of Manetas' play with the insidious practice of branding as a unique part of American culture? Or did it ask questions already posed in previous Whitney Biennials, but merely in different terms?

By putting all of these issues into context, more macroscopic tropes emerge. *whitneybiennial.com* both challenged and reinscribed traditional art agendas by positioning itself against the gallery and testing the porousness between art and design. But Manetas did not address many issues beyond the art world except those that might apply to the conceptual framework of Neen. Manetas seems to say that it doesn't matter whether he exists at all; his style of branding becomes another 'death of the author'.¹⁵ The project proves the exhaustion of contemporary art, mirrored in Neen's evacuation of meaning and the shift in cultural valuation towards branding as style. Echoing the claim made by Terrence McKenna's late nineties radio piece *Virtual Paradise* – "Reality? ... Well, it's ALL virtual!"- he combines the perceptual value of contemporary art with the implied value of branding to erase his own identity and leave at best a flickering signifier.¹⁶ And perhaps that's what the whole purpose of Neen is, to show that the Emperor is wearing no clothes by going naked oneself.

15. Roland Barthes, 'The Death of the Author', *Image, Music, Text*. Ed. and trans. Stephen Heath, New York: Hill, 1977.

16. Earwax Productions. *Virtual Paradise*, 1992-93, <http://streaming.turbulence.org:8080/ramgen/somewhere/paradise.ra>.

FEEDBACK LOOPS AND MOSH PITS: NEW MEDIA AND COLLABORATION

Collaborations have been a highly visible mode of production for New Media art, exemplified in numerous collectives, such as Jodi.org, Entropy8Zuper, Etoy, Sito.org, Beige, ®™ark, Institute for Networked Culture, Institute for Distributed Culture, Institute for Applied Autonomy, Critical Art Ensemble, The Yes Men, LEMUR. One can consider, then, whether New Media – which originated in technology and computation and coevolved with digital networks such as ARPANet – have created a native culture from which collaborative artworks are a natural extension.

Is the collaborative impulse in New Media art practice a direct reflection of its medium's cultural underpinnings and technical evolution? McLuhan forecasted collective or networked culture in the 1960s, and his pronouncements about the Global Village presciently sound like 21st century social media. But how are cultures native to New Media specifically conducive to collaborations? Cultural conditions specific to New Media, exhibit their own affordances, problems and benefits. In addition, the models of collaboration explored here offer social insights into the workings of New Media cultural production.

The Theories of New Media Networks

The theoretical foundations of New Media culture are deeply rooted in the evolution of electronic networks preceding the Internet. Of course, McLuhan foretold the communal nature of communication through his vision of the Global Village, in which “we cannot but know about one another”¹ because of our televisual involvement in networks. Although McLuhan hypothesized future telephony, teletype and television, mediums that perhaps most equate to today's webcam, his forecast also hints at Facebook and the wiki. His was clearly a vision of media as a social space, similar to Web 2.0 with its emphasis on social interactions and content generation – the social as an extension of the human organism and its community through the nets.

Deleuze's rhizome is also a well-known metaphor for the interconnectedness of 'wired' individuals. In *Rhizome Versus Trees*, Deleuze posited that networked discourse follows the massively enmeshed, but non-hierarchical and undifferentiated social structures of the root systems of strawberry plants.² This structure is a metaphor for a shallow, quick rapidly moving strategy that requires less engagement with the subject. While hierarchical social structures (pre-networks) are built around protocol and privilege, rhizomatic cultures tend towards the ad hoc and collective. One prime example of rhizomatic media is Wikipedia, with its ever-changing structure and content defined entirely by users. The rhizomatic social space represents a holistic and possibly intrinsically collaborative environment where the interdependence (or at least interaction) between disciplines is 'written into the operating system' of culture.

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1. Marshall McLuhan, *The Gutenberg Galaxy: The Making of Typographic Man*, Toronto: University of Toronto Press, 1962.
 2. Gilles Deleuze, 'Rhizome versus Trees', *The Deleuze Reader*, ed. Constantin V. Boundas, New York: Columbia University Press, 1993.

Again, I return to *The Transparence of Evil*, where Jean Baudrillard argues that media conflates entire categories to the point where all of culture – arts, sciences, humanities – becomes inextricably linked.³ In the massively networked age, not only are we 'next door' to one another (McLuhan), or massively interconnected (Deleuze), but our disciplines of research and discourses unavoidably permeate one another. Is it any surprise that New Media artists collaborate? Collaboration seems largely unavoidable, a default position of a networked culture that enmeshes the people, projects and disciplines indigenous to it.

The Necessities of New Media

One of the defining aspects of New Media is its relevance to a wide scope of disciplines, from engineering and computer science to arts and humanities. Interdisciplinary collaboration among these fields finds historic precedent in Rauschenberg and Kluver, et al's Experiments in Art and Technology from 1966.⁴ EAT explored the applications of technology to fine art, resulting in *9 Evenings: Theatre and Engineering*, an event involving 10 artists and 40 engineers. The project explored the symbiosis needed for art and tech collaborations; as Kluver said, "It became clear that achieving ongoing artist-engineer relationships would require a concerted effort to develop the necessary physical and social conditions."⁵

While this project bridges C.P. Snow's divide between the 'two cultures' of the arts and sciences, it goes further to declare their necessary symbiosis in creative enterprises.⁶ EAT also formalized technology's traditional influence on art and the interdisciplinary nature of technological art by establishing a vast network of collaborators. It's very much worth noting that what began as an experiment of roughly fifty individuals became a community of thousands, validating the role of interdisciplinary collaboration in technological cultural production.

Another example of the necessity of interdisciplinary action in computational art is illustrated by Jim Campbell's *Diagram for Computer Art*,⁷ an update of the classic diagram put forth by A. Michael Noll in his essay 'The Digital Computer as a Creative Medium'.⁸ Campbell's expansion on the ubiquitous von Neumann system infers any sensible input as data (including death) for an interactive work. Campbell's computer performs data remapping, with output devices as fanciful as 'Rain Generators' Could it be an exceptional individual indeed who engineers and contextualizes microprocessor art and is a rainmaker as well? Perhaps so, if Clarke's Third Law, claiming that "Any sufficiently advanced technology is indistinguishable from magic", is any indicator.⁹ However, Campbell, taken in context with Clarke, does not illustrate the artist as a prodigious, solitary individual, but as someone with a robust technical and collaborative network, even if only

3. Jean Baudrillard, *The Transparence of Evil*, New York: Verso Press, 1994, p. 10.

4. Billy Kluver, 'Experiments in Art and Technology (E.A.T.)', Fondation Langlois online archives, <http://www.fondation-langlois.org/html/e/page.php?NumPage=306>.

5. Kluver.

6. C.P. Snow, *The Two Cultures, And a Second Look*, Cambridge: Cambridge University Press, 1984.

7. Jim Campbell, 'Diagram for Computer Art', <http://jimcampbell.tv/formula/index.html>

8. A. Michael Noll, 'The Digital Computer as a Creative Medium', IEEE Spectrum, October 1967.

9. Arthur C Clarke, 'Hazards of Prophecy: The Failure of Imagination' *Profiles of The Future*, New York: Warner Books, 1962.

for technical support. In so doing, we can see from our archipelago of art and tech practitioners – EAT (1966), Noll (1971) and Campbell (1999) – that few individuals have all the skills for New Media pieces, mandating larger or smaller collaborative networks.

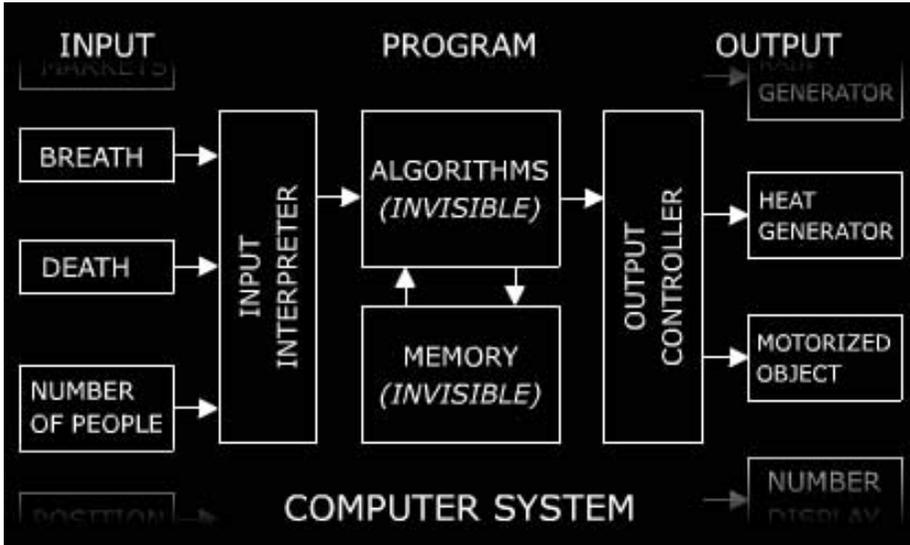


Diagram for Computer Art, Image Courtesy Jim Campbell.

The Benefits of Collaboration

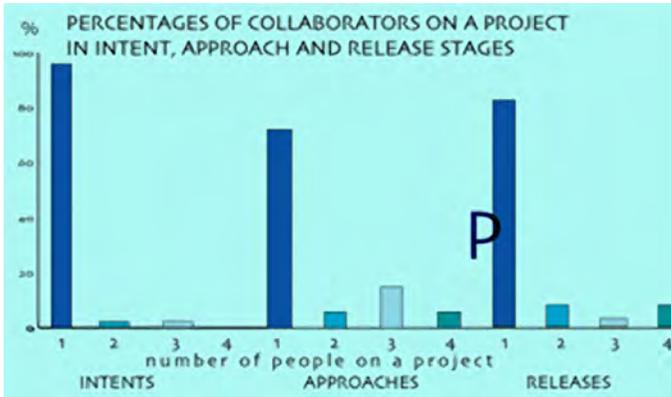
We have discussed the practical necessity of collaboration, but are there precedents of collaboration as a sustaining cultural force? Joline Blais, in her 2006 essay, *Indigenous Domain: Pilgrims, Permaculture and Perl*, argues for 'permaculture' (creation of wealth without doing damage) in digital practices. In the essay, she mentions that indigenous people practice a 'free culture', by honoring a gift economy, valuing the process of creation and building a collection (catchment) of free assets for collective benefit.¹⁰ Free culture as she defines it can be expressed with the sharing of any asset, from physical water basins to open source software.

The particularly interesting notion of catchment is investigated in a project called *The Pool*, created by University of Maine professors Joline Blais, Jon Ippolito, Mike Scott and Owen Smith, *The Pool* is an online catchment of assets, texts, skills and resources for stimulating communal wealth.¹¹ The project looks at collaborative interactions, intellectual property such as attribution and licensing, and ironically, students' hesitation to release their efforts and resources for free. To derive some sort of metric from the social interactions it instigates, the team created an associative interaction mapping tool the Social Grapher. With the Grapher, the *Pool* facilitators are able to look at degrees of integration (rather than separation) between users and the degree of collaboration that students employ while wading about in the Pool. Interestingly, while many of

10. Joline Blais, 'Indigenous Domain: Pilgrims, Permaculture and Perl', *Intelligent Agent Magazine*, February 2006, <http://www.intelligentagent.com>.

11. Ippolito, et al, *The Pool*, <http://pool.newmedia.umaine.edu/>.

the students are possibly wary of losing intellectual property (evident in the number of single-participant projects as seen in diagram 1), they still seek community with others. These connections are shown in diagram 2, which illustrates three degrees of connection as generated by the Grapher. Although this is only one study of digital sociology and collaboration, you could presume that the individual still seeks collective action in a robust way, despite our society's continued investment in intellectual capital.



Participants per project, *The Pool*



User associations by collaboration, *The Pool*

The Politics of Collective Gain

So far, this conversation has ranged from the theoretical, pragmatic, and (to some extent) altruistic factors promoting collaborative cultural production. However, socio-economic and political realities also align themselves towards collective New Media practices. For instance, Clipping and Bollier's essay, *A Renaissance of the Commons...* makes a socio-political argument

for collaboration by considering it a baseline of human biology.¹² They take a refreshingly polemic stance against Smith's and Locke's individualistic market philosophies, stating that in the age of the Internet and ensuing eras there is a reemergence of the commons that is essential to human existence. They state: "...scientists are coming to believe that many social behaviors that are crucial to the commons – social reciprocity, trust, shared values – have played a vital practical role in assuring human survival and adaptation", and there is even evidence that these behaviors could be a long-term threat to free-market democracy.¹³ Furthermore, they cite research positing that social exchange constitutes an 'evolutionarily stable strategy', since reciprocity is part of the human neurobiology necessary to the formation of civilization, and free market 'choices' actually reflect flock behavior.

This is a radical position, suggesting, in its most logical extreme, that Western modes of individualism and competition in economics or even art production are counterintuitive to biology itself. This is not to say that competition is not part of the development of the human species, or that Hobbes in his *Leviathan* is wholly incorrect for calling human existence 'nasty, brutish, and short'.¹⁴ But Clippinger and Bollier suggest that cooperative interaction has figured far greater in the social and biological development of the human species, and cooperation is the norm, rather than the exception. In the long run, perhaps the community mural (or possibly graffiti wall) will turn out to be the true gesamtkunstwerk

Collaboration – Four Flavors

This discussion has analyzed some of the theoretical, practical, and even possibly biological foundations of New Media collaboration. Equally important is the experiential mode of production. There are many models of New Media art collectives, with specificities unique to each. Regardless, we can derive from a few examples some correlation between our preceding discussion and current praxis. What follows are encapsulations of collective methods that the author has studied or been part of, offered as embodiments of principles stated earlier in this essay. In these brief analyses, we will consider the various groups' production models, their shared benefits and attribution distribution schemas.

The Strange Case of @™ark – The Monolith

@™ark, an anonymous online collective of anti-corporate activists who challenged corporate power through subversion of liability displacement in the 1990s, maintained its cultural opacity under a corporate veil.¹⁵ Going by names Frank Guerrero, Ernest Lucha, Max Kauffmann and Candida Lucida (plus an army of other names), the amorphous group marshaled various resources through its participants' complimentary backgrounds. In addition, the very structure of @™ark as a cultural mutual fund and subversion-clearing house created a channel for 'black-listed' cultural production. This faceless, obfuscating monolithic corporate structure, similar in

12. John Clippinger and David Bollier, 'A Renaissance of the Commons: How the New Sciences and Internet are Framing a New Global Identity and Order', from Ghosh, ed *CODE: Collaborative Ownership and the Digital Economy*, Cambridge, MA: MIT Press, 2005.

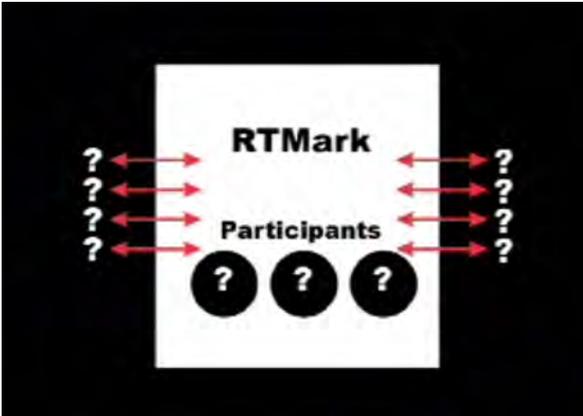
13. Ibid, p.264.

14. Thomas Hobbes, *Leviathan*, chapter 13, <http://www.mdx.ac.uk/WWW/STUDY/xhob13.htm#top>.

15. @TMark, <http://www.rtmark.com>.

ways to Austrian collective etoy, was also perfect for the ®™ark collective, as it focused attention on the work and not on individuals. The structure conceptually displaced participants from their cultural (and possibly legal) transgressions but also created a 'mythology', an entity that may be everywhere or nowhere, small or in legion.

Their methods of attribution were brilliant, as artists could not exactly 'claim' involvement except through inexact terms. The ®™ark collective was a playful cultural insurgency before that age post-millennial panic. In many ways, ®™ark served as Duchampian catchment refuge for dissension, subversion and critical intervention. ®™ark was everyone, yet no one, acting out wherever it needed to be.



®™ark: The Monolith.

Second Front – Hub with Spokes

Second Front is the name of an avatar-based performance group in the online world Second Life and was founded by Jeremy Turner (Vancouver, aka Wirxli FlimFlam), Doug Jarvis (aka Tran Spire), Patrick Lichty (aka Man Michinaga) and Scott Kildall (San Francisco) in 2006.¹⁶ Each member has had an interest in virtual reality for a number of years and came from an artistic tradition that includes Char Davies, Jaron Lanier, Gregory Little, Cynthia Beth Rubin and Margaret Dolinsky. Although the artists had discussed collaborating for some time, there had not been a venue with the right confluence of mainstream recognition and usability. Second Life's popularity (including the 2007 Postmasters showing of 0100101110101101.org's *13 Most Beautiful Avatars*¹⁷) provided a free-form online performance venue for audiences larger than those in other VR-based spaces such as There.com or OnLive Traveler.

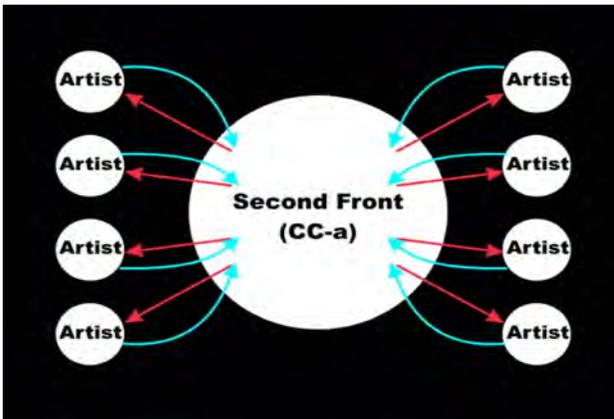
Second Front's collaborative method was based on that of a listserv. Ideas were thrown out to the group, and the members democratically refined the concepts. For major activities like script finalization, web development, PR and so on, individual members took creative initiative then vet-

16. Jeremy Turner, et al, *Second Front*, <http://www.secondfront.org>.

17. Eva Mattes and Franco Mattes, *13 Most Beautiful Avatars*, (online and Postmasters Gallery, NYC), 2007, <http://0100101110101101.org/home/portraits/thirteen.html>.

ted the results through the listserv. Over the first six performances, this 'flat' democratic method worked with no difficulties, as the members work under a consensual social contract.

As mentioned earlier, credit and shared mythology is an important component of artistic production, especially when artists create derivative works from collaborations. How does one credit artists' collaborations? In the case of Second Front, there are two important factors. All of the Second Front videos, graphics, etc. are licensed under Creative Commons Attribution licenses, for free use as long as proper credit is given. From this, individual artists are then free to create derivative works if they also credit the group, i.e., 'Bibbe Hansen and Second Front'. This method, while different from @™ark's monolithic form of crediting, still distributes credit widely, as both the artist and collective are recognized. In many ways, *Second Front* acts as a catchment to which members contribute, share and then return the shared benefits to the collective.



Second Front: The Wheel with Spokes.

The Gears – Clevelander Z

Clevelander-Z was an installation-based surveillance collective founded by ex-Clevelander Laura Rusnak at Bowling Green State University in 2005.¹⁸ C-Z (their nom de guerre) came together over common sensibilities regarding social justice and surveillance technologies. Unique about C-Z is the complimentary skills of its members. The group has a baseline of mutual competencies (Adobe Flash, electronics, familiarity with theory, conceptual sensibilities) and realized a near-dovetailing of expertise (i.e. hardware vs. code, imaging vs. design) to create a highly efficient unit. Unlike groups with specialized participants that may or may not be able to perform installation duties, etc., the C-Z collaborative (as of 2007) meshed through a baseline of common knowledge.

C-Z operates similarly to @™ark regarding accreditation, except that it is not anonymous. The works that the participants attribute to C-Z are wholly collective in nature, making no distinction of roles. In many ways, this is another collective catchbasin, and C-Z considers this an effective and beneficial model. (Illustration: [BOOKC_Z.png](#))

18. Clevelander-Z (L. Rusnak, et al), *Voice of the Electric City* installation, Cleveland Ingenuity Festival, Cleveland Ohio, USA, 2005.



Cleveland-Z: The Gears.

The Organization – Terminal Time

Lastly, another notable collective model was Domike, Mateas and Vanouse's interactive documentary, *Terminal Time*.¹⁹ This audience-driven, real-time historical documentary consisted of hundreds of movie and text clips, animations and an extensive AI engine, requiring the efforts of 'guest artists', tens of production assistants, and hundreds of participants. The role distribution varied from videography, editing, writing, programming, interfacing, sound and AI.

TT, of all of these examples, is probably unique in its scope, with its organizational structure more like a small movie than a New Media project. The closing credits, from the principals, additional collaborators, production assistants, actors and so on, take on a traditional media production hierarchy, possibly even illustrating a set of concentric rings of involvement. Phenomenologically, *TT* offers insight into the confluence of New Media, industrial models and traditional media production. As with many projects involving numerous participants, resource allocation of all categories are an issue, and *TT*'s scope likely demanded a hierarchical organization. This begs the question of whether larger New Media projects with numerous categories of interdisciplinary specialization and levels of expertise require more traditional models to function within existing institutional and foundation funding models. Such a project asks how support will work at larger scales of collaboration.

Conclusion

This discussion has considered the cultural origins, necessities and benefits of collaboration in New Media production, as well as four models of artistic collaboration and legitimation, mentioned here for their familiarity to the author (though there are several more). One could argue that New Media art practice is an outgrowth of distributed culture. From that rhizomatic, interdisciplinary milieu, the collective gesture makes sense as a form of cultural expression, and thus the discussion of New Media and collaboration is a logical progression of contemporary art discourse.

19. Steffi Domike, Michael Mateas, Paul Vanouse, *Terminal Time*, <http://www.terminaltime.com>.



Terminal Time: The Organization.

As social media continue to develop, the nature of collaboration may change radically in the coming years. If Clippinger and Bollier are correct, collectivism in New Media may reflect the return of the commons and possibly even a transformation in human neurobiology. But group action, whether creation or participation, seems to be a common factor in New Media art, and this in itself is a fertile area of inquiry.

NEW MEDIA SITUATIONS WHY ART IN VIRTUAL WORLDS? E-HAPPENINGS, RELATIONAL MILIEUX AND 'SECOND SCULPTURE'

The 2000s saw an emergence of New Media art within virtual worlds, specifically 3D online spaces that people can navigate using electronic personifications called avatars. These environments include MMORPGs (Massively Multi User Online Role-Playing Games) such as World of Warcraft and Everquest,¹ and the MUVES (Multi User Virtual Environments) found in There and Second Life.² Though multi-user worlds have been around for years, the number of artists now working on specific platforms has created a critical mass recognized by art curators and the mainstream art press (examples are ARTnews,³ Exibart⁴ and Art in America⁵). The artists include Cao Fei, Eva and Franco Mattes, Second Front, Gazira Babeli and many others. Their works are an odd negotiation between genres, since virtual worlds have not traditionally been a platform for or subject of contemporary art. That being said, the question remains why this particular genre of social media has merited new levels of attention. What are the compelling aspects of virtual world art launching it into a larger contemporary discourse, and how is it located within an art historical context?

Exploring new forms have been a modus operandi of the avant-garde for over a century, and New Media is doubly implicated in this praxis. New Media implicitly signifies novelty by virtue of its name alone and includes emergent (but primarily digital) artforms. As a subset, one could say that art in virtual worlds could be a 'new' New Media. Before devolving into satirical discussions of comparative novelty, it's notable that New Media have also been a locus of art praxis as media expanded over centuries, including oil, print and photography. However, is novelty sufficient cause to merit the consideration of virtual art?

Beyond the maxim of 'art for art's sake', virtual world art is part of a historical arc of work that engages social relationalism; to consider its function one has to look at the history of art that involves the creation of social situations. Emblematic of these are the Dadaists and Futurists, whose soirees and evenings of syntesi broke boundaries between art and theatre. Excommunicated Surrealist Antonin Artaud's 'Theatre of Cruelty' proclaimed the use of radical actions to

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1. World of Warcraft, released November 2004 by Blizzard Entertainment, <http://us.battle.net/wow/en/>. Everquest, released March, 1999 by Sony Entertainment, <http://www.everquest.com/everquest.vm>
 2. There, released October 2003 by There, Inc. <http://www.there.com/>. Second Life, released June 2003 by Linden Labs, <http://www.secondlife.com>.
 3. Rachel Wolff, 'All the Web's a Stage', ARTnews, March 2008, http://www.artnews.com/issues/article.asp?art_id=2443.
 4. Domenico Quaranta, 'Virtual FLUXUS', Exibart #38, <http://www.exibart.com/notizia.asp/IDNotizia/19662/IDCategoria/231>.
 5. K. Wodell. 2008, March, Performa 07 in Second Life: Brave New Metaverse. *Art in America*, 96(3), 55-55.

reveal a reality without artifice, and in the late fifties Guy Debord and the Situationist international engineered social situations to engage in critical discourse.⁶ Although a number of artists dealt with social relations in the 20th century, three artists and their effects toward virtual art are of note: the construction of ephemeral, social, and relational space through Alan Kaprow's 'happenings', Joseph Beuys' object as site of social exchange and generation and relational space with persistent traces of art found in work by Nicolas Bourriaud.

In his *Untitled Guidelines for Happenings*, artist Alan Kaprow wrote of the 'Happening' in which he sought to erode the boundaries between art and life. In this essay, Kaprow defined two principles of the Happening: that "The line between art and life should be kept as fluid and indistinct as possible", and that "the source of themes, materials, actions and the relationships between them are to be derived from any place or period except from the arts..."⁷ The importance of Kaprow's principles is twofold: first, art is formally freed from the object and the gallery to the realm of life and action, and secondly it blurs the distinction between art and life, allowing the Happening to be defined as any realm of potential in agreement with virtual worlds. Although this author believes that there is intentionality to art, even in Kaprow's definition virtual worlds certainly exhibit many of the principles of the Happening, including variability of time, indistinctness of audience and uniqueness of moment.

Another model of socially interactive art and society-as-art can be found in Joseph Beuys' conception of 'Social Sculpture',⁸ though contemporaneous with Kaprow's Happening, Beuys' work relates more to an objective practice in the creation of social situations. For example, his *7000 Oaks*, commissioned by the Dia Center for the Arts for Documenta 7, centers around the planting of that number of saplings and basalt plinths as a gesture of environmental awareness. Much of Beuys' work emphasizes ambiguity of interpretation in his objects and performances, underscoring his assertion that the "artist is akin to that of a shaman and art is a means to a social utopia".⁹

Beuys' 'Social Sculpture' contrasts with the Happening by operationalizing an object (artist or 'art') as an event or site for wider change – a utopian one according to Beuys' vision. His work is certainly in line with Linden Labs' utopian vision found in *Second Life*, and ironic in terms of Julian Bleecker's missive on the carbon footprint of the avatar that Eva and Franco Mattes recreated *7000 Oaks* in *Second Life*.¹⁰ What is important in the source work and its remediation is that the effects are still the same: both create a discursive space formed around Beuys' original vision of environmental awareness. It is from these Beuysian effects that works in virtual worlds can be affective event-sites rather than merely loci for material exchange.

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6. Antonin Artaud, 'The Theatre of Cruelty (First Manifesto)', *The Theatre and its Double*, New York: Grove Press, 1994, p. 89.
 7. Alan Kaprow, 'Untitled Guidelines for Happenings', *Multimedia: From Wagner to Virtual Reality*, Randall Packer and Ken Jordan, eds. New York: Norton Press, 1965, pp. 280-281.
 8. Lynne Cooke, 'Joseph Beuys', Dia Center for the Arts, http://www.diacenter.org/exhibs_b/beuys/essay.html.
 9. Ibid.
 10. Julian Bleecker, 'When 1st Life Meets 2nd Life: The 1685 Pound Avatar and the 99 Ton Acre', Near Future Laboratory, 18 September 2007, <http://www.nearfuturelaboratory.com/2007/02/09/when-1st-life-meets-2nd-life/>.

However, we may add one more tool in the box with Bourriaud's concept of relational aesthetics. In Bourriaud's eponymously named book relational aesthetics emerges from the work of artists such as Rikrit Tiravanija, Miranda July, Pierre Huyghe and Vanessa Beecroft.¹¹ Relational art defines itself, in part, as collective social situations that involve actions or situations-as-objects under the guidance of artistic agency. This is not the utopian vision of Kaprow and Beuys that stressed the artist as libérateur, but is an artist system that leaves traces, whether material or experiential and emotional. Relational art then, as opposed to the expansive definition of Kaprow (art as milieu) and Beuys' milieu-creating work, is constrained by formal collective social systems with persistent traces. This brings art back to the gallery, an anathema to Kaprow, and one that was transcended by Beuys. These issues exert themselves upon the relational, as art becomes a sociological or material dialectic. Note that while others have varying non-commercial models for Relationalism, my interpretation stems from Bourriaud's text and the more famous examples of the form. Therefore, negotiating issues of 'ownership' defines power relations that shape the milieux in which art may operate. Within virtual worlds that have fundamental systems of exchange – commercial, social and otherwise – Relationalism in virtual worlds redefine social art as complex affective systems with larger effects in that environment, spreading into the larger culture surrounding the given virtual world.

Discussing these practitioners creates a discursive field with which to analyze virtual art, and we may return to examples of works and performances in Second Life to ask why such work emerged. An analytical tool may be consideration of the valuation of virtual works, although this author wants to caution against mistaking financial exchange as symbolic exchange. Bourriaud has stated that the purchase of immaterial work (conceptual, virtual) is merely a relational exchange no different than acquiring the signifier of a given historical event, as evidenced in work by artists such as Klein and Manzoni.¹² The red herring is whether the purchase price of a virtual artwork has an equal valuation in a physical gallery. The difference is that the work is in a maintained space on a privately owned server where the 'owner' can retrieve the piece onto their computer as a local copy only with great difficulty. Therefore, virtual work is largely ephemeral, and traditional models of speculation are impossible. By examining relational effects around sites of virtual objecthood, one can examine how 'objects' create social relations and then become oeuvres and communities.

Object: Otawara

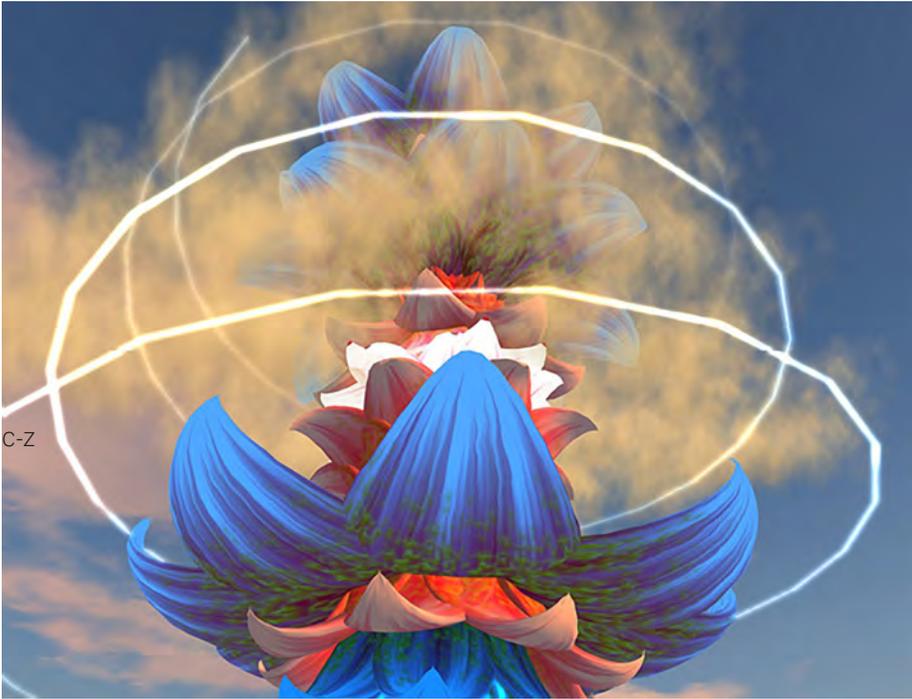
One of the most basic examples we can consider is the object as site of social exchange. Irena Morris (a.k.a. Eshi Otawara)'s *One Hour Sim* projects were a set of eleven daily installations using the entire space of a Second Life server, or 256 virtual square meters in which she creates a regional installation in one hour.¹³ For *Flower Tower*, Morris created a recursive, meditative space framed by shell upon shell of flowers, and when the inhabitant ventures outside, the 'upper room' is actually the top of a vast structure comprised of flowers stretching up several hundred (virtual)

11. Nicolas Bourriaud, *Relational Aesthetics*, Dijon: Les presses du réel, 2002.

12. Ibid. p. 48.

13. Bettina Tizzy, 'Eshi Otawara's One Hour Sim Project is Blossoming', Not Possible in Real Life, 21 July 2008, <http://npirl.blogspot.com/2008/07/eshi-otawaras-one-hour-sim-project-is.html>.

meters.¹⁴ This piece is a multi-tiered structure for inhabitation, including spaces for congregation, assembly and singular contemplation. Also of note is that the Tower was purchased for four figures (in 'Linden Dollars', which are about 250 to 1 US dollar) and relocated by the owner to double as sculpture and social space, fulfilling Bourriaud's principles of experience and exchange.



FlowerTower, Image Courtesy Irena Mandic.

The relational model solves the problem of the inherent material valuelessness of the work except as site of social exchange. This repositions virtual art as 'milestones' akin to Conceptualism, except within the context of virtual worlds. Conservationists may argue that open source initiatives like abandonware¹⁵ and OpenSim¹⁶ may preserve work outside the Linden Lab's 'grid', potentially extending their persistence as objects.

Conversely, genres associated with FLUXUS and Relationalism are often self-reflexively immaterial, although the latter is more connected to objective production. Persistence over time is a curatorial dialectic within New Media art circles, as many of these works are a subset of applications technology rather than a computer operating system, which has a slightly longer lifespan. Except

14. Ibid.

15. 'The Abandonware Ring FAQ' The Official Abandonware Ring, 2006 <http://www.abandonwarering.com/?Page=FAQ>.

16. Opensimulator project site, http://opensimulator.org/wiki/Main_Page.

for issues of emulation, neither has persistence at conservationists' timeframes and should be considered as such. What is more relevant is the function of art as social 'attractor' broadening the ties around it. For the *Flower Tower*, Morris and Otawara's patron saw the work as social scaffold and milestone in that simulator, to the point where they desired to relocate that relationship and through it build another social space, although perhaps more akin to those of Kaprow or Beuys.

Milieu: Brooklyn Is Watching

Another initiative that centered on the creation of social networks is *Brooklyn Is Watching* by New York artists Jay Van Buren and Amy Wilson.¹⁷ *BiW* consisted of a space in Second Life, as well as a blog and podcast; it is intended as a nexus where artists share art and critical dialogues. Van Buren's vision is loosely based on Kaprow's space and has no expectation except exploring 'art as life' within the virtual. It doubles as a physical portal in Brooklyn's now defunct Jack the Pelican gallery, a 'space of chance' in an otherwise tightly inscribed setting. *BiW* is where 'art happens', with no preconception of the participants, a site both relational (artist-constrained system of symbolic traces) and indeterminate inside the traditional space of a Brooklyn gallery. This virtual relational art space is generated through the loose rubric and (im)material traces of its interactions, creating a complex dialogue between 60s and 90s sensibilities.



Brooklyn is Watching, Image Courtesy NPIRL Blog.

17. Jay Van Buren and Amy Wilson, *Brooklyn is Watching*, <http://brooklyniswatching.com/>.

Another concept of interest is Van Buren's 'objecthood' in Second Life, put forth in many BiW podcasts, but especially in podcast #21.¹⁸ Van Buren highlights intentionality and the mutability of virtual worlds, including avatars and the environment as created objects. This dialogue foregrounds fetishization and objectification of all elements and the social contracts within user-defined online worlds. This work considers milieu-creating objects and milieux that themselves attract objects, with added levels of recursion such as avatars that themselves create objects and milieux. These can then create 'archives' of those interventions. These agent-objects are generators of objects, which create region-milieux or even emergent sensibilities around their actions.

Generator: Gazira Babeli

One example of this methodology is 'Code Artist' Gazira Babeli.¹⁹ Identifying herself as an Italian, Gazira also claims to be an independent agent with no human intervention. Gazira is a virtually embodied artwork, a Body of Work' or 'Corpus' who (or that) creates virtual situations, including a pizza delivery attack upon a virtual art gallery,²⁰ or provocative artworks like the Warholian *Second Soup*.²¹ Gazira embodies more social functions than those found in Otawara's and Van Buren's work. Babeli, through her Locusolus region, moves into community building and 'hybrid' objecthood. She is an avatar-as-object (a performative social 'object') with aggressive social components like *Second Soup*, and has multiple archives and studios for other artists in her region, Locusolus.



Second Soup, Image Courtesy Gazira Babeli.

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18. Brooklyn is Watching, podcast 21, 1 August 2008, <http://www.brooklyniswatching.com/podcast/biw21.mp3>.
 19. Gazira Babeli, <http://www.gazirababeli.com>.
 20. Regine Debatty, 'The Second Life Code Performer', We Make Money Not Art, 27 November 2006, <http://we-make-money-not-art.com/archives/2006/11/gazira-babeli-e.php>.
 21. Gazira Babeli, *Second Soup*, May 2006 <http://gazirababeli.com/secondsoup.php>.



RMB City, Image Courtesy Cao Fei.

Her piece *Don't Say* is a metaphor both for practice and larger conversation.²² When another avatar encounters the piece and utters a 'forbidden' keyword, it is swept up by a giant tornado that will not let go until the user apologizes. This vortex is a relational metaphor for Gazira's confrontational work; the avatar 'work' intervenes with the audience, creating clouds of (derivative?) works, effects and affect. This larger corpus recursively collects artists into the region of (Locus) olus, creating a space of Beuysian social sculpture combining gesture (avatar), 'objects' and their effects with the social aggregate in the artist's commune. From this, Gazira's play on the French audio collective Locus Sonus (loosely 'Locus of Sound') to Locus-olus ('Small Locus') is a direct alliteration to the idea of creating a social and associative node for engagement. Gazira is the 'little Locus', an Indra's Net of loci that becomes a 'metatecture' of persona, works as effects, and residents as collaborators.

The New Citizen and Architect: Cao Fei And RMB City

Another metatect in online worlds is Chinese artist Cao Fei, whose *iMirror* and *RMB City* touch on the socially constructive nature of virtual worlds, especially Second Life. *iMirror*,²³ her romantic odyssey across Second Life, follows from her previous work, *CosPlayers*, that crosses cultures by exploring Chinese youth engaging in the Japanese pop practice of Cosplay by dressing as anime and other characters (a practice which is also common in North America.) In *iMirror*, her avatar, China Tracy, a Chinese girl in synthetic skin (another form of Cosplay?) travels about the synthetic 'Global Village' of Second Life in playful innocence with her virtual confidante, named 'Hug Yue'. They travel the virtual world, wondering about 'forgetting the real darkness' of the physical. What is significant is that China, the romantic cosplayer, does not unlink her 'object self' from the artist

22. Gazira Babeli, *Don't Say*, June 2006, <http://gazirabeli.com/dontsay.php>.

23. Paul Schmelzer, 'Cao Fei's *iMirror*' *Walker Art Center Off Center blog*, 16 June 2007 <http://blogs.walkerart.org/offcenter/2007/07/16/cao-feis-imirror/>.

Cao Fei (like Babeli). *iMirror* is a documentary with relational components as China searches in an innocent Calle- like quest for the person behind 'Hug', but does retain the form of the document, the formal component, and I would argue, a sort of objecthood.

In *RMB City*,²⁴ Cao Fei plays with dys/utopia in assuming the role of a virtual developer for an interpretation of Olympic Beijing. The city contains virtual analogues of the Koolhaas' CCTV headquarters, pandas on construction cranes, a Duchampian (Ferris) wheel and many other signifiers of emergent Beijing. In addition, and reflecting the opening real estate sales scenes of *iMirror*, she doubles the speculative aspect of the signified city by offering development opportunities in *RMB City*. These are offered at rates analogous to those in Beijing but translated into the fractional currency of Linden Dollars. At Art Basel, Cao Fei sold a building unit in *RMB City*, linking her exploration of the impact of the virtual upon the real-to-real estate, in contrast to Babeli's 'object-oriented' practice. This is more in line with Bourriaud's model than Babeli, albeit slightly, but this also highlights the different perspectives through which artists are shaping relational spaces in virtual worlds.

Unsituated Social Sculpture and Virtual Performance: Remediating and the Impossible

The previous four situations have addressed progressions of art as a site of social exchange, nexus and relational field. Equally important as 'located art' is art praxis that is 'unsituated' and performative. Where the previous artists work with objecthood, performance is also a powerful site for intervention in virtual art. This distinction is a fine line in cases like Gazira Babeli, who is both the 'generator' of Locusolus and part of Second Front, or Eva and Franco Mattes, whose remediation of Beuys' *7000 Oaks* signaled the objective and the relational. For the sake of this part of the discussion, we will focus on experiential work that creates art in terms of social relations in virtual worlds.

Remapping Bodies: Eva & Franco Mattes, Scott Kildall

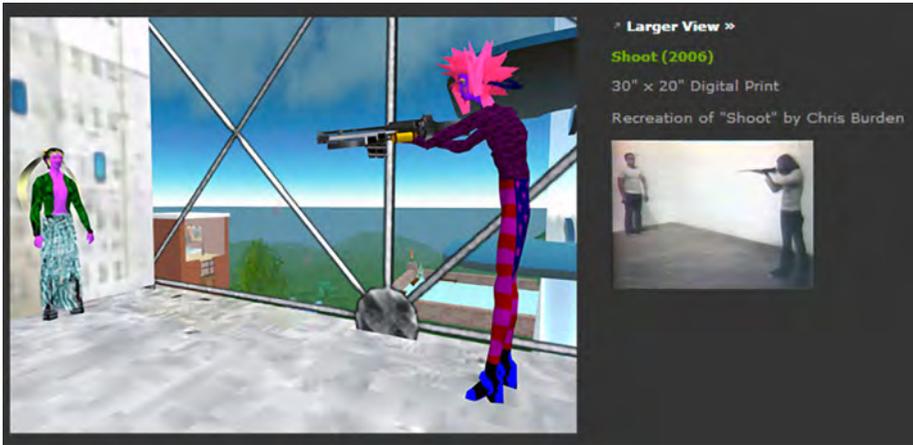
In 2005, Marina Abramovic performed *Seven Easy Pieces* at the Guggenheim, a series of performance art works by artists such as herself, Valie Export, Bruce Nauman, Vito Acconci, and Joseph Beuys.²⁵ For seven evenings, she performed pieces including Acconci's *Seedbed* and Beuys' *How to Explain Pictures to a Dead Hare*, temporally recontextualizing the pieces outside their original time and place. While this brought into question whether reenacting performance artworks as site-unspecific pieces might reduce them to theatre, this was rather a resituation creating far different effects. Abramovic' question of context and action posed by the event and subsequent video raised further questions for contemporary artists who use virtual worlds.

Scott Kildall's *Paradise Ahead* series abstracts embodied art as virtual performance pieces by sourcing twelve print works, including Klein's *Leap Into the Void* and Burden's *Shoot*.²⁶ According to Kildall, translating performance and representation of these works into the virtual creates

24. Karen Rosenberg. March 21, 2008."RMB City," *New York Times*.

25. Marina Abramovic, 'Seven Easy Pieces' Guggenheim Museum, 9-15 November 2005, <http://pastexhibitions.guggenheim.org/abramovic/>.

26. Scott Kildall, *Paradise Ahead*, 2006-2007, http://www.kildall.com/artwork/2007/paradise_ahead/index.html



Chris Burden's 'Shoot', Image Courtesy Scott Kildall.

a dialogue of "collective notions of emotional content in surreal space", continuing the tradition of immediacy of the body.²⁷ Kildall's works explore the gap "between the desired representation and the actual result", signifying the affective connection between the subject and the audience. Eva and Franco Mattes would explore their experiential disconnection, both with genre and medium. The duo, also known as 0100101110101101.org, questioned the effectiveness/affect of performance art by reenacting six *Synthetic Performances* in Second Life, including Beuys' *7000 Oaks*, Abramovic and Ulay's *Imponderabilia*, Gilbert and George's *Singing Sculpture*, and, mirroring Abramovic, Acconci's *SeedBed*.²⁸ The work took the form of an 'imponderable' medium, as Franco states, "Eva and me, we hate performance art, we never quite got the point. So, we wanted to understand what made it so un-interesting to us, and reenacting these performances were the best way to figure it out."²⁹ Likewise from conversation, Eva stated that they also did not like Second Life, and doing performance art there created a critical negation as test subject for the efficacy of disembodied body art in virtual worlds. Their performance of *Imponderabilia*, *Seedbed* and *Singing Sculpture* at the Odyssey region in Second Life for the Performa 07 Biennial drew an audience of over thirty participants and an active reception, with the 'visitors' eagerly taking part in pieces like *Imponderabilia*.³⁰ This created a connection to the audience, and, perhaps by its venue, to the larger art world. However, performance in Second Life is seldom a 'white box'. During the performance, a trompe l'oeil box sailed in like a Recognizer from the movie *Tron*, flying in and sitting down next to the scene. It contained a recreation of Abramovic and Ulay's *Modus Vivendi: Pieta*, performed as *Audience Response I* by the group Second Front, revealing the next stage of social relation in our argument.

27. Domenico Quaranta, 'Displaced Familiarity: Interview with Scott Kildall', *Spawn of the Surreal*, 31 August 2007, <http://spawnofthesurreal.blogspot.com/2007/08/displaced-familiarity-interview-with.html>.

28. Eva and Franco Mattes, *Synthetic Performances*, 2007-2009, <http://0100101110101101.org/home/performances/>.

29. Matthew Board, 'Second Lives, Virtual Identities and Fragging', *HZ Magazine*, Issue 12, July, 2008, <http://www.fylkingen.se/hz/n12/board.html>

30. Wolff.

The Impossible Happening: Second Front

Second Front is an international performance group of seven to nine members located across ten time zones, who create original or 'impossible' performance works in the spirit of the Dadas, FLUXUS, and artists such as Guillermo Gomez-Pena.³¹ One of the key components of Second Front's work in Second Life is their adoption of elements from Kaprow's Happening format, allowing for non-repeatability by using disparate elements from cascades of barricades to rains of Super Marios. This instability is partially due to the sheer difficulty of simultaneously directing seven participants in a global virtual world; it creates inconsistencies calling forth gestures, props, or even arrival via teleport, as with their *Border Patrol* performance at Ars Virtua, where their arrival turned into sheer chaos by failures in SL's server technology.³² Dealing with processes of chance also fits within traditions such as FLUXUS, but the ability to achieve previously 'impossible' sites of social interaction suggest the next generation of performance using virtual worlds.

Two examples of Second Front's 'theatre of the improbable' are *28 Avatars Later* and a realization of *Al Hansen's Car Bibbe #2*.³³ For the first, Second Front assumed the role of a roving zombie horde, infecting the surrounding avatars by inviting them to put on a zombie 'skin' and items that would help the 'infected' to invite others to join. This relational gesture, akin to crossing Tiravanija with George Romero, was performed across six sites, including a virtual country bar in the Dublin region, infecting over a hundred avatars during the performance. The significance is that similar actions are often seen as 'griefing' or disruptive interventions, and frequently result in banning the interveners from the area. The fact that in over six regions, Second Front's zombie activities was not only not banned but welcomed is evidence of the piece's efficacy as emergent social milieu, social sculpture, or relational artwork.

Next is an Al Hansen text, *Car Bibbe #2*,³⁴ performed in Chicago, and Parvu, Estonia on 18 October 2008. Hansen's first 1958 *Car Bibbe* known as the 'car symphony', has been performed a number of times, but *Car Bibbe #2* was written years after and was never feasible due to obvious liability issues involving large amounts of explosives.³⁵ The piece emerged when Second Front member Bibbe Hansen revealed a scan of her father's original sketch, and asked whether the piece could finally be realized in the virtual. *Car Bibbe #2* involved cycles of systematic detonation of a Cadillac automobile using dynamite, ballerinas performing barre exercises, and maintenance engineers raking parts in, where the cycle repeats until the vehicle's destruction. Random virtual passers-by are invited to participate by raking or performing pirouettes while the detonations progress.

31. Second Front, [Secondfront.org](http://secondfront.org).

32. Second Front, *Border Patrol*, blip.tv, 11 November 2007, <http://blip.tv/second-front/border-patrol-336812>.

33. Bestzombiemovies.net blog, Second Front's 28 Avatars Later, <http://www.bestzombiemovies.net/second-fronts-zombie-attack-28-avatars-later/>.

34. Second Front blog, *Car Bibbe 2*, 31 January 2009, <http://www.secondfront.org/blog/?p=140>.

35. Hansen, Al, 'Car Bibbe (1958/59)', *FLUXUS Anthology 30th Anniversary 1962-1992 Sound Events*, Netherlands: Slowscan Music, 1994.



Car Bibbe II, Image Courtesy Bibbe Hansen.

The performance of this piece fulfilled many of Kaprow's criteria for a Happening. *Car Bibbe #2* was a hybrid space in which participants were in disparate locations; even in Chicago the projection avatar and the director were at separate locations. The principle of 'non-art' materials was taken to extremes; the explosives, instead of being dynamite, consisted of ten-megaton nuclear missiles, and the other 'movements' of the score included clouds, ballerina images and platoons of cleaning robots. The importance of *Car Bibbe #2* is not its spectacle but the palpable reaction in Second Life and the spaces in which it was projected from testaments of onlookers 'taking cover' during the performance.

Denouement: Affect and Engagement

Why art in virtual worlds? This begs of the differences between performativity and objecthood in relational art, as well as objective, site specific, and unsituated works. But again we are led to the questions of the extant, immediacy, and identification of the work that creates levels of compelling engagement. What are these issues, as evidenced by virtual artists' volume of work and resultant recognition? Two possible answers may have to do with physiology and preverbal processes when humans express affinity.

The first of these is the discovery of mirror neurons in the late 20th century. This particular class of neurons, called 'Dalai Lama Neurons' by Ramachandran has so far suggested their role in empathy, imitation learning and understanding.³⁶ The idea of 'mirroring' is also a well-known sociological concept, referenced by Sherry Turkle in the title of *The Second Self*, her volume about the multiplicity of the self in the networked world. The use of an avatar in a virtual world as

36. V.S. Ramachandran, 'The Neurology of Self-Awareness', *Edge Foundation Journal* 8 January 2007.

a mirror of the self in digital terms is increasingly understood not only in sociological terms but also physiological. It is fitting then, that Cao Fei's virtual self in her documentary is called *iMirror*, as humans, who are self-aware and empathetic beings, are creating experiences in online worlds that produce logical situations for identification with their virtual bodies.

Second is that of affect as preverbal response to social stimuli. Eric Shouse explores Massumi's thoughts on the distinctiveness of affect in his essay, *Feeling, Emotion, Affect*.³⁷ According to Shouse, affect is a prehensive "non-conscious experience of intensity"; it is a moment of unformed and unstructured potential based on responses that Massumi states are "prior to and/or outside of consciousness". This makes a fundamental correlation between virtual art and its social relations to the aesthetic experience of Morris/Otawara or the social onslaught of Second Front. Research in the role of mirror neurons in aesthetic experience is in early stages, but one could argue that our engagement with virtual art is a logical extension of virtual embodiment and creating relational spaces by proxy. While empathy with Marina Abramovic's bleeding belly in *Lips of Thomas* is questionably analogous to Man Michinaga's re-mediation of the piece, identification, empathy, and engagement evidences that there is compelling social relations in art in virtual worlds.

Conclusion

The social relations of art in virtual worlds range from the objective to the purely relational. There are artists who create 'objects' such as Morris/Otawara, whose sites of interaction widen the milieu, whether as social 'gravitational wells' or larger environments for aesthetic engagement. The virtual Happening created by Van Buren, et al. at *Brooklyn is Watching* acts as objective frame for social actions around other objects. This contrasts with artists like Gazira Babeli, who fulfills her and Van Buren's ideas of objecthood. Babeli expands this metaphorical Object-Oriented practice, where the source object recursively creates its own traces, then places them in her own 'container' (Locusolus) and serves as a location for other artists/ child processes (in computer science terms) of the initial object/avatar. This encompassing structure emerges in the art world through the works of Cao Fei, who creates hybrid analogies between the real estate of Beijing, the issues of real estate in the physical and virtual, and the development of community.

As virtual art moves from objective to situational praxis, a logical extension of the performative in the gallery tradition is certainly that of Kildall's *Paradise Ahead* series (the action that creates the record) and the Mattes' *Synthetic Performances* (extending the performance art tradition into the virtual). Second Front's theatre of the improbable builds simultaneously from the FLUXUS Happening, realizing previously 'impossible' works, such as Hansen's *Car Bibbe #2*, and the zombie work *28 Avatars Later*.

Art in virtual worlds, and especially Second Life, explicates the epistemic arc of social art of the last sixty years, from Kaprow's Happening (the ephemeral relational space), Beuys' Social Sculpture, (the milieu-creating work), and Bourriaud's relational art (social milieu that reveals

37. Eric Shouse, 'Feeling, Emotion, Affect', *M/C Journal*, Vol. 8, Issue 6, December, 2005.

persistent traces). Secondly, its emergence and level of engagement ties to traditions of performance art as well as the relational. The engagement is a phenomena extending a rich heritage of virtual art by Shaw, Davies, Novak, DeLappe and many others. As suggested here, it may be possible that humans are hard-wired to identify with virtual spaces and virtual art. The functions and historical contexts of virtual art unfold under scrutiny, including the effects of these works on the larger social sphere, and the role of affect in identification with these works. Why virtual art? Hopefully, some insights, if not answers, have been gleaned from this discussion, and the emergence of various artforms in virtual worlds signals the importance of social art not only in the late 20th and early 21st centuries, but in the millennial era of the networked age.

SOCIAL MEDIA, CULTURAL SCAFFOLDS, AND MOLECULAR HEGEMONIES: MUSINGS ON ANARCHIC MEDIA, WIKIS, AND DETERRITORIALIZED ART

When I first wrote this I thought it could possibly get me killed (I once brandished a toy ray gun at a podium while delivering these ideas at a conference in Amsterdam). Why? As this was written in 2010, the rise of Wikipedia challenged notions of legitimacy, cultural production and institutional power, and any mention of a wiki-formed media community would often provoke furious debate. Given this, what are the effects of wiki-based sites (Wikipedia, Encyclopedia Dramatica, Wikicities, and Wikimedia Commons) or even communal sites such as 4chan.org on mass culture?

Community-driven online media creates frameworks for anarchic models of media production. The Burning Man-like potential for wiki culture ranges widely, since each community sets their own bylaws by creating what Guattari might call 'molecular', or localized hegemonies. These various grassroots communities, social protocols and delivery methods depend on the conceptual frames of the sites' specific missions. Here, I would like to address wiki-based media production and the emergence of molecular hegemonies within them. As wiki-based media expands, what can we learn from the relocation of power structures from institutional to communal? Can cogent art or curatorial models arise from emergent communal media? Hopefully this can be determined through case studies that include encyclopedias, then 'curatorial' sites such as *Wikipedia Art*, 4chan.org and my own project, *Art in the Age of Dataflow*, a wiki-based essay, and a text following this one.

Looked at from a radical analysis, wiki software might be considered a socially emergent platform for online self-organizing anarchic communities that are defined by the mission of their sites and the goals of their members. Yet we see that media ecology of user-generated sites is only anarchic if used in their initialized forms: flat, rhizomatic and amorphous in organization. The social hierarchy and terrain often become internally and externally unequal as they institutionalize or become institutionally affiliated. These entanglements could include the incorporation of non-profit foundations, funded patronage, social legitimation on the Internet, or even memetic and viral recognition.

Wiki-based media sites need time to coalesce into formal structures as groups establish their own hegemonic codes of conduct. The normalization of user-generated communities and content can be seen in engineering terms as a result of feedback in a cybernetic system that oscillates wildly in the beginning then comes to a (relative) state of equilibrium. For instance, a Wikipedia entry on average reaches a stable form after about twenty updates.¹ As the protocological norms of a site's community, implicit or explicit, begin to settle, a set of superusers (admins) arise to enforce those norms. The site, the community and the content oscillate into stability,

1. John Jones, 'Patterns of Revision in Online Writing, A Study of Wikipedia's Featured Articles', *Written Communication*, Vol. 25, No. 2, 2008: 262-289 (found through from CPOV maillist).

Once social contracts, methods of content distillation and a focused mission have been established, the user-generated community will have moved away from the generalized, amorphous wiki model just as the fetus does from the initial zygote. Felix Guattari calls such differentiation 'molecular discourses'² in which a specific set of rules, taxonomies or other rhetorical apparatuses are created to frame content, mission, mode of production or internal governance. The idea of a local or molecular discourse for a site (wiki, image-list, or other) is important for defining a specific situation versus a general framework. Wikipedia is merely one situation located within a wider cultural milieu of socially emergent media. We must consider how each site's community produces agendas of power within its own hegemony and normative codes,

Wikipedia

In terms of this discussion, Wikipedia is a key framing apparatus for community-based models of content production, and curation in general. The site is comprised of a community of thousands of 'hobby-workers' or 'playbourers' operating in hundreds of languages with the help of the Wikimedia Foundation and (at the time of this writing) millions of dollars of volunteer donations.³ There have even been discussions of making a paper version of the site in order to challenge the primacy of print encyclopedias such as *Britannica*.

Jimmy Wales's audacious project is a self-organizing system, a 'temporary autonomous zone'⁴ with its own laws and restrictions that are enforced by its community, as we will see in the case of Kildall and Stern's *Wikipedia Art*.⁵ Its subject distribution is heavily skewed towards popular media versus traditional forms.⁶ The question to pose is whether the dual molecular hegemonies represented by the Wikimedia Foundation and the Wikipedia community are in fact comparable (albeit discursively) to other wiki-based sites such as Encyclopedia Dramatica.

Encyclopedia Dramatica

Founded in 2004 by Sherrod DeGrippe, Encyclopedia Dramatica⁷ has been described as 'Wikipedia's bastard stepchild'.⁸ It chronicles Internet memetic counterculture, trolling (aka online aggravational mischief), lol-culture such as LOLcats⁹ and detournements such as Bel-Airing, and Rick-Rolling in which situations are hijacked by playing music by Will Smith or Rick Astley. In 2007, the troll/ Encyclopedia Dramatica community had a Chicago-based conference

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2. Félix Guattari, *Chaosophy: Texts and Interviews 1972–1977*, New York: Semiotext(e), 2008.
 3. Amy-Mae Elliott, 'Wikipedia hits 2009 funding target', Pocket Lint (blog), <http://www.pocket-lint.com/news/20121/wikipedia-hits-2009-funding-target>, January 2, 2009.
 4. Hakim Bey. *T.A.Z. the Temporary Autonomous Zone, Ontological Anarchy, Poetic Terrorism*, New York: Autonomedia, 1991.
 5. Scott Kildall and Nathaniel Stern, *Wikipedia Art*, <http://wikipediaart.org/>, 2009.
 6. Alexander Halavais and Derek Lackaff. *An Analysis of Topical Coverage of Wikipedia*, Wiley, 2008.
 7. Encyclopedia Dramatica Website, <http://www.encyclopedia-dramatica.com>.
 8. Shaun Davies, 'Critics point finger at satirical website', 9-News, August 5, 2008, <http://news.ninemsn.com.au/article.aspx?id=459249>.
 9. LOLcats are an Internet meme consisting of a picture of a cat with a caption (misspelled in 'lulz'-speak) in Impact typestyle. For more information, access <http://knowyourmeme.com/memes/lolcats>, <http://icanhazcheezburger.com>, and *I Can Has Cheezburger?: A LOLcat Collecshun*, Gotham, 2008.

in 2007 called Lulzcon where self-styled 'lulzsters' and trolls got together to party and talk about their culture.¹⁰

Culturally, Encyclopedia Dramatica is diametrically opposed to Wikipedia in its anarchic net-dystopianism and for privileging offensive, senseless, and shocking cultural gestures that seek to jam legitimate, open and communal systems of media generation. It would be hard to imagine a hardbound version of Encyclopedia Dramatica.¹¹ While Wikipedia and Encyclopedia Dramatica are on similar media platforms their sociocultural differences are vast, with Wikipedia heavily skewed towards popular culture and Encyclopedia Dramatica 's towards net.memes.

What is significant about Encyclopedia Dramatica is that it represents one of many nodes in a culturally powerful Internet community of loose 'lulz' internet counterculture. While the landscape of sites changes over time, they include the board 4chan.org,¹² You're the Man Now, Dog (YTMND.com),¹³ and the hacker group 'Anonymous'. In 2008, a loose confederation of these Internet users created Project Chanology,¹⁴ an emergent protest against the Church of Scientology under the Anonymous movement. The protests took the form of undisclosed videos on YouTube and various images and media on image-boards 4chan.org and Futaba. These ad hoc discussions resulted in mass rallies in London of Guy Fawkes mask wearing, Bel-air playing protestors and Denial-of-Service attacks against institutions seeking to limit the power of Wikileaks.org.¹⁵ While Encyclopedia Dramatica is not a sole repository for memes like the Anonymous actions, it serves as a significant locus in this Internet counterculture.

4chan: Wrecking the Net, One Image at a Time

Although it is not a wiki-based site, 4chan.org is the most visible of a series of '-chan' image-boards (4chan, 7chan, and 12chan.org being most popular). The site consists of a set of databases defined by a sub-directory where users post images and make them available for comment. 4chan was the origin of many Internet memes (or 'mind viruses') such as LOLcats, the Boxy video phenomenon, Anonymous and so on, which are then chronicled on the Encyclopedia Dramatica site. In contrast to wiki-based sites that have stated missions, the -chans are much more generalized, with only loose categories by genre and emergent discourse arising from the user base. Chan-based image sites are not entirely anarchic, as they have user deletion requests called 'sages' (pronounced 'sah-geh'), as well as superuser deletion of images that fall outside the site's protocols.

10. Lulzcon website, <http://www.lulzcon.com/>

11. Cory Doctorow, 'Wikipedia hardcopy for the developing world', BoingBoing, November 1, 2005, <http://www.boingboing.net/2005/11/01/wikipedia-hardcopy-f.html>,

12. 4chan website, <http://www.4chan.org>.

13. You're the Man Now, Dog! (media art site), <http://YTMND.com>.

14. Jared Moya, 'Hackers Declare War on Scientology with 'Project Chanology'', Zeropaed Blog, January 24, 2008, http://www.zeropaed.com/news/9219/hackers_declare_war_on_scientology_with_project_chanology/.

15. Tom Whipple, 'Scientology: the Anonymous protestors', June 20, 2008, The Sunday (London) Times Online, http://women.timesonline.co.uk/tol/life_and_style/women/the_way_we_live/article4173635. ece, accessed Feb.28, 2010.



Wikipedia Art (Painting).

In considering the formal and social structures of Wikipedia, its alter ego and the image boards, what might we learn from them as future curatorial models, using curation as a general metaphor for cultural content focusing?

User-Based Curation: Grassroots Cultural Revolution or Futurist Remix?

As a New Media curator, I am interested in how media art, theory or literature can be edited or curated in the wiki format. Examples such as *Wikipedia Art* and *Art in the Age of Dataflow* indicate possible directions, but do image boards like 4chan.org and deviantart.com, and sites like YTMND.com suggest models for community-based curating? The wiki and image-board are perhaps both the dream and the nightmare of cultural production. Will they resonate with the peals of the Futurist P.T. Marinetti's call to destroy the museums and libraries with our 'machines of loving grace' (to play with the Brautigan poem),¹⁶ or will they only replace them with new hegemonies? Is Wikipedia supplanting the *Britannica's* enlightened every-men mentioned in Andrew Keen's *Cult of the Amateur* with a hierarchy of its own?¹⁷ From our examples, we can make some inferences about the function of power in community-based content production.

16. F.T. Marinetti, *The Futurist Manifesto*, 1909, <http://cscs.umich.edu/~crshalizi/T4PM/futurist-manifesto.html>.

17. Andrew Keen, *The Cult of the Amateur: How the Democratization of the Digital World is Assaulting Our Economy, Our Culture, and Our Values*, New York: Doubleday Currency, 2007.

In 2009 Scott Kildall and Nathaniel Stern created an online artwork entitled *Wikipedia Art*,¹⁸ consisting of a solipsistic Wikipedia entry that defined itself as a sort of 'exquisite corpse' in the vein of the Surrealists¹⁹ or a Situationist detournement. The entry, as Kildall and Stern mention, is to be considered the artwork, and any further editing of it to be considered as continuation of the process of the work. The stage was set by a publication describing the project prior to the time of its entry, but its self-referential quality also made it highly problematic for Wikipedia standards. Within hours the entry had turned from strategic artwork to tactical milieu as community members Jon Coffelt and Daniel Rigal fought over the merits and legality of the project. The news was posted live to lists like Rhizome, which drew further attention to the battle.

In the 15 hours that *Wikipedia Art* managed to stave off deletion (much higher than other articles marked for deletion), a bizarre underbelly was revealed to the mass Internet media as rules like 'Snowball's Chance in Hell' and 'Don't Feed the Trolls' were brought into the debate. In the end, a 16-year-old superuser named Werdna deleted the entry,²⁰ which would have been unheard of in any institutional setting. Subsequently, *Wikipedia Art* was covered in international press, finally drawing the ire of the Wikipedia foundation through a SLAPP suit (strategic lawsuit against public participation) for use of the word 'Wikipedia' in their website.²¹ And lastly, Wikipedia founder Jimmy Wales called the pair 'a couple of trolls',²² thus bridging the cultures of Wikipedia and Encyclopedia Dramatica. *Wikipedia Art* proved that categorization emerges in anarchic media by genre, content and politics, as grassroot groups differentiate from plutocracy through differences in their political position.

But there are other issues surrounding the curation of community-based content production, as can be seen through a recent theoretical text written with the wiki as a formal constraint. In 2009, I contributed a chapter for Turbulence.org's *Networked* online book project,²³ entitled *Art in the Age of Dataflow*, in which the evolution and shift in narrative structure from the early 20th century through the rise of New Media was detailed. The *Networked* book as a project was designed as an 'open dialogic' document; each chapter was to take the form of episodic blogs or wiki-like set of pages. 'Dataflow' however was the only one to use the wiki structure, which was surprising, as the goal of the entire project was its proposed mutability to create a cybernetic feedback loop in scholarly generation. This, in turn, would create an iterative group editing process and a form of community consensus regarding the subject.

18. Kildall and Stern.

19. Anne Kerne, 'From One Exquisite Corpse (in)to Another: Influences and Transformations from Early to Late Surrealist Games', *From The Exquisite Corpse, Chance and Collaboration in Surrealism's Parlor Game*, Kochhar-Lindgren, Schneiderman, and Denlinger, eds. Lincoln: University of Nebraska Press, 2009.

20. For a detailed account of the discussion and resulting deletion, read the archives on [wikipediaart.org](http://wikipediaart.org/wiki/index.php?title=Articles_for_deletion/Wikipedia_Art), http://wikipediaart.org/wiki/index.php?title=Articles_for_deletion/Wikipedia_Art, 2009.

21. Simon Owens, *Wikipedia Art: Vandalism or Performance Art?* Mediashift: US Public Broadcasting Service (online) <http://www.pbs.org/mediashift/2009/05/wikipedia-art-vandalism-or-performance-art133.html>, 2009.

22. Owens.

23. Patrick Lichty, 'Art in the Age of DataFlow, Narrative, Authorship, and Indeterminacy', <http://lichty.networkedbook.org/> (Primary Source), 2009.

The puzzling aspect of the project is that while additional chapters were added after the project's launch, few edits have been submitted to the wiki-form essay, and it remains roughly the same as it appears later in this volume. Given that most of the community consists of established New Media artists and academics, perhaps the general hesitation to edit shows that power remains in the notion of authorship, whatever that may be as of 2010. Or perhaps the subject was less suitable for a general audience of a Wikipedia-like milieu. So the level of counter-editing suggests a perception of academic elitism, unnecessary respect for the text or intimidation, and/or a readership that is below levels of critical mass to edit.

These examples reveal that there are local boundaries in content creation using wikis and other community-driven models. Response depends on initial conditions of the site's framing apparatuses, the constituency of the community and the set of implicit consensual social protocols. When this text was first written as a presentation for the 2010 Amsterdam Wikipedia Critical Point of View summit,²⁴ my intent was to place this text on a wiki to surrender it to the Internet population, offer to have them re-write it, and present the results *unedited*. As part of the musings in the title, I wonder what might have happened to this text had it been opened to a wiki community? Would it have been utterly rewritten and subverted by the Internet counterculture or subjected to the twenty-iteration rule; would it have been 'trolled' or 'exquisite-corpsed'. Or perhaps nothing? Perhaps with adequate promotion to a large enough community over a long period of time, and with generous mass media exemplars, there would be a response from the masses. If not, there might have been a response from the New Media community or 4chan's nefarious /b/ subculture that constitutes an Internet culture of Ids run amok. Hopefully, that will be fodder for experiments for future exploration.

4Chan/YTMND as Curatorial Model

Two last sites to consider are the Futaba/Chan image-base and 'YTMND' single page content site as models for experimental media curation. As a quick aside, YTMND.com is where users submit single page content, consisting of a line or two of text, a background image or a single sound file that are voted upon by the community from one to five stars. At the -chan sites, an image is posted in a themed sub-directory and child submissions are then submitted in 'threads'. On -chan image-boards, the persistence of an image depends variously on not being flagged for deletion, on its number of thread posts and on the number of following threads that push the image down the stack. At YTMND persistence is ongoing, and visibility depends on age and popularity as the pages are sorted by hits and popularity, or memetic 'stickiness'.

While not of the same formal model as the wiki, the board models represent a seminal example of user-driven community curation of community-generated media. This becomes even more salient with the integration of sound and image into wiki-based sites. The question is whether future vetting and curatorial models will resemble the Wikipedia/Encyclopedia Dramatica/MediaWiki format, the Futaba/4Chan model, YTMND, or something else. By examining the responses to the Networked book and *Wikipedia Art*, we can infer some social protocols that have already

24. Julianna Brunello, 'Patrick Lichty: This Presentation Might Get Me Killed', <http://networkcultures.org/wpmu/cpov/lang/de/2010/03/27/lichty-this-presentation-might-get-me-killed/>, March 27, 2010.

developed in different wiki-based projects. But by comparing them to simpler ones evident on the image boards, can we assume that these might be the ends of a bell curve for emergent practices of community-based media production?

Conclusion

We have discussed the structures of three community-based media production sites – Wikipedia, Encyclopedia Dramatica, and the -chan image-board communities – in order to discern the differences that emerge from general models into specific situations. Once these milieus come into being, they distinguish themselves in terms of their local, molecular discourses, social protocols and situations within larger society. This is evident in the power dynamics specific to Wikipedia and Encyclopedia Dramatica and with image board culture. Each of the models develops their own form of hegemonic power structure to exert their own agendas.

With this in mind, one may ask whether the communal technotopian model of hegemony is preferable to the traditional institution. In many ways, the content on user-driven sites skews toward the common or popular until, if allowed to become a dominant paradigm, cultural production becomes a Harrison Bergeron-esque hegemony of the mediocre. This indictment is not a defense of the institution either, as cultural production at this scale is no longer able to keep up with techno-social evolutionary speeds. What is crucial is that as content production heads further towards social media and community based models, producers need to maintain a critical point of view in order to have a conscious notion of how that culture is being shaped by these communications platforms.

ART IN THE AGE OF DATAFLOW

Introduction

One asks, "How to write a chapter that ostensibly has no end?"

One of the parameters of this text as commissioned by turbulence.org in 2009 was that it could be released as a wiki and conceivably be editable by anyone. This simple fact, contrasted with the potentially mutable nature of this thesis over time, creates discursive problems for both the author and commissioners. By proposing a document with the possibility for endless revision, the function of the originating author – myself – merely starts a conversation from which all else becomes discursive potential.

The effects of indeterminacy in online media have precedents in the work of a number of theorists and computer scientists. Barthes' *Death of the Author* states that once a written 'work' is transmitted to the audience, the writer in effect ceases to exist.¹ In the 1960s, Douglas Engelbart envisioned a networked real-time textual development system called the On-Line System (NLS) that made hypertext, object addressing and dynamic file linking possible. This system allowed a number of users to simultaneously read and write online documents, thus problematizing the role of the cultural producer by multiplexing the functions of creator and consumer.

During the same period, literary theory predicted various ways that online media could structure meaning. Joseph Frank's 1943 concept of literary spatial form posits that texts like Proust's *In Search of Lost Time*, famous for its length and sense of 'involuntary memory', and Joyce's *Ulysses*, 265,000 words about a Dubliner's ordinary day, collapses narrative into a simultaneous non-linear moment in time.

Spatial form and agency of choice, when coupled with nonlinear narrative inspired hypertext literature, such as Michael Joyce's *WOE*, the first major Hypercard literary work,² Mark Amerika's *Grammatron*, one of the largest online hypertext novels,³ and Scott Rettberg, et al's *The Unknown*, an 'oeuvre' of hypermedia texts.⁴ Hypertext works then expanded into more conversational forms through mail-lists, blogs and social media. Manik's (Vauda and Pilipovic) aphoristic proclamations on online listservs, which often took the form of troll messaging and lead to flame wars in e-mail lists such as Syndicate and Netbehaviour, and the emailed/blogged love story of Yael Kanarek's *World of Awe* are narratives that illustrate differences between two models of transmission: the mail-list and blog. The mail-list 'reflects' an email; a message is first posted to

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1. Roland Barthes, 'Death of the Author', *Image, Music, Text*, trans. Stephen Heath, New York: Hill and Wang, 1978.
 2. Michael Joyce, *WOE – Or a Memory of What Will Be*, Macintosh Hypertext novel, 1991.
 3. Mark Amerika, *Grammatron*, 1997, <http://www.grammatron.com/index2.html>.
 4. Scott Rettberg, et al, *THE UNKNOWN, THE GREAT AMERICAN HYPERTEXT NOVEL*, 1998-2002, <http://unknownhypertext.com/>.

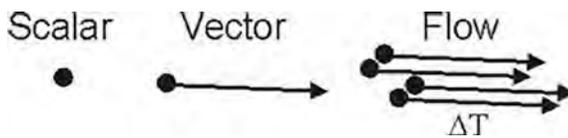
the list, which retransmits the post to all registered to that list. The blog is an episodic transmitter with periodic entries. Both define cultural transmitters and their audiences since each mode of communication has a specific way of building a community and conveying information. The mail-list could be seen as more of an agora for message exchange, while the blog might be seen as a public 'soap box' that people learn about and aggregate together largely by cross-linking and word of mouth. With the tremendous amount of information generated by blogs, online data and social media, artists are now making works that map trends and indices to intuit the shape of 'flows' of online data. Examples include Martin Wattenberg's diagrammatic maps generated from live Wall Street data, and Golan Levin's graphic visualization of metrics gleaned from teenage breakups posted on blogs in *The Dumpster*.

In placing emphasis here on mail-lists and blogs, I do not intend to exclude the wiki, which is a hybrid with a mutable structure with revision trails. The wiki form was aptly probed by Scott Kildall and Nathaniel Stern in *Wikipedia Art*, by creating a self-referential conceptual art entry that revealed the internal social structures and modes of production in wiki communities, especially Wikipedia.

All of these writers, researchers and artists have done invaluable work in advancing the development of narrative structure (scalar), the trajectory of communication (vector) and the overall trends in interaction (flows).

While the following discussion does not intend to suggest a linear development of art's journey from structure to flow, it does propose that the development of the discussed theories, technologies and artworks reflects a culture striving to understand how to relate to itself in the face of tremendous change.

Defining Terms



I have mentioned the terms *scalar*, *vector* and *flow*. When using these, I want to stress that they are conceptual or visual metaphors borrowed from mathematical terminology to describe narrative structure, transmission of narrative and social trends within large sets of transmissions or narratives. Structure is represented by the *scalar*, spatial moment, or formal quality; here I use it to represent how narratives from modern literature to hypertexts arise from spatial form. In spatial form, narrative becomes a single point in time, its events to be accessed in no particular order.

The *vector*, or movement of the scalar, represents communication, or the transmission of the narrative through a medium. But there are different modes of narrative transmission, different directions or intents and magnitudes that represent the scope of the media and how they are transmitted over time. Analyzing a vector narrative could be as simple as considering the size of the audience and how the narrative reaches it, or the singular or episodic nature of an email to a

list versus the communicative function of a blog.

Lastly, *flow* – the metaphor of acceleration – is a larger concept; it is the rate of change of information represented as social trends in an online community. One example of tracking these trends or 'flows' is [Twitter's](#) (microblog) 'trending' statistics, which determine dominant conversational topics within the community by tracking key words and phrases. Techniques such as trending, tagging and indexing allow us to try to infer relationships within large sets of data or in large sets of interactions that might seem overwhelmingly complex. Artistic visualizations and analytics can reveal insights about these trends or flows within a set of interactions or in a community.

The ideas of *scalar*, *vector* and *flow* are then analogous to that of narrative structure, its transmission and the mass movement of narratives and their respective transmissions within an online milieu.

Joseph Frank and the Collapse of Narrative Flow

In 1945 Joseph Frank published *Spatial Form in Modern Literature* in the *Sewanee Review*, proposing a model of narrative that challenges traditional notions of linear progressions in time.⁵ His assertion is that writers such as Eliot, Proust and Joyce have broken the linear model of narrative, thus creating a sense of time that collapses and a literary space from a single point of memory.

For Frank, creating space is linking narrative to non-linear time, thus reflecting the relatively new conception of Einsteinian space-time. But by breaking with the use of linear time to create a narrative, by collapsing time into layers, these writers have produced random access ordering now so familiar in online media.

Frank's analysis draws from Lessing's *Laocoon*, which in turn draws its discursive foundations from classical and 18th century European thought, to "define the limits of literature and plastic arts".⁶ Frank begins with the following text, using it to anchor previous thought and to reconsider the issue of literary formalism:

*Many of Lessing's conclusions grew out of a now antiquated archaeology, whose discoveries, to make matters worse, he knew mainly at second hand. But it was precisely this attempt to rise above history, to define the unalterable laws of aesthetic perception rather than to attack or defend any particular school, which gives his work ... perennial freshness ...*⁷

Framing his arguments in Lessing's terms, Frank places himself in an historical discourse while, at the same time, maintaining his focus on modern literature. He thus reserves for himself the right to make the audacious statement that literary narrative is no longer linear and that literary formalism has, in effect, changed.

Of course, the concern with formalism in literary and plastic arts was part of the contemporary zeitgeist in the mid-20th century; *Avant-Garde and Kitsch*, Clement Greenberg's seminal article

5. Joseph Frank, 'Spatial Form in Modern Literature', *The Idea of Spatial Form*, New Brunswick: Rutgers University Press, 1991.

6. *Ibid.*, p. 5.

7. *Ibid.*, p. 6.

that develops his definition of high and low culture, and ultimately Modernist Formalism in art, was published six years earlier, in 1939. Frank uses the argument to reconsider Lessing and thus reassess forms under a modern rubric, claiming that narrative structure in the 20th century is collapsing by shifting from sequences of events into moments in time. Under the model of spatial form, time and structure implode rather than progress. Although the implosion of linear structure in spatial form is not identical to browser-based hypermedia, it does create the framework for theorizing the temporal and formal simultaneity of online media. This will lead scholars like J. Yellowlees Douglas to arrive at the indeterminacy of closure in hypermedia, then of form in hyperbolic browsing and finally in openness of content in Wiki-based media.

Frank's analysis of Proust's *In Search of Lost Time* and Joyce's *Ulysses* are prescient for anticipating structural aspects of narrative in networked media. In Proust, Frank notices the disappearance and reemergence of characters, such as the narrator's absence in a sanatorium and his attendance at the reception of the Princesse de Guermantes, as asynchronous, as is much of the rest of the story. *In Search of Lost Time* is seen as a raconteur's moment of recollection, a spatial form rather than a linear flow of time. This also establishes Proust's 'random access' style; we can begin to imagine a contemporary viewer at a screen, clicking around the narrator's recollections. Frank's analysis of Proust provides a thoughtful metaphor for considering the juxtaposition of narrative, human memory and computational memory.

Joyce's *Ulysses*, according to Frank, uses a similar conceit, portraying the whole of Dublin with little framing or order to the presentation. A metaphor for this sort of narrative is learning the collective story of a community by way of entering a pub and talking with the patrons, bartender, etc. One can get different perspectives on the town; each new person will have unique bits of information, and one can go from person to person; sequencing can define much about the 'reader's' view. There is a holistic perspective provided by these books' spatial form.

This collapse of the linear flow of narrative into an 'all-at-onceness' where events are not meant to be read in any particular order also emerges in theoretical works such as Deleuze and Guattari's *A Thousand Plateaus*, or even earlier in Benjamin's *Arcades Project*. Brian Massumi writes in the *A Thousand Plateaus* Translator's Foreword: "*What do you do with a book that dedicates an entire chapter to music and animal behavior – and then claims it's not a chapter? That presents itself as a network of 'plateaus' that are precisely dated, but can be read in any order?*"⁸

Massumi's playful consternation with his translation project fits with our spatial model – possibly not only its form but also genre by its inclusiveness of topics. At the risk of becoming too broad in scope, I would like to suggest that discursive spatiality often tends toward the encyclopedic. Perhaps the spatial form resembles Wagner's *gesamtkunstwerk* (total work of art) at times or the 18th century *Wunderkammer*, which was a personal museum or 'cabinet of curiosities'. Benjamin's *Arcades Project*⁹ certainly embodies this modular approach in its representation of

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8. Brian Massumi, 'Introduction to A Thousand Plateaus', from Gilles Deleuze and Felix Guattari, *A Thousand Plateaus: Capitalism and Schizophrenia*, Trans. Brian Massumi, Minneapolis/London: University of Minnesota Press, 1988.
 9. Walter Benjamin, *The Arcades Project*, Cambridge, Massachusetts: Harvard University Press, 2002.

19th and 20th century Paris from the viewpoint of the flâneur, the wanderer about the city. Benjamin takes in bits here and there from writings, architecture and interactions to construct a nonlinear cognitive map of one of the greatest cities of the world in a sprawling set of reflections. He also represents a feel for the space of the city and how he moves through it, presaging Debord's concept of psychogeography or the affective relation between individuals and the (usually urban) landscape.¹⁰

While mentioning a near thousand-page set of documents in what may appear an offhand fashion, what is important is the spatial form of the overall work as a holistic experiential map. In many ways, Benjamin is reminiscent of a theoretical Ulysses in Paris, but he goes a step further. Benjamin's holism presupposes the volition of the readers to go as they will, which is consistent with Frank, but it also shows the *Project* as a map of the terrain of his mental organization of the city. This terrain shows the affective patterns of Benjamin's discourse in relation to Paris, i.e. its psychogeography. It also reveals flows of activity within the social milieu through his anecdotal accounts, revealing how culture manifested itself in his time. These patterns of interactions between the city's inhabitants and the affective landscape serve as a strong metaphor for some of the pattern recognition schemes that emerge in a number of to be discussed hereafter.

The nonlinearity of both *A Thousand Plateaus* and *The Arcades Project*, in the context of Frank's analysis of Proust and Joyce, show spatial form as a modern literary practice broader than fiction. We could also cite many other works, such as Harold Pinter's play *Betrayal*, which details of two couples' unfolding histories from recollections in semi-reverse order.¹¹ The prominence of literature with elements of spatial form leads to literary theories that question the resolution of hypertext narrative. Yet once we have collapsed time into a single randomly-accessible space, once we get to hypertext literature, is there any way to have narrative closure?

On Narrative Closure

In "*How Do I Stop This Thing?: Closure and Indeterminacy in Interactive Narratives*", J. Yellowlees Douglas investigates spatial form in hypertextual literature by drawing upon Frank's ideas of spatial form and nonlinearity.¹² Douglas notes spatial form's navigation through parallel levels of collapsed time by indicating the similarities between Proust's *In Search of Lost Time* and Michael Joyce's *WOE – Or a Memory of What Will Be*.¹³ In *WOE*, Joyce employs a memory map on the screen, illustrating the schematic relations of the narrative lexia or media chunks of the story. As Douglas notes, there are discontinuities in *WOE* that prompt the reader to question the meaning of the text. For example, the indeterminacy of narrator and character is evident through unspecified characters, when one portion of the text identifies an indeterminate woman as 'not Filly' as she wears a perfume that smells good on Filly. As with Proust, characters come and go, and sometimes one is not entirely sure what the narrative sequencing is. Douglas draws parallels between *WOE* as

10. Guy Debord, *Psychogeographic Guide of Paris*, ed by Bauhaus Imaginiste, Denmark: Permild & Rosengreen, 1955.

11. Harold Pinter, *Betrayal*. New York: Grove Press, 1994.

12. J. Yellowlees Douglas, "How Do I Stop This Thing?" Closure and Indeterminacy in Interactive Narratives', *Hypertext/Theory* George P. Landow (ed.), Baltimore and London: The Johns Hopkins Press, 1994.

13. Joyce.

hypernovel and Proustian nonlinearity by equating the lexia of the hypernovel to Proust's navigation of layers of time. This nonlinearity, Douglas states, creates a cycled 'rereading' in hypermedia that calls into question the nature of closure. The reader/user in a hypertext novel can try to find the end, wander around for a while and perhaps never attain any sense of closure at all.

This indeterminacy of closure is also evident in hypermedia literary works like Mark Amerika's *Grammatron*¹⁴ and Scott Rettberg's *The Unknown*.¹⁵ *Grammatron*, Mark Amerika states, consists of "over 1100 text spaces, 2000 links, and 40+ minutes of original soundtrack", hinting at the abyss of lexia and the statistical impossibility of closure by virtue of *Grammatron*'s scope. Amerika's protagonist Abe Golam's sprawling cyber-erotic adventures are based around the *Grammatron* Project, a metaphor for the author's ambitions whose mission is:

...to project his, Golam's, creative work to as many different people as possible over the Net and to have all of these different people pay him as many credits as they could cough up to help support his habit which, it ends up, was nothing more than continually pursuing his projects.¹⁶

To sum up, Golam (an obvious analog for 'golem', or avatar) is tied in a Gordian knot of chasing his goals of infinite recognition through net.stardom that will fund the work and enable him to chase his dreams some more. Therefore Amerika erects a hyperlinked wilderness of mirrors, or, as Golam states, 'meaning'. "I'm Abe Golam, an old man. I drove a sign to the end of the road and then I got lost. Find me." The problem is that Golam seems to have lost his way and cannot tell you how he got where he is; in effect, he is leading the reader into his own recursive web. *Grammatron* exhibits a structural imposition that necessitates a Proustian wandering and 're-reading' that specifies a non-linear spatial form as per Frank. One question that arises is whether spatial form (in hypermedia or in text, as we have seen with Proust and Joyce) is defined by the challenge of closure, i.e. by that form's potential of infinite wandering. Perhaps, but Rettberg, et al. offer an interesting solution to the spatial hypernovel by introducing a narrative indexing narrative in *The Unknown*.

In *The Unknown* Scott Rettberg and collaborators extend the spatial form into a playful conceit by claiming it as the "Great American Hypertext Novel",¹⁷ echoing Amerika's assertion that *Grammatron* is "the most widely accessed hypertext on the World Wide Web". But *The Unknown*, unlike *Grammatron*, is one aspect of a larger lexial constellation. Using the graphic conceit of a color index inspired by the Chicago mass transit system, it posits that *The Unknown* is not just a hypermedia novel but a larger oeuvre, including related correspondence, live readings and art. This reminds one of Foucault's *What is an Author?* in which he asks what constitutes an authorial work.¹⁸ How mundane can a 'piece' be to be considered a work? Could Kafka's laundry list be considered a work? Could all the ephemera, events, as well as the hypertext of *The Unknown*, be considered

14. Amerika.

15. Rettberg, et al.

16. Amerika.

17. Rettberg, et al.

18. Michel Foucault, 'What is an Author?', *Twentieth-Century Literary Theory*, ed. Vassilis Lambropoulos and David Neal Miller, Albany: State University Press of New York, 1970.

'the work' by virtue of its inclusion, or is it just web documentation? Given our discussion of spatial form and hypertext, it would seem logical to say yes, but this further questions the notion of closure in spatial form. Closure includes not only closure in reading, but also an indeterminacy of closure relating to production. Although this points towards the wiki, it would be useful to take a moment to consider historical precedents to hypertext and collectively editable texts.

Forerunners of Hypermedia

One of the key forerunners of hypermedia, the Memex, was envisioned in 1945 by Vannevar Bush in the same year that Frank published his seminal essay. The odd coincidence of the two appearing at the same time is evidence that multiple disciplines were concurrently considering sweeping changes in communication. The Second World War had ended, and Bush was considering how new computational technologies could be used to further the lot of the human species. His proposition was a device called the Memex, a portmanteau for (Mem)ory Extender described in his essay, *As We May Think*.¹⁹ It consisted of an interactive microfilm recording and annotation system for storing and analyzing information pertinent to the user, plus a system to link and store associations between topics. Content, from personal photos to scholarly material, could be purchased ready-made or recorded directly on the translucent data screens on the top of the device.

The World-Wide Memex (Collage)



Looking at this device, one can see the amazing similarity to surface computing (computing dependent on touch and gesture rather than keyboard and mouse), with its ability to record and manipulate documents placed on the screen. But the defining feature of the Memex was 'associative indexing'. The operator can associate the selection of one item to cause the recall of another, or, in effect, create a hyperlink. As Bush states, "The process of tying two items together is the important thing", the gesture at the foundation of all hypermedia. The links create trails of association that don't fade with time and act as a form of retrievable metatagging. In addition, more items can also be added to the skeins of associations in the Memex to create a database of preferences for the user(s). The process of reviewing the trails and indices of the Memex through interactive associative trails is the seminal description of hypermedia browsing, albeit

19. Vannevar Bush, 'As We May Think', Packer, R. and Jordan, K. (ed.) *Multimedia: From Wagner to Virtual Reality*, New York and London: W.W. Norton & Co., 2001.

electromechanical and non-networked. However, Bush's device was designed for single users, and it would take Douglas Engelbart to develop a multi-user document environment that resembled later developments such as the wiki.

In 1962, Douglas Engelbart (also known as the inventor of the mouse) was working at Stanford Research Institute on the creation of the NLS, or oN-Line System.²⁰ The NLS used a tightly ordered, collapsible outline format for a uniform structure of information, defining the format of document creation and organization. In addition, the NLS utilized the mouse and a new five key chording interface. The new interface and uniformity of document structure embodied Engelbart's belief in the co-evolution (or augmentation) of human-computer symbiosis, assuming that humans and computers would need to challenge one another to create new ways of working.²¹ Documents could be dynamically edited by all users on the mainframe and also had the capability to link to other documents. Although at this time mainframes time-shared access to the system, the NLS allowed for live, asynchronous editing of documents by multiple users. Although the main artifact remaining from the NLS is the mouse, creating the point-click interface for later web browsing, Engelbart's document structure also laid the groundwork for ordering browser languages. But what is most significant is that the NLS created a paradigm of collective authoring in online spaces, which would be expanded upon later by the wiki.

The Wiki

Having investigated the roots of hypermedia and open historical document systems, I would like to turn to a contemporary technology, the wiki. The wiki is a communally editable webpage driven by a server-side database that further complicates the idea of closure in narrative production. As a dynamic archive, the wiki is open to revision by the community authorized to edit it. Wikis are hyperlinked, social, time-based, and reconfigure archives dynamically over time. Although the wiki is mutable, it tracks revisions by author, date, etc., thereby visualizing flow. It has a hyperlinking schema reminiscent of the Macintosh HyperCard, and it develops content in ways that are largely bottom-up and dialogic (community-formed) rather than top-down (institutional). In terms of the direction of transmission between media and audience it corresponds to the vector. But what is most germane here is the indeterminate nature of the closure of the document.

Although Douglas argues that hypertexts encourage a loss of narrative closure, the lack of authorial closure complicates the matter even further. In the cases of *Grammatron* and *The Unknown*, each has a central author and is constructed as static web pages updated by that author. In contrast, a wiki is a phenomenon with normative social behaviors adhering to a bell curve. When a wiki article with a sizeable community is posted, its text is reviewed by a number of editors and admins, and, if it is not removed, it goes through an intense period of correction. Discussion about the topic then attenuates over time, although new authors or current events may 'strike the bell' again, setting off the process of normalization once more. The document is never closed; its potential for change persists, although over time it becomes less likely. Furthermore, references in wikis can link to dynamic documents, allowing for an Indra's web of cross-dependencies. This is one reason why

20. Thierry Bardini, *Bootstrapping: Douglas Engelbart, Coevolution, and the Origins of Personal Computing*, Stanford: Stanford University Press, 2001.

21. Bardini.

Wikipedia often stresses links to print media: they reveal the dialectic between static and dynamic and where the current tolerance for solipsism and communal limits for openness lies.

What art forms are possible in dynamic community-based social document environments? One is Kildall and Stern's *Wikipedia Art* project, conceived as a simple social intervention into Wikipedia in the spirit of the Surrealist exquisite corpse.²² The project was created as a self-referential article proposed by Kildall and Stern and placed by critic and Wikipedia co-admin Jon Coffelt, who kept other community admins at bay until the project attained a tenuous existence on the site. *Wikipedia Art* set out to question the permeability or potential for subversion of the Wikipedia community and its social protocols. Because of piece's social dynamic, the narrative shifted from what was originally a conceptual strategic position to a performative tactical one, as the most important aspect of the work became records of interactions on Wikipedia such as the deletion debate.

The events of the deletion debate unfolded roughly as follows. Certain administrators ran interference for the project while the Wikipedia community argued about *Wikipedia Art's* deletion on the discussion page. Arguments about the conceptual merits of the piece were weighed alongside violations of Wikipedia standards, such as solipsistic references. 15 hours later, an 18-year-old admin named Werdna removed the entry.²³ While the debate raged, artists and collaborators found arcane rules for community conduct including 'Snowball's Chance in Hell' and 'Don't Feed the Trolls'. The first refers to whether the entry has any chance of remaining on Wikipedia, and the other to not letting 'trolls', 'griefers' or other intentional irritants get any attention for their activities. In an institutional setting, such protocols would be differently worded if they existed at all. The difference between institutional or corporate social protocols (policies) and those of grassroots communities (e.g. forum rules), defines the shape of their respective cultures, which is expressed in the form of their cultural production, whether narrative, literary or aesthetic.

In the months after its removal, online communities including Rhizome.org and the blogosphere took up the issue of the project's inclusion. After its demise, a new article surfaced called the 'Wikipedia Art Controversy', creating another set of discussions. This provoked Wikipedia Foundation founder, Jimmy Wales, to call Kildall and Stern, "a group of trolls" i.e., disruptive individuals in the social media milieu.²⁴

What is evident is that networked communities are sensitive to ongoing negotiations between literature, art, context and intentionality in projects that use open forms. In many ways, our exposition of spatial form and indeterminacy progresses from *Grammatron's* singular hypertext and *The Unknown's* oeuvre, to *Wikipedia Art's* complex set of texts (the <http://wikipediaart.org> site), including the two articles and the social narratives that performatively emerged around the work. The challenge with this progression is that complexity, indeterminacy and diffuseness of thought creates incoherence unless one uses indices and maps or other methods to make the structures or correlations in large sets of data more 'tangible'. From this, one can look at how to create such

22. Scott Kildall and Nathaniel Stern, *Wikipedia Art*, <http://wikipediaart.org/>.

23. Simon Owens, 'Wikipedia Art: Vandalism or Performance Art?' Mediashift, PBS Online, <http://www.pbs.org/mediashift/2009/05/wikipedia-art-vandalism-or-performance-art133.html>.

24. Ibid.

structures, but must consider the journey from author to audience in online environments, the 'line of flight' or vector.

Vector

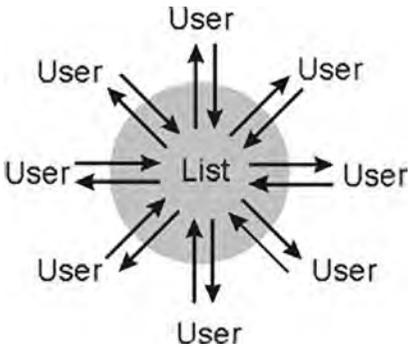
The next step in this discussion of digital narratives and communication is to consider the metaphor of the vector. This idea is far more about mode of communication than structure and therefore much more relational than that of narrative structure. In the Translator's Foreword to Deleuze and Guattari's *A Thousand Plateaus*, Massumi explains Deleuze's use of the vector as a "point of application of a force moving through a space at a given velocity in a given direction".²⁵ The point of application is the content, and the movement is translation into the online social milieu. The question is, where does the information go? Who does it go to, if anyone? Does it go to a community for discussion, or is it posted on a site for discovery and aggregation into someone's daily news? How does it propagate? These are much more social than narrative concerns, although the two are not separate, as here McLuhan's pronouncement of 'The Medium is the Message' is very true.²⁶ This is because each communications method has different effects. A listserv is more communal, a forum has categories and topics, and a blog is a more singular transmission, like a micro-broadcast. For our comparison, I would like to discuss artists who have used the listserv as a medium, Manik (aka Marija Vauda and Nikola Pilipovic), blogs (Liza Sabater), and a blog that tracks flows of ideas, trends, or memes (Olson, et al.). Even though there are far more models of online intercommunication than blogs and listservs, these two offer a contrast of flows of information that are useful for our general discussion.

By analyzing vectors of content (narrative, art, etc.) in networked environments through the work of Manik, Sabater and NastyNets (Olson, et al.), I want to compare the trajectory of information in the listserv and the blog. The listserv, implemented in 1986 by Eric Thomas, is a collective email reflector that has a list of subscribers to whom a message is forwarded every time one of them posts to the server.²⁷ The listserv is used by many New Media art groups, including Furtherfield.org, Institute for Distributed Creativity, empyre, and nettime. The listserv then is analogous to a huge discussion circle in which everyone is able to hear everyone else's statements. The message-vector travels into the server, where it propagates out to all the recipients on the list. Therefore, the diagram for the listserv could be seen as a central node with double-ended arrows, all signifying the bidirectional communication of this sort of electronic agora. However, when used by any one user, the bidirectional vector points back to that of the originator, as his content is transmitted back to him. All other vectors go out to the other participants.

25. Deleuze, G. and Guattari, F, *A Thousand Plateaus. Capitalism and Schizophrenia*, trans. Brian Massumi, Minneapolis and London: University of Minnesota Press, 1988, p. xiii.

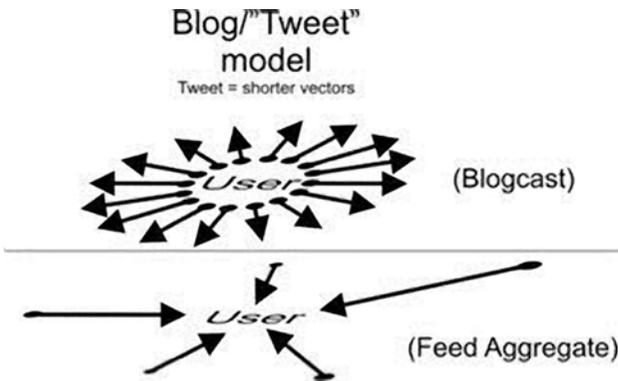
26. Marshall McLuhan and Quentin Fiore, *The Medium is the Message*, prod. by Jerome Agel, Corte Madera, CA: Gingko Press, 2001.

27. LivingInternet.com mailing lists, Listserv History, <http://www.livingInternet.com/1/1li.htm>.



Listserv Discourse Vector Diagram.

Blogs produce a very different schematic relationship between author and reader. Consider a large circle representing the blogosphere, or collective community of bloggers. Next, place points of application (blogs) with vectors of force (feeds) going out in all directions inside that circle. The diagram might resemble a high school illustration of gas inside a balloon, with the atoms transmitting packets of information throughout that circle.



Blog Discourse Vector Diagram.

Someone will read the blog via a search engine or word of mouth, but the definition of audience, as in the listserv, is indeterminate or open. This openness or indeterminacy can be found in hyper-text and the wiki, but now relates to the audience. Blog content is usually static, but episodically added to, so blogs' indeterminacy is not found in the narrative or author but in the 'target'. Also, as blogs become established, readerships and affiliated bloggers emerge through 'rings' and link-chains (aka cross-linking). Therefore, although in the beginning the blogosphere's audience is ideally indeterminate, molecules of association can form. One could almost think of these clumps and chains as hydrocarbon rings that link and form larger molecules. Using this metaphor playfully, it is not surprising that the blogosphere is sometimes explosive.

Manik (Marija Vauda and Nikola Pilipovic) is a collective in Belgrade, Serbia, whose works range from conceptual paintings to ASCII art, i.e., art created with nothing more than computer text. Their work mixes intellect – they are frequent textual contributors to New Media lists – with a fierce intransigence that questions the nature and status politics of the art world. While Vauda and Pilipovic are multi-media conceptual artists, their *Art for Beginners* series on the Rhizome listserv is a direct polemic for New Media's emergence on the international art scene in the early 2000's.²⁸ It consists of small images (about 320 by 240 pixels) that comment upon or satirize artists' or art's effectiveness as a genre. The images are lobbed like grenades into the list, including *Art II for Beginners* with its simple black *Art Macht Frei* (the phrase placed above German labor camps during the Holocaust), and *Tender Touch for Beginners* with an understated 'Hiroshima' on an olive background. I speculate that *Art for Beginners* contains a Serbian perspective to remind the West (as Serbia has had a liminal status as a semi-sanctioned country after Milosevic) of the 'banality of evil', a phrase coined by Hannah Arendt to describe Eichmann's denial of responsibility for his actions in the Holocaust during his Nuremberg testimony.²⁹ With a small gif image, Manik subtly reminds the (largely) Western net.art audience of its own banality in the face of the ongoing effort of the former Yugoslavia to cope with the fallout of the Balkan and Kosovo conflicts.

Manik's posts exactly fit our model of information propagated through a listserv: mind-bombs, with the blast radiating through the perimeter of the recipient list. They are also a Dada-like jamming of the list with aesthetic antagonism rather than overt hostility, which would present the work as trolling or as a senseless tactical provocation. Jamming is a fitting description, because there were no less than thirty such works during the month of December, thus forcing awareness of the work through sheer volume. Still, *Art for Beginners* used the listserv as an artful method to channel a polemic and nearly guaranteed discussion by targeting the Rhizome community.

Another artist who built a community by using a blog as art is New York-based Liza Sabater. Her *Culture Kitchen* blog has earned recognition in US National Public Radio, where she has also been a commentator.³⁰ Her blog is a space of polemic, with a mission to "explore socially libertarian and politically progressive solutions to the issues of everyday life in the United States by focusing on arts, culture, entertainment, life, media, politics, sex, and technology". Originally it was conceived as a New Media project for the Rhizome community. However, rather than a formal project, Sabater's blog is a social experiment exploring how the blogosphere can connect similar vectors and to create 'progressive molecules'. The political thrust of *Culture Kitchen* – to inject comment into the national discourse – is reminiscent of Revolutionary War-era pamphleteering or Tactical Media. In both examples, individuals or small groups leveraged technology surgically to place their political message in the public conversation and to incite discussion. Because of the success of *Culture Kitchen*, Sabater has effectively used the modes of communication specific to the blog as a tool for public discourse.

28. Manik, *Art for Beginners*, Rhizome Raw Listserv, December 2002, archive at http://tija.blogspot.com/2005_06_24_tija_archive.html.

29. Hannah Arendt, *Eichmann in Jerusalem: A Report on the Banality of Evil*, New York: Penguin Classics, 1963.

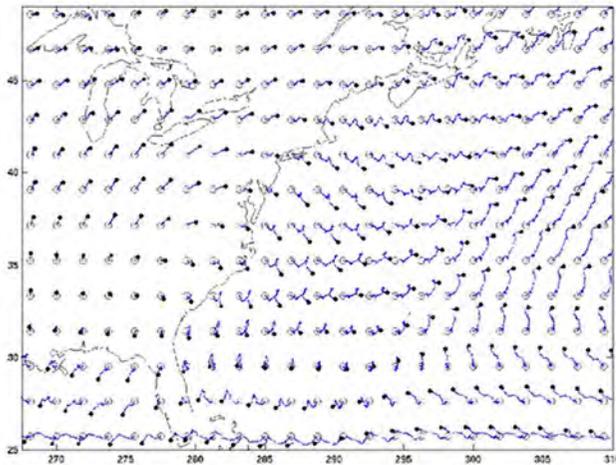
30. Liza Sabater, *Culturekitchen* blog, <http://www.culturekitchen.org>, 2009.

Artists also use blogs as a form of curation, becoming what Anne-Marie Schleiner would call 'filter-feeders', or people who filter content in service of feeding culture.³¹ This has given rise to another collective cultural practice: the web surfer as artist. Marisa Olson, in *Lost Not Found: The Circulation of Images in Digital Visual Culture*, describes the Internet surfing club in which:

...Internet artists, offline artists, and web enthusiasts who were invited by the group's co-founders (of which I was one) to join them in posting to their website materials they had found online, many of which were then remixed or arranged into larger compositions or 'lists' of images bearing commonality.³²

Olson and *NastyNets*, her collective of 'prosurfers' – a play on the term prosumer meaning an advanced (usually amateur) computer enthusiast – surf between the boundaries of vector and flow, blogging (microcasting) about their 'lists of commonality' (discernment of cultural flows). Their results are posted to the blog and exhibited in galleries on disks full of their collective explorations, as "art in variable forms, and ... an art in sharing ... other found 'footage'.³³ *NastyNets* is a pattern recognizer of net memes (the term meme was coined by Richard Dawkins as a mind-virus that spreads through 'infection' and 'mutation') and a trend definer through the group's position as recognized cultural curators. Therefore, the 'surfing club', of which *NastyNets* is only one, reveals the torrential nature of net.culture and that the curators of the present are so inundated with information they now have to surf content, or navigate flows.

FLOW



Progressive Vector Diagram of wind patterns over the US maritime coast [Law, 2000].

31. Anne-Marie Schleiner, 'Fluidities and Oppositions among Curators, Filter Feeders, and Future Artists', *Intelligent Agent Magazine*, 2003, <http://www.intelligentagent.com>.

32. Marisa Olson et al., *NastyNets*, <http://www.nastynets.com/>.

33. Marisa Olson, 'Lost, not found: The Circulation of Images in Visual Culture', <http://wordswithoutpictures.org/main.html?id=276¬e=281>.

By tracking trends, indices and metadata, cultural producers can draw inferences about structures within 'Big Data' or large sets of interactions (another form of narrative), revealing social and information 'flows'. Expanding from the mathematical or logical method used by Deleuze, the flow is an acceleration or *change* in speed or direction of vectors (usually large numbers of them) that reveal a trend or 'shape'. As discussed above, when hypertexts become indeterminate in terms of authorship *and* reading, and are also released to collective processes, finding closure appears almost silly. One must create indices or maps to derive or determine the narrative of large sets of lexia or interactions at macro-scales and to get a feel for meta-structures of the overall terrain. Then one can (if desired) zoom down into more specific areas of information or narrative. The index and map are two prominent methods of mapping flows of interaction that create an intuitive or affective relationship between the viewer and the data. In many ways, Debord's psychogeography applies here, except now we deal with large terrains of information, rather than a city or landscape; the index or map orders data so one can wander around in it. In my examples, the artists track market trends, program flows in classic video games and the terrains of teenage heartbreak. Each one takes a very complex set of data and at least tries to create a visually tangle schematic of it, one that is both intuitive and aesthetically compelling.

Martin Wattenberg creates cognitive maps that depict structural relationships in complex systems of Big Data to reveal trends and correlations. His *Idea Line*, the first New Media artwork commissioned by the Whitney Museum in New York, is a database driven timeline of net art of the 1990s. He describes it as a:

"... timeline of net artworks, arranged in a fan of luminous threads. Each thread corresponds to a particular kind of artwork or type of technology. The brightness of each thread varies with the number of artworks that it contains in each year, so you can watch the ebb and flow of different lines of thought over time."³⁴

The categories range from the conceptual, such as 'minimal', to genre, such as humor or activism, to technical aspects, as in a given programming language like C++. As the visitor to the site scrolls across lines of affinity mapped by luminosity for the frequency of their occurrence, the 'fan' set or 'concurrent timelines', depending on the visualization method, pop open to reveal works in the database. Net artists were invited to submit online, and their submissions were then placed into the piece. *Idea Line* is one of the few attempts to map nineties net art that currently exists online.

Wattenberg's most noted work in mass consciousness is *Map of the Market* created for SmartMoney.com.³⁵ The piece uses the rectangular tree map scheme popularized by Ben Shneiderman for programs like GrandPerspective for the Mac; it displays disk usage by size and type of file. *Map of the Market* intuitively gives a feel for the activity of the market by correlating capitalization versus change (from green to red). However, by first looking at various sectors of the market such as commodities, utilities, banking, and then by varying my time snapshot, I was able to get

34. Martin Wattenberg, *Idea Line*, 2001, <http://artport.whitney.org/commissions/idealine.shtml>.

35. Martin Wattenberg, *Map of the Market*, 1998, <http://www.bewitched.com/marketmap.html>.

a very quick idea of which stocks selected for the Smartmoney.com map were performing short and long term, as well as a good overview of the 'portfolio' in the map. This work is a good index for the overall market and the performance of sectors and particular stocks; to deal with them discretely at first glance would be far more of a challenge.

Ben Fry's best known work is *Valence*, an algorithm that tracks occurrences and associations in Big Data. *Valence* was featured in the display of the movie *Minority Report*, and in the 2002 Whitney Biennial.³⁶ Fry has used *Valence* to analyze Mark Twain, genomes and to comparatively analyze books. As the program reads the data, it tracks several factors and creates intuitive associations between them. In the case of Twain, higher degrees of word occurrence will move the word further from the center for better visibility, and the more often two words are in sequence, the closer they will appear. *Valence* forms a gestalt, a feel for the qualitative properties of a body of data, such as Twain's writing. As Fry states on his website:

*The premise is that the best way to understand a large body of information, whether it's a 200,000 word book, usage data from a web site, or financial transaction information between two multinational corporations, is to provide a feel for general trends and anomalies in the data, by providing a qualitative slice into how the information is structured. The most important information comes from providing context and setting up the interrelationships between elements of the data.*³⁷

Valence's cultural acceptance is evidence of its compelling nature, but Fry appears to wonder whether it ultimately has utilitarian purposes. To this end, he has applied the general algorithm to visualize web traffic by page hit and user information, but within a straight-line form rather than with the arcing method of the popularly known version. The web version of *Valence* exposes the frequency of hits on a page and between pages. Fry successfully takes one body of data of interactions and makes another clear set of legible associations.

Two sets of mapping that have similar functions but different ends are Fry's *Distellamap: Pac-Man* shown in the MoMA's *Design and the Elastic Mind* exhibition,³⁸ and Wattenberg's *Shape of Song* shown at Bitforms Gallery, New York, and seen on the Turbulence.org site.³⁹ Both map temporal structures, one as the execution pattern of the assembly code of classic Atari 2600 games, and the other an analysis of structures in musical composition. In *Shape of Song*, Wattenberg takes his algorithm and loads it with MIDI digital music data. It then looks for deep structures in the music such as repeating themes and motifs, and draws sets of arcs between them to signify their similarity. For example, the folk tune *Oh Clementine* is clearly a repetitive structure, while Madonna's *Like a Virgin* shows a much more chaotic pattern. *Shape of Song* is visually seductive, but while it shows a compelling visual metaphor for the structural qualities of a song, its aesthetics or the fact that it was computationally generated alone may not make it a convincing piece.

36. Ben Fry, *Valence*, 2002, <http://benfry.com/genomevalence/>.

37. Ibid.

38. Ben Fry, *Distellamap*, <http://benfry.com/distellamap/>, 2005.

39. Martin Wattenberg, *Shape of Song*, 2001, <http://turbulence.org/works/song/>

Fry's *Distellamap: Pac-Man* is a similar analysis of a temporal data structure, but it executes the 6507 assembly code of popular Atari 2600 videogames. For the *Design and the Elastic Mind* exhibition at the New York MoMA, Fry displayed a disassembly of the cartridge *Pac Man*. In the schematic, the 'opcodes' (instructions) are seen to the left, and the raw character or chip data is visualized at the end as a simple bitmap, which is the structure of the cartridge code. The execution appears as a series of arcs, jumping from block to block. The ghosts are clearly visible as is Pac Man himself. Significantly this work provides a quick, intuitive glance at programming styles. Compared to multiple disassemblies, the Pac Man code exhibits a convoluted map of the artificial intelligence within the game, showing its unusual complexity. For vintage Atari cartridge hackers, Fry's mapping schema might provide insights into the structure of a cartridge's game engine (kernel) and how to modify it using *Distellamap*. However, just as a display and execution of code, it evokes a sense of wonder about the magic of limitations that vintage programmers had to contend with, as well as nostalgia for the first waves of video gaming. In a way, it produces a map of seventies' technoculture.

The last example in our discussion of artworks using flows in information sets is *The Dumpster*.⁴⁰ This work analyzes millions of blogs and then parses entries to cull ones about teenage breakups. As Golan Levin states, "visitors to the project can surf through tens of thousands of specific romantic relationships in which one person has 'dumped' another." The 20,000 or so breakup entries obtained over 2005 have maps for date, gender and daily volume. But when I interacted with the piece, my general conclusions also had an emotional impact. The posts I read were predominantly female (a quick scan through the left-hand side point cloud suggests this correlation) and revealed teenage women kicking out young men, comforting one another, triumphing and lamenting. On one hand, *The Dumpster* provides an affective, sympathetic map for young romance and its patterns of demise. But as with many of our maps of flows, one asks what data are analyzed under what criteria? Could *The Dumpster* be a tool for sociological research, or is it a social media index of a certain cross section during a particular time that suggests specific results? Or are all of these flow-tracking devices more important for their qualitative or affective aspects than their quantitative use? I believe that if nothing else, works that track trends and flows of interactions and processes give their viewers some inference about meta-structures with huge amounts of data, and from that they can make intuitive leaps. More importantly, these works by Wattenberg, Fry and Levin reflect a culture awash in data and developing new strategies to make sense of it.

Conclusion

Non-linear and networked cultural production spans back nearly a century, if one considers the literary sources from which spatial form is theorized. Humanity questioned the limits of mind, technology and society during the 20th Century, especially in the post-World War II era. Later, visions of New Media by Bush and Engelbart emerged concurrently with literary theory and integrated at the end of the century as hypertext literature such as those by Joyce and Amerika. These works further challenge author and audience, as both wrestle with indeterminate closure, first through hypertext and then dynamic, collective authoring environments such as the wiki.

40. Golan Levin (with K. Nigam and J. Feinberg), *The Dumpster*, 2006, <http://artport.whitney.org/commissions/thedumpster/dumpster.shtml>.

This indeterminacy of closure and the multiplicity of social media (one can consider a listserv a pre-Web 2.0 social media) ask not only what the narrative function of networked cultural production is, but also how to describe its vector of transmission and receipt.

The one to one correlation between transmission and receipt, killed by Gutenberg's printing press, morphed into a panoply of communication modes, origins and termini. Beyond listservs and blogs, narrative potential can be found in forums, friend-based social media, and the wiki as collective literary authoring sites. What is evident is that dynamic, collectively and systematically created content sharply decreases the possibility of static narrative (even hypertextual), and closure of any kind becomes non sequitur. Remaining is the surfer or the cartographer who tries to discern the ever-changing landscape that navigates or shuffles dynamic stuff into their own shape-shifting form. This is not to say that new forms of cultural production eliminate their predecessors – video did not kill cinema – but media do reconfigure discourse.

This being said, contemporary culture, of which networked culture is just a part, reflects its technological challenges as it is deluged with information it tries to make sense of. Therefore, while we read, write and share at historically unprecedented levels – the word 'unprecedented' being used at unprecedented levels in culture as well – the networked individual faces such an enormous information overload that they can only surf, index, map and go with the flow.

ON AMORPHOUS POLITICS

Since the turn of the millennium, new forms of sociopolitical dissent arose. These include cellular forms of resistance, such as asymmetrical warfare of global insurgencies, the use of social media like Twitter and Facebook to voice dissent in Syria, Egypt and Tunisia, by WikiLeaks and its mirrors, and political movements such as Occupy that use anarchistic forms of collective action. Although my focus is more concerned with the Occupy movement, what is evident is what I call an amorphous politics of dissent. 'Amorphous' is defined as 'without shape' and can be applied to most of the *mise en scenes* listed above.

The dissonance of power in conventional politics can be seen in its structure. For example, the nation-state has a tiered structure of power relations. There is a President or Prime Minister, a legislative organ of MPs or representatives, Parliaments, Houses and the like, a judicial organ and a military organ. Although I am referring to US and UK forms of government, we can also find the hierarchical form in the corporation, with its CEO, board, shareholders, managers and workers, and even in Feudal communities with their retinue of vassals, nobles and warlords with their coterie of warriors and support personnel. Conventional power operates roughly pyramidally with a centralized figurehead. One can argue that the pyramid may have different shapes or angles of distribution of power, but in the end, there is usually a terminal figure of authority. To put it in terms of stereotypical science fiction terminology, when the alien comes to Earth it pops out of the spacecraft and says, "Take me to your leader." Leadership is the conventional paradigm of power in Western culture and dominates the industrialized world.

Territorialization refers to power exerted along perimeters or borders. Functionaries, including customs agents and border patrols, apply territorial constriction, but the military wing of the nation-state makes territories' terminal expression. The military is also a pyramid constructed by generals, colonels and other officers leading battalions, regiments and divisions, all organized as defenders of a nation's sovereignty. These military organs are conversely best optimized to exert their power against either parallel or subordinate structures. That is, parallel structures include the armies of other nations, their generals, colonels, majors, et al, and their troops and ordnance. Subordinate structures over which military powers (National Guards and Gendarmeries) exert power over the (relatively) unarmed masses. In the conventional sense, power is expressed in parallel or orthogonally when applied against an equal (institutional or state) or subordinate force, such as a general populace.

Another aspect of this conversation relates to power and force through violent conflict (armed or not), but it has its inconsistencies. Most of the pop-cultural examples I use in this missive to explain amorphous action are violent in nature but are not related to the paradigmatic jamming of conventional power. These metaphors are more illustrations of conventional power's parallelism (a 'right angle') to equal forces at war or orthogony against subordinate populations when exerting power. Amorphous politics and resistance, being asymmetrical, sidesteps both the vertical and horizontal vectors of power to rest in a zone of autonomy at 'odd angles' to conventional paradigms. There are examples of violent and peaceful exertion of both amorphous dissent and conflict at 'right angles' (parallel and vertical expressions of power). In amorphous conflict or dissent, we could cite the

Occupy movement as passive and the Tunisian uprising as violent. In regards to parallel conflict in which equivalent structures confront one another, the Gandhi and King model of non-violent action is passive, and World War Two is violent. What is important here is the inability of conventional politics and power to cope with leaderless, non-hierarchical, non-'right angular' discourse that refuses to talk in like terms of centralization, leadership and conventional negotiations that make demands. This is the site where cognitive dissonance erupts.

The need for the traditional power structure to construct the antagonist's identity in terms of figureheads is evident in the Middle East and Eurasia, but is more simply illustrated in the films *Alien* and *Aliens*, and *Star Trek: The Next Generation*. Both of these feature their respective antagonists, the 'alien' as archetypal Other, and the Borg, symbol of autonomous, collective community. In *Alien*, the crew of the Nostromo encounters an alien derelict ship that has been mysteriously disabled and finds a hive of eggs of alien creatures whose sole role is the creation of egg factories for further reproduction. In the Alan Dean Foster book adaptation and extended edit of the film, Ripley finds during her escape that Captain Dallas has been captured and organically transformed into a half-human egg-layer whom she immolates with a flamethrower. However, in the *Aliens* sequel, the amorphous society of self-replicating aliens has been replaced by a centralized hive, dominated by a gigantic Queen that threatens to impregnate the daughter-surrogate Newt. This transformation creates a figurehead for the threat and establishes a clear protagonist/antagonist relationship of traditional leadership/hierarchical models.

This simplified dialectic of asymmetrical politics is also evidenced in *Star Trek: the Next Generation*, by the coming of the Borg, a collective race of cybernetic individuals. Although representations of the Borg vary in fictional timeline, on television they began as a faceless hive-mind that abducted Captain Jean-Luc Picard as a mouthpiece, not as a leader. It was inferred that if one sliced off or destroyed a percentage of a Borg ship, you did not disable it; you merely had the percentage left over coming at you just as fast. However, in the movie *First Contact*, the Borg network now possesses a hierarchical command structure and, more importantly, a queen. With the assimilated and reclaimed android Lieutenant Data, the crew of the Enterprise infiltrates higher-level functions of the Borg collective, effectively shutting down the subordinate elements of the hive. In addition, the Queen/Leader is defeated, assuring traditional figurehead/hierarchical power relations, rather than an amorphous, autonomous mass. There are other amorphous metaphors in cinema, including the 1958 movie *The Blob*, in which a giant amoeba attacks a small town and grows as it engulfs everything, *The Thing*, about a parasitic alien that doppelgangs its victims, and *Invasion of the Body Snatchers*, a metaphor for the Communist threat of the Red Scare.

Perhaps one of the most asymmetric cultural forms of traditional power is Anonymous' involvement in the Occupy Movement. Anonymous, which has been called a hacker group by the mass media, largely formed out of the online image sharing community 4chan.org, but various factions claim the term. According to The State News, "Anonymous has no leader or controlling party and relies on the collective power of its individual participants acting in such a way that the net effect benefits the group."¹ Anonymous falls in with the faceless collectives mentioned above and cer-

1. James Harrison. 'Scientology protesters take action around world' *The State News*, student newspaper Michigan State University, 12 February 2008.

tainly represents an asymmetric exercise of power. Anonymous is an ad hoc voice of dissent that also collected against the Church of Scientology (called Project Chanology), when flash mobs in Guy Fawkes masks and suits arrived to protest at sites around the world. Its other activities include hacking credit card infrastructures opposed to handling donations to WikiLeaks and creating media around Occupy Wall Street. However, without a clear infrastructure and only transient figureheads, Anonymous functions as an organizing frame for a cloud of individuals interested in various collective actions and represents an indefinite politics based on networked culture.

Another difference between the Occupy movement and conventional politics is the former's perceived lack of agenda. This is because it gives its constituents collective importance in voice and so disperses its discourse. What is the agenda of the disempowered 99% of Americans, or world citizens marginalized by global concentration of wealth? To be heard, simply put. What does that mean? It means anything from forgiving student loans, jobs and redistribution of wealth to affordable health care and so on. It isn't a list; it is a call to systemic change of the means of production, distribution of wealth and empowerment in political discourse. It isn't as simple as, "We want a five percent cut in taxes for those making under \$30,000." It's more akin to, "We're tired that there are so many who are sick, hungry, poor and uneducated, and we want it to end. Let's figure it out." It is the invitation to the beginning of a conversation that has no simple answers, other than the very alteration of a paradigm of disparity that has arisen over the past 40 years through American capitalism.

The last difference between traditional power and amorphous politics is that of passive resistance. This is not a new concept, especially under the aegis of Gandhi and King. However, as long as resistance does not present undue inconvenience for the circulation of power and capital, it is allowed by the traditional state. The irony that Zuccotti Park was privately owned, providing a technical loophole that enabled the Occupy movement, also highlights the tenuousness of public discourse in millennial America. Even given this legal oddity, on the two-month anniversary of Occupy Wall Street, traditional power's patience with amorphous politics grew thin, and force was used against the occupiers. In the streets, the marches were split up, and rules about occupation began to be enforced with cupidity.

The new forms of politics are based on plurality, collectivism and free ideas. The hierarchical nation state has no idea what to do with the growing amorphous blob, except to try to contain it. But as with Anonymous, it is a whack-a-mole game – if one smacks down on a protest, two pop up across town, or five websites pop up on the net. Shut down WikiLeaks, and a thousand mirror sites show up. People in the streets swarm New York and other cities throughout the US and the world, and conflict arises.

Ideas in themselves are not hierarchical.

Desires often have no agendas.

Sometimes people want what is right, and that is all.

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Variant Analyses, Interrogations of New Media and Culture

Lichty's range of commentary and analysis dissects nearly two decades of what has now become new media society. Before Facebook's IPO and Wikileaks' media storm, artist-as-activists experimented with data gloves, virtual world performance, and anonymous, anarchic disruptions determined to bewilder traditional enclaves of art and political society. In this collection Lichty presents several such experiments in distributed creativity: collaborations across a range of technologies and platforms, where authorship becomes a vague placeholder and sometimes acts as a performance in of itself, and the artwork is equally in flux, always in process, and often disappearing into bits.

These essays provide an extensive and timely overview of critical thought on new media culture, written by an observer-participant who has made major contributions to the sociopolitical movements he archives. Spanning art and new media theory, activism and literary criticism, this assembly seeks to understand the networked society in flux: what it means when the virtual integrates with the physical, and when newer, uncategorized media works prompt major shifts in cultural production and change the very definition of art and protest. As a veteran observer of the technological society, Lichty has produced the ideal guidebook for exploring the wilderness of our digital mediascapes, both past and present.

"This collection of interventions confirms Patrick Lichty as one of the most radical and critical of those heroic figures who have responded early on and intelligently to our burgeoning digital culture and its various manifestations as New Media art. Patrick was there right at the beginning, and he has continued to make responses that are clever, witty and humane." – Charlie Gere, Professor of Digital Theory and History, Lancaster University, United Kingdom

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