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Art in the Age of Technological Seduction

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Editorial Statement

Editor's Note

This stunning edition of media-N *Art in the Age of Technological Seduction* is guest-edited by Legier Biederman and Joshua Callaghan. It delves into many critical aspects of new media art, exploring some of the most pertinent issues of today's culture. Each text examines an issue with depth and clarity, broadening the horizons of debate, challenging assumptions and prompting further inquiry.

Thank you, Legier and Joshua for bringing together this broad array of compelling articles. The edition also includes reviews and commentaries from recent national and international media arts festivals and conferences – thank you to all our contributors.

Please check out the *Call for Papers* for information on the upcoming edition of media-N, *Bits, Bytes and the Rhetoric of Practice: New Media Artist Statements*, new deadline for submissions: April 30 2007. In this upcoming edition of media-N, we invite new media arts practitioners to submit personal artist statements and examples of their practice – **we want to hear about you and your practice.**

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Introduction

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In recent years, digital technologies have penetrated our lives in innumerable ways. How do we begin to understand and critically engage with the complex effects of this deluge of information? These technologies not only changed our ways of doing things, but also profoundly conditioned our experience of ourselves and others. Have these shifts in technological processes of imaging, communication, information collection and dissemination enabled a break with established power structures and thus flattened hierarchies? Have they changed our ways of imagining and knowing? Or are they simply maintaining and re-enforcing existing hegemonic structures of power? The diverse essays, responses and anecdotes gathered here to address "Art in the Age of Technological Seduction" attempt to create a wedge in what is otherwise a shut door, to begin an ongoing and necessary discussion of our investments, desires, expectations and ambivalences within a world permeated by new technologies.

Many students today have grown up completely immersed in digital technologies, using them organically as extensions of their hands, eyes, ears and mouths. Millions of people use Web 2.0 internet based services, such as wikis, myspace, flickr, youtube, facebook and many others, and many others as stages on which to endlessly fashion and perform their identities. Despite the radical "newness" incessantly associated with these modes of communication, are the personal experiences— the awkwardness of puberty, the pressure to succeed, the desire for approval—different than in past generations? The idea of the radical break, separating the "new" from the decisively "old," the self from the other, is a touchstone upon which much of modernity defines itself.

Again and again, "new" media art is characterized as being on the edge, as pushing the limits and frontiers of art and life. Yet, this way of thinking is grounded in an obsolete modernist discourse seduced by the medium. Discussions focusing on formal aspects of new media, such as interactivity, non-linearity, duration, process and collaboration have occupied a privileged position in new media criticism. These discussions have often led to a wholesale separation of form and content, muting more complex engagements with the politics, cultural biases and power relationships that are embedded in digital technologies.

For the technologically emboldened, it would seem as though a limitless field of possibility has been made available, from endless forms of cultural production and distribution to unprecedented access to information. But is this utopian perspective still viable today? Has the recent compliance of American companies with China's censorship policies and American Homeland Security programs rendered the "openness" of new technologies meaningless? Has the cosmopolitan tourism originating in nineteenth-century Europe expanded into the new market conditions deriving from conventional capitalist principles for global connectivity? Does the spectre of the nation-state loom within the de-centered, reticular hyper-space that new media arts practices are frequently said to embody? How have the technologies and media that were supposed to bring about the "global village" contributed to the revival of "ethnic cleansing" and religious fundamentalism and helped bring about an age in which economic competitiveness and "prosperity" go hand in hand with mass unemployment and growing economic inequalities? How can we resist commercializing and instrumentalizing forces of technology and the art market? How have digital technologies altered economies of the self? What kinds of subjects are we becoming? What kinds of subjects are the millions of people without access to these technologies becoming?

If information is the true capital of this age, then we are increasingly pressed to look closely at the ways in which the visual culture network continues to be a site where the unspoken rules by which the West knows and enjoys its world are fashioned—the ways the west historically came to know and control much of the world by appropriating the world into its own image. As these technologies develop and expand, so should our engagements with them, and maturation necessitates change and also entails conflict. This collection presents diverse perspectives that engage with the complex and often contradictory ways in which technologies are shaping our lives. While new technologies have been heralded largely as a utopian hierarchy-leveling force of democracy, these essays present a more complex, equivocal engagement with how these technologies function as instruments of control as well as freedom.

Alan Kay's Universal Media Machine

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> Medium:
> 8. a. A specific kind of artistic technique or means of expression as determined by the materials used or the creative methods involved: the medium of lithography.
> b. The materials used in a specific artistic technique: oils as a medium.
>
> *American Heritage Dictionary*, 4th edition (Houghton Mifflin, 2000).

> "The best way to predict the future is to invent it."
>
> — Alan Kay

One way to understand how computerization changed the media we use to represent the world, record our ideas and communicate with others is to examine the work of the people who invented the paradigms and practical techniques of computer media. And one of the key figures in this history is Alan Kay.

Building on the previous work of Ivan Sutherland, Ted Nelson, Douglas Englebart, J.C. Licklider, Seymour Papert, and others, the Learning Research Group at Xerox PARC headed by Kay in the 1970s systematically articulated the paradigm and the technologies of *vernacular media computing,* as it exists today.[i] Although selected artists, filmmakers, musicians, and architects were already using computers since the 1950s, often developing their software in collaboration with computer scientists working in research labs such as Bell Labs and IBM Watson Research Center, most of this software was aimed at producing only particular kind of images, animations or music congruent with the ideas of their authors. In addition, each program was designed to run on a particular machine. Therefore, these software programs could not function as general-purpose tools easily usable by others.

It is well known most of the key ingredients of personal computers as they exist today came out from Xerox PARC: Graphical User Interface with overlapping windows, bitmapped display, networking via Ethernet, mouse, laser printer, and WYIWYG ("what you see is what you get") printing. But what is equally important is that Kay and his colleagues also developed a range of applications for media manipulation and creation which all used a graphical interface. They included a word processor, a file system, a drawing and painting program, an animation program, a music editing program, etc. Both the general user interface and the media manipulation programs were written in the same programming language Smalltalk. While some the applications were programmed by members of Kay's group, others were programmed by the users that included seventh-grade high-school students.[ii] This was consistent with the essence of Kay's vision: to provide users with a programming environment, examples of programs, and already-written general tools so the users will be able to make their own creative tools.

"Simulation is the central notion of the Dynabook"

While Alan Kay articulated his ideas in a number of articles and talks, his 1977 article co-authored with one of his main PARC collaborators, computer scientist Adele Goldberg, is particularly useful resource if we want to understand contemporary computational media. In this article Kay and Goldberg describes the vision of the Learning Research Group at PARC in the following way: to create "*a personal dynamic medium* the size of a notebook (the Dynabook) which could be owned by everyone and could have the power to handle virtually all of its owner's information-related needs."[iii] Kay and Goldberg ask the readers to imagine that this device "had enough power to outrace your senses of sight and hearing, enough capacity to store for later retrieval thousands of page-equivalents of reference materials, poems, letters, recipes, records, drawings, animations, musical scores, waveforms, dynamic simulations and anything else you would like to remember and change."[iv]

In my view, "all" in the first statement is important: it means that the Dynabook – or computational media environment in general, regardless of the size of a form of device in which it is implemented – should support viewing, creating and editing all possible media which have traditionally were used for human expression and communication. Accordingly, while separate programs to create works in different media were already in existence, Kay's group for the first time implemented them all together within a single machine. In other words, Kay's paradigm was not to simply create a new type of computer-based media which would co-exist with other physical media. Rather, the goal was to establish a computer as an umbrella, a platform for *all* already existing expressive artistic media. (At the end of the article Kay and Goldberg give a name for this platform – "metamedium.") This paradigm changes our understanding of what media is. From Lessing's *Laocoön; or, On the Limits of Painting and Poetry* (1766) to Nelson Goodman's *Languages of Art* (1968), the modern discourse about media depends on the assumption that different mediums have distinct properties and in fact should be understood in opposition to each other. Putting all mediums within a single computer environment does not necessary erases all differences in what various mediums can represent and how they are perceived – but it does bring them closer to each other in a number of ways. Some of these new connections were already apparent to Kay and his colleagues; others became visible only decades later when the new logic of media set in place at PARC unfolded more fully; some maybe still not visible to us today because they have not been given practical realization. One obvious example such connections is the emergence of multimedia as a standard form of communication: web pages, PowerPoint presentations, multimedia artworks, mobile multimedia messages, media blogs, and other communication forms which combine few mediums. Another is the rise of common interface conventions and tools which we use in working with different types of media regardless of their origin: for instance, a virtual camera, a magnifying lens, and of course the omnipresent copy, cut and paste commands.[v] Yet another is the ability to map one media into another using appropriate software – images into sound, sound into images, quantitative data into a 3D shape or sound, etc. – used widely today in such areas as DJ/VJ/live cinema performances and information visualization. All in all, it is as though different media are actively trying to reach towards each other, exchanging properties and letting each other borrow their unique features. (This situation is the direct opposite of modernist media paradigm of the early twentieth century which was focused on discovering a unique language of each artistic medium.)

Alan Turing theoretically defined a computer as a machine that can simulate a very large class of other machines, and it is this simulation ability that is largely responsible for the proliferation of computers in modern society. But as I already mentioned, neither he nor other theorists and inventors of digital computers explicitly considered that this simulation could also include media. It was only Kay and his generation that extended the idea of simulation to media – thus turning Universal Turing Machine into a Universal Media Machine, so to speak.

Accordingly, Kay and Goldberg write: "In a very real sense, simulation is the central notion of the Dynabook."[vi] When we use computers to simulate some process in the real world – the behavior of a weather system, the processing of information in the brain, the deformation of a car in a crash – our concern is to correctly model the necessary features of this process or system. We want to be able to test how our model would behave in different conditions with different data, and the last thing we want to do is for computer to introduce some new properties into the model that we ourselves did not specify. In short, when we use computers as a general-purpose medium for simulation, we want this medium to be completely "transparent."

But what happens when we simulate different media in a computer? In this case, the appearance of new properties may be welcome as they can extend the expressive and communication potential of these media. Appropriately, when Kay and his colleagues created computer simulations of existing physical

media – i.e. the tools for representing, creating, editing, and viewing these media – they "added" many new properties. For instance, in the case of a book, Kay and Goldberg point out "It need not be treated as a simulated paper book since this is *a new medium with new properties.* A dynamic search may be made for a particular context. The non-sequential nature of the file medium and the use of dynamic manipulation allows a story to have many accessible points of view."[vii] Kay and his colleagues also added various other properties to the computer simulation of paper documents. As Kay has referred to this in another article, his idea was not to simply imitate paper but rather to create "magical paper."[viii] For instance, PARC team gave users the ability to modify the fonts in a document and create new fonts. They also implemented another important idea that was already developed by Douglas Englebart's team in the 1960s: the ability to create different views of the same structure (I will discuss this in more detail below). And both Englebart and Ted Nelson also already "added" something else: the ability to connect different documents or different parts of the same document through hyperlinking – i.e. what we now know as hypertext and hypermedia. Englebart's group also developed the ability for multiple users to collaborate on the same document. This list goes on and on: e-mail in 1965, newsgroups in 1979, World Wide Web in 1991, etc.

Each of these new properties has far-reaching consequences. Take search, for instance. Although the ability to search through a page-long text document does not sound like a very radical innovation, as the document gets longer this ability becomes more and more important. It becomes absolutely crucial if we have a very large collection of documents – such as all the web pages on the Web. Although current search engines are far from being perfect and new technologies will continue to evolve, imagine how different the culture of the Web would be without them.

Or take the capacity to collaborate on the same document(s) by a number of users connected to the same network. While it was already widely used by companies in the 1980s and 1990s, it was not until early 2000s that the larger public saw the real cultural potential of this "addition" to print media. By harvesting the small amounts of labor and expertise contributed by a large number of volunteers, social software projects – most famously, Wikipedia – created vast and dynamically updatable pools of knowledge which would be impossible to create in traditional ways. (In a less visible way, every time we do a search on the Web and then click on some of the results, we also contribute to a knowledge set used by everybody else. In deciding in which sequence to present the results of a particular search, Google's algorithms take into account which among the results of previous searches for the same words people found most useful.)

The Permanent Extendibility

Sutherland, Nelson, Englebart, Kay and other pioneers of computational media have added many previously non-existent properties to media they have simulated in a computer. The subsequent generations of computer scientists, hackers, and designers added many more properties – but this process is far from finished. And there is no logical or material reason why it will ever be finished. It is the "nature" of computational media that it is open-ended and new techniques are continuously being invented.

To add new properties to physical media requires modifying its physical substance. But since computational media exists as software, we can add new properties or even invent new types of media by simply changing existing or writing new software. Or by adding plug-ins and extensions, as programmers have been doing it with Photoshop and Firefox, respectively. Or by putting existing software together. (For instance, at the moment of this writing – 2006 - people are daily extending capacities of mapping media by creating software mashups which combining the services and data provided by Goggle Maps, Flickr, Amazon, other sites, and media uploaded by users.)

In short, *"new media" is "new" because new properties (i.e., new software techniques) can always be easily added to it.* Put differently, in industrial, i.e. mass-produced media technologies, "hardware" and "software" were one and the same thing. For example, the book pages were bound in a particular way that fixed the order of pages. The reader could not change nether this order nor the level of detail being displayed a la Englebart's "view control." Similarly, the film projector combined hardware and what we know call "media player" software into a single machine. In the same way, the controls built into a twentieth-century mass-produced camera could not be modified at user's will. And although today the user of a digital camera similarly cannot easily modify the hardware of her camera, as soon as transfers the pictures into a computer she has access to endless number of controls and options for modifying her pictures via software.

In the nineteenth and twentieth century there were two types of situations when a normally fixed industrial media was more fluid. The first type of situation is when a new media was being first developed: for instance, the invention of photography in the 1820s-1840s. The second type of situation is when artists would systematically experiment with and "open up" already industrialized media – such as the experiments with film and video during the 1960s, which came to be called "Expanded Cinema."

What used to be separate moments of experimentations with media during the industrial era became the norm in a software society. In other words, computer legitimizes experimentation with media. Why this is so? What differentiates a modern digital computer from any other machine – including industrial media machines for capturing and playing media – is separation of hardware and software. It is because endless number of different programs performing different tasks can be written to run on the same typemachine, this machine – i.e. a digital computer - is used so widely today. Consequently, the constant invention of new and modification of existing media software is simply one example of this general principle. In other words, experimentation is a default feature of computational media. In its very structure it is "avant-garde" since it is constantly being extended and thus redefined.

If in modern culture "experimental" and "avant-garde" were opposed to normalized and stable, this opposition largely disappears in software culture. And the role of the media avant-garde is performed no longer by individual artists in their studios but by a variety of players, from very big to very small - from companies such as Microsoft, Adobe, and Apple to independent programmers, hackers, and designers.

But this process of continual invention of new algorithms does not just move in any direction. If we look at contemporary media software – CAD, computer drawing and painting, image editing, word processors – we will see that most of their fundamental principles were already developed by the generation of Sutherland and Kay. In fact the very first interactive graphical editor – Sketchpad – already contains most of the genes, so to speak, of contemporary graphics applications. As new techniques continue to be invented they are layered over the foundations that were gradually put in place by Sutherland, Englebart, Kay and others in the 1960s and 1970s.

Of course we not dealing here only with the history of ideas. Various social and economic factors – such as the dominance of the media software market by a handful of companies or the wide adoption of particular file formats -- also constrain possible directions of software evolution. Put differently, today software development is an industry and as such it is constantly balances between stability and innovation, standardization and exploration of new possibilities. But it is not just any industry. New programs can be written and existing programs can be extended and modified (if the source code is available) by anybody who has programming skills and access to a computer, a programming language and a compiler. In other words, today software is fundamentally "fabbable" in a way that physical industrially produced objects usually are not.

Although Turing and Von Neumann already formulated this fundamental extendibility of software in theory, its contemporary practice – hundreds of thousands of people daily involved in extending the capabilities of computational media - is a result of a long historical development. This development took us from the few early room-size computers, which were not easy to reprogram to a wide availability of cheap computers and programming tools decades later. This democratization of software development was at the core of Kay's vision. Kay was particularly concerned with how to structure programming tools in such a way that would make development of media software possible for ordinary users. For instance, at the end of the 1977 article I have been already extensively quoting, he and Goldberg write: "We must also provide enough already-written general tools so that a user need not start from scratch for most things she or he may wish to do."

Comparing the process of continuous media innovation via new software to history of earlier, pre-computational media reveals a new logic at work. According to a commonplace idea, when a new medium is invented, it first closely imitates already existing media before discovering its own language and aesthetics. Indeed, first printed bibles by Guttenberg closely imitated the look of the handwritten manuscripts; early films produced in the 1890s and 1900s mimicked the presentational format of theatre by positioning the actors on the invisible shallow stage and having them face the audience. Slowly printed books developed a different way of presenting information; similarly cinema also developed its own original concept of narrative space. Through repetitive shifts in points of view presented in subsequent shots, the viewers were placed inside this space – thus literally finding themselves inside the story.

Can this logic apply to the history of computer media? As theorized by Turing and Von Neuman, computer is a general-purpose simulation machine. This is its uniqueness and its difference from all other machines

and previous media. This means that the idea that a new medium gradually finds its own language cannot apply to computer media. If this were true it would go against the very definition of a modern digital computer. This theoretical argument is supported by practice. The history of computer media so far has been not about arriving at some standardized language – the way this, for instance, happened with cinema – but rather about the gradual expansion of uses, techniques, and possibilities. Rather than arriving at a particular language, we are gradually discovering that the computer can speak more and more languages.

If we are to look more closely at the early history of computer media – for instance, the way we have been looking at Kay's ideas and work in this text – we will discover another reason why the idea of a new medium gradually discovering its own language does not apply to computer media. The systematic practical work on making a computer simulate and extend existing media (Sutherland's Sketchpad, first interactive word processor developed by Englebart's group, etc.) came after computers were already put to multiple uses – performing different types of calculations, solving mathematical problems, controlling other machines in real time, running mathematical simulations, simulating some aspects of human intelligence, and so on. (We should also mention the work on SAGE by MIT Lincoln Laboratory which by the middle of the 1950s already established the idea of interactive communication between a human and a computer via a screen with a graphical display and a pointing device. In fact, Sutherland developed Sketchpad on TX-2 that was the new version of a larger computer MIT constructed for SAGE.) Therefore, when the generation of Sutherland, Nelson and Kay started to create "new media," they built it on top, so to speak, of what computers were already known to be capable off. Consequently they added new properties into physical media they were simulating right away. This can be very clearly seen in the case of Sketchpad. Understanding that one of the roles a computer can play is that of a problem solver, Sutherland built in a powerful new feature that never before existed in a graphical medium – satisfaction of constraints. To rephrase this example in more general terms, we can say that rather than moving from an imitation of older media to finding its own language, computational media was from the very beginning speaking a new language.

In other words, the pioneers of computational media did not have the goal of making the computer into a 'remediation machine" which would simply represent older media in new ways. Instead, knowing well new capabilities provided by digital computers, they set out to create fundamentally new kinds of media for expression and communication. These new media would use as their raw "content" the older media which already served humans well for hundreds and thousands of years – written language, sound, line drawings and design plans, and continuous tone images, i.e. paintings and photographs. But this does not compromise the newness of new media. For computational media uses these traditional human media simply as building blocks to create previously unimaginable representational structures, creative and thinking tools, and communication options.

Although Sutherland, Engelbart, Nelson, Kay, and others developed computational media on top of already existing developments in computational theory, programming languages, and computer engineering, it will be incorrect to conceive the history of such influences as only going in one direction – from already existing and more general computing principles to particular techniques of computational media. The inventors of computational media had to question many, if not most, already established ideas about computing. They have defined many new fundamental concepts and techniques of how both software and hardware thus making important contributions to hardware and software engineering. A good example is Kay's development of Smalltalk, which for the first time systematically established a paradigm of object-oriented programming. Kay's rationale to develop this programming language was to give a unified appearance to all applications and the interface of PARC system and, even more importantly, to enable its users to quickly program their own media tools. (According to Kay, an object-oriented illustration program written in Smalltalk by a particularly talented twelve-year old girl was only a page long.[ix]) Subsequently object-oriented programming paradigm became very popular and object-oriented features have been added to most popular languages such as C++.

Looking at the history of computer media and examining the thinking of its inventors makes it clear that we are dealing with the opposite of technological determinism. When Sutherland designed Sketchpad, Nelson conceived hypertext, Kay programmed a paint program, and so on, each new property of computer media had to be imagined, implemented, tested, and refined. In other words, these characteristics did not simply come as an inevitable result of a meeting between digital computers and modern media. Computational media had to be invented, step-by-step. And it was invented by people who were looking for inspiration in modern art, literature, cognitive and education psychology, and theory of media as much as technology. For example, Kay recalls that reading McLuhan's *Understanding Media* led him to a realization that computer can be a medium rather than only a tool.[x]

So far I have talked about the history of computational media as series of consecutive "additions." However this history is not only a process of accumulation of more and more options. Although in general we have more techniques at our disposal today when twenty of thirty years ago, it is also important to remember that many fundamentally new techniques which were conceived were never given commercial implementation. Or they were poorly implemented and did not become popular. Or they were not marketed properly. Sometimes the company making the software would go out of business. At other times the company that created the software was purchased by another company that "shelved" the software so it would not compete with its own products. And so on. In short, the reasons why many of new techniques did not become commonplace are multiple, and are not reducible to a single principle such as "the most easy to use techniques become most popular."

For instance, one of the ideas developed at PARC was "project views." Each view "holds all the tools and materials for a particular project and is automatically suspended when you leave it."[xi] Although currently (2006) there are some applications that implement this idea, it is not a part of most popular operating systems: Windows, MAC OSX, and Linux. The same holds true for the contemporary World Wide Web implementation of hyperlinks. The links on the Web are static and one-directional. Ted Nelson who is credited with inventing hypertext around 1964 conceived it from the beginning to have a variety of other link types. In fact, when Tim Berners-Lee submitted his paper about the Web to ACM Hypertext 1991 conference, his paper was only accepted for a poster session rather than the main conference program. The reviewers saw his system as being inferior to many other hypertext systems that were already developed in academic world over previous two decades.[xii]

Computer as Metamedium

As we have established, the development of computational media runs contrary to previous media history. But in a certain sense, the idea of a new media gradually discovering its own language actually does apply to the history of computational media after all. And just as it was the case with printed books and cinema, this process took a few decades. When first computers were built in the middle of the 1940s, they could not be used as media for cultural representation, expression and communication. Slowly, through the work of Sutherland, Englebart, Nelson, Papert and others in the 1960s, the ideas and techniques were developed which made computers into a "cultural machine." One could create and edit text, made drawings, move around a virtual object, etc. And finally, when Kay and his colleagues at PARC systematized and refined these techniques and put them under the umbrella of GUI, which made computers accessible to multitudes, a digital computer finally was given its own language - in cultural terms. In short, only when a computer became a cultural medium – rather than only a versatile machine.

Or rather, it became something which no other media has been before. For what has emerged was not yet another media, but, as Kay and Goldberg insist in their article, something qualitatively different and historically unprecedented. To mark this difference, they introduce a new term – "metamedium."

This metamedium is unique in a number of different ways. One of them we already discussed in detail – it could represent most other media while augmenting them with many new properties. Kay and Goldberg also name other properties, which are equally crucial. The new metamedium is "active – it can respond to queries and experiments – so that the messages may involve the learner in a two way conversation." For Kay who was strongly interested in children and learning, this property was particularly important since, as he puts it, it "has never been available before except through the medium of an individual teacher." [xiii] Further, the new metamedium can handle "virtually all of its owner's information-related needs." It can also "serve as "a programming and problem solving tool," and "an interactive memory for the storage and manipulation of data."[xiv] But the property that is the most important from the point of view of media history is that *computer metamedium is simultaneously a set of different media and a system for generating new media tools and new types of media.* In other words, a computer can be used to create *new tools for working in the media it already provides as well as to develop new not-yet-invented media*.

Using the analogy with print literacy, Kay's motivates this property in this way: "The ability to 'read' a medium means you can *access* materials and tools generated by others. The ability to write in a medium means you can *generate* materials and tools for others. You must have both to be literate."[xv] Accordingly, Kay's key effort at PARC was the development of Smalltalk programming language. All media editing applications and GUI itself were written in Smalltalk. This made all the interfaces of all applications consistent facilitating quick learning of new programs. Even more importantly, according to Kay's vision, Smalltalk language would allow even the beginning users write their own tools and define their own

media. In other words, all media editing applications, which would be provided with a computer, were to serve also as examples inspiring users to modify them and to write their own applications.

Accordingly, the large part of Kay and Goldberg's paper is devoted to description of software developed by the users of their system: "an animation system programmed by animators"; "a drawing and painting system programmed by a child," "a hospital simulation programmed by a decision-theorist," "an audio animation system programmed by musicians"; "a musical score capture system programmed by a musician"; "electronic circuit design by a high school student." As can be seen from this list that corresponds to the sequence of examples in the article, Kay and Goldberg deliberately juxtapose different types of users - professionals, high school students, and children – in order to show that everybody can develop new tools using Smalltalk programming environment.

The sequence of examples also strategically juxtaposes media simulations with other kinds of simulations in order to emphasize that simulation of media is only a particular case of computer's general ability to simulate all kinds of processes and systems. This juxtaposition of examples gives us an interesting way to think about computational media. Just as a scientist may use simulation to test different conditions and play different what/if scenarios, a designer, writer, a musician, a filmmaker, or an architect working with computer media can quickly "test" different creative directions in which the project can be developed as well as see how modifications of various "parameters" affect the project. The later is particularly easy today since the interfaces of most media editing software not only explicitly present these parameters but also simultaneously give the user the controls for their modification. For instance, when the Formatting Palette in Microsoft Word shows the font used by the currently selected text, it is displayed in column next to all other fonts available. Trying different font is as easy as scrolling down and selecting the name of a new font.

To give users the ability to write their own programs was a crucial part of Kay's vision for the new "metamedium" he was inventing at PARC. According to Noah Wardrip-Fruin, Englebart research program was focused on a similar goal: "Englebart envisioned users creating tools, sharing tools, and altering the tools of others."[xvi] Unfortunately, when in 1984 Apple shipped Macintosh, which was to become the first commercially successful personal computer modeled after PARC system, it did not have easy-to-use programming environment. HyperCard written for Macintosh in 1987 by Bill Atkinson (who was one of PARC alumni) gave users the ability to quickly create certain kinds of applications – but it did not have the versatility and breadth envisioned by Kay. Only recently, as the general computer literacy has widen and many scripting languages became available – Perl, PHP, Python, ActionScript, Vbscript, JavaScript, etc. – more people started to create their own tools by writing software. A good example of a contemporary programming environment, which is currently very popular among artists and designers and which, in my view, is close to Kay's vision is Processing.[xvii] Build on top of Java programming language, Processing features a simplified programming style and an extensive library of graphical and media functions. It can be used to develop complex media programs and also to quickly test ideas. Appropriately, the official name for Processing projects is sketches.[xviii] In the words of Processing initiators and main developers Ben Fry and Casey Reas, the language's focus "on the 'process' of creation rather than end results."[xix] Another popular programming environment that similarly enables quick development of media software is MAX/MSP and its successor PD developed by Miller Puckette.

Conclusion

The story I just told could also be told differently. It is possible to put Sutherland' work on Sketchpad in the center of computational media history; or Englebart and his Research Center for Augmenting Human Intellect which throughout the 1960s developed hypertext (independently of Nelson), the mouse, the window, the word processor, mixed text/graphics displays, and a number of other "firsts." Or we can shift focus to the work of Architecture Machine Group at MIT, which since 1967 was headed by Nicholas Negroponte (In 1985 this group became The Media Lab). We also need to recall that by the time Kay's Learning Research Group at PARC flashed out the details of GUI and programmed various media editors in Smalltalk (a paint program, an illustration program, an animation program, etc.), artists, filmmakers and architects were already using computers for more than a decade and a number of large-scale exhibitions of computer art were put in major museums around the world such as the Institute of Contemporary Art, London, The Jewish Museum, New York, and Los Angeles County Museum of Art. And certainly, in terms of advancing computer techniques for visual representation enabled by computers, other groups of computer scientists were already ahead. For instance, at University of Utah, which became the main place for computer graphics research during the first part of the 1970s, scientists were producing 3D computer graphics much superior to the simple images that could be created on computers being build at PARC. Next to University of Utah a company called Evans and Sutherland (headed by the same Ivan Sutherland

who was also teaching at University of Utah) was already using 3D graphics for flight simulators – essentially pioneering the type of new media that can be called "navigable 3D virtual space."[xx]

The reason I decided to focus on Kay is his theoretical formulations that place computers in relation to other media and media history. While Vannevar Bush, J.C. Lindlicker and Douglas Englebart were primary concerned with augmentation of intellectual and in particular scientific work, Kay was equally interested in computers as "a medium of expression through drawing, painting, animating pictures, and composing and generating music."[xxi] Therefore if we really want to understand how and why computers were redefined as a cultural media, and how the new computational media is different from earlier physical media, I think that Kay provides us with the best perspective. At the end of the 1977 article that served as the basis for our discussion, he and Goldberg summarize their arguments in the phrase, which in my view is a best formulation we have so far of what computational media is artistically and culturally. They call computer *"a metamedium" whose content is "a wide range of already-existing and not-yet-invented media."* In another article published in 1984 Kay unfolds this definition. As a way of conclusion, I would like to quote this longer definition which is as accurate and inspiring today as it was when Kay wrote it more than twenty years ago:

It [a computer] is a medium that can dynamically simulate the details of any other medium, including media that cannot exist physically. It is not a tool, though it can act like many tools. It is the first *metamedium*, and as such it has degrees of freedom for representation and expression never before encountered and as yet barely investigated.[xxii]

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[i] Kay has expressed his ideas in a few articles and a large number of interviews and public lectures. The following have been my main primary sources: Alan Kay and Adele Goldberg, *Personal Dynamic Media*, IEEE Computer. Vol. 10 No. 3 (March), 1977; my quotes are from the reprint of this article in *New Media Reader*, eds. Noah Wardrip-Fruin and Nick Montfort (The MIT Press, 2003); Alan Kay, "The Early History of Smalltalk, " (HOPL-II/4/93/MA, 1993); Alan Kay, "A Personal Computer for Children of All Ages," Proceedings of the ACM National Conference, Boston, August 1972; Alan Kay, *Doing with Images Makes Symbols* (University Video Communications, 1987), videotape (available at www.archive.org); Alan Kay, Alan Kay, "User Interface: A Personal View," p. 193. in *The Art of Human-Computer Interface Design,* 191-207. Ed. Brenda Laurel. Reading, Mass," Addison-Wesley, 1990.; David Canfield Smith at al., "Designing the Star user Interface," *Byte*, issue 4 (1982).

[ii] Alan Kay and Adele Goldberg, "Personal Dynamic Media*,"* in *New Media Reader*, Eds. Noah Wardrip-Fruin and Nick Montfort (The MIT Press, 2003), 399.

[iii] Ibid., 393. The emphasis in this and all following quotes from this article in mine – L.M.

[iv] Ibid., 394.

[v] This elevation of the techniques of particular media to a status of general interface conventions can be understood as the further unfolding of the principles developed at PARC in the 1970s. Firstly, the PARC team specifically wanted to have a unified interface for all new applications. Secondly, they developed the idea of "universal commands" such as "move," "copy," and "delete." As described by the designers of Xerox Star personal computer released in 1981, "MOVE is the most powerful command in the system. It is used during text editing to rearrange letters in a word, words in a sentence, sentences in a paragraph, and paragraphs in a document. It is used during graphics editing to move picture elements, such as lines and rectangles, around in an illustration. It is used during formula editing to move mathematical structures, such as summations and integrals, around in an equation." David Canfield Smith et al., "Designing the Star User Interface," *Byte*, issue 4/1982, pp. 242-282.

[vi] Ibid., 399.

[vii] Ibid., 395. Emphasis mine – L.M.

[viii] Alan Kay, "User Interface: A Personal View," p. 199.

[ix] Alan Kay, *Doing with Images Makes Symbols* (University Video Communications, 1987), videotaped lecture (available at www.archive.org).

[x] Alan Kay, "User Interface: A Personal View," 192-193.

[xi] Aan Kay, "User Interface: A Personal View," p. 200.

[xii] Noah Wardrip-Fruin and Nick Monford, Introduction to Tim Berners-Lee et al., "The World-Wide Web" (1994), reprinted in *New Media Reader.*

[xiii] Ibid., 394.

[xiv] Ibid., 393.

[xv] Alan Kay, "User Interface: A Personal View," p. 193. in *The Art of Human-Computer Interface Design,* 191-207. Ed. Brenda Laurel. Reading, Mass, Addison-Wesley, 1990. The emphasis is in the original.

[xvi] Noah Wardrip-Fruin, introduction to Douglas Engelbart and William English, "A Research Center for Augmenting Human Intellect" (168), *New Media Reader,* 232.
[xvii] www.processing.org, accessed January 20, 2005.
[xviii] http://www.processing.org/reference/environment/.
[xix] http://processing.org/faq/,
[xx] For more on 3D virtual navigable space as a new media, or a "new cultural form," see chapter "Navigable Space" in *The Language of New Media*.
[xxi] Ibid., 393.
[xxii] Alan Kay, "Computer Software," *Scientific American* (September 1984), 52. Quoted in Jean-Louis Gassee with Howard Rheingold, "The Evolution of Thinking Tools," in T*he Art of Human-Computer Interface Design*, p. 225.

Between Art and Design

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Abstract: In a time when art and design appear to be pitted squarely against one another, there is a middle ground where the two disciplines converge: interactivity. How does interactivity affect content?

Some years ago, I had the great good fortune of catching the late Rich Gold, leader of Xerox Parc's RED Group (Research in Experimental Documents), present a talk at UC Berkeley's Art, Technology and Culture Colloquium. Gold was unique in the land of computer science research, not because his work contributed novel academic findings, but because he was one of the few individuals who had convinced a big corporation to bankroll the "research" of artists. Gold was not a Computer Science PhD, but was an MFA. He lead the RED Group from 1997 – 2001, and a large part of the group's focus was on experiments in the future of reading, which exhibited in places like San Jose's Technology Museum. The Red Group was disbanded in 2001, when Xerox funding cuts were necessary and the artist-led group was no longer funded.

I find myself frequently returning to Rich Gold's lecture at Berkeley because he made a comment that has never quite settled itself in my mind. "The difference between art and design is this: designers make something and say (he holds up his hand as if presenting a drawing) 'I made this. What do you think?" An artist makes something and says, "I made this."

I suppose a quick read on this statement seems pretty straightforward, almost banal. Design, at its core, addresses issues of functionality, user experience, or other problems that require solving, usually in the creation of a novel approach to an existing problem. Design also checks in with the participants/users to see how they feel about the solution that's been created (which is where design and art diverge). A good solution opens doors to new perspectives on the said problem, thus, newer, better solutions emerge, and entire dialogues (and diatribes) via the form of new design emerge, creating a new pathway for discovery and experimenting. This is of course, design at its best. (At its worst, design can be a crappy remote control for your TiVo, the majority of the buttons sitting idly, waiting for you to accidentally press one of them and send your television into a downward spiral.) In essence, the beauty of design is the dialogue between users and designers that develops over time, as new demands (usually driven by new technologies) are met and evolve with the changes that occur in our society.

Unlike designers, artists, according to Rich Gold, don't ask for feedback and don't want their "user's" experience to be qualified. There is a clear difference in the artist's relationship to an audience and a designer's. It brings to mind the modernist view of Jackson Pollack, a tortured soul with a certain (divine?) gift for art making. (This of course was disputed with the civil rights movement and the emergence of postmodernism. Could Pollack have been black? Doubtful.) Gold's perspective on artists' roles in their practices also pits them squarely against designers, creating an obvious hierarchy. If you want to work for someone else, design. If you want to drive your own ship, be an artist.

The question of art and design, and Gold's quote for that matter, have stayed with me for the nearly ten years that have passed since I heard him speak. During this time, the line between design and art has become much blurrier as the field of interactivity has broadened and become almost a discipline unto

itself. Entire festivals are focused on reviewing interactive work (ISEA and Ars Electronica come to mind). Universities offer degrees in Interaction Design. Consulting careers are made on user interface expertise. Interactivity suggests, at its core, that a work of art relies on the participation of a viewer in order to be complete. In some essential capacity, the life of the work depends on a cooperative audience to make it whole, to ignite its gemlike flame. This is the most basic, yet critical, definition of interactive art.

It's nearly impossible to consider interactivity in artmaking without remembering the work of Allan Kaprow. Kaprow's large scale Happenings and performances introduced the art world to interactivity in many ways. If a pencil is considered an early piece of technology, performance is the seminal model for interactive art. Performance art assumes an audience, whether that means its members are live or will watch the performance on videotape or will carefully examine the performance artifacts at a later time. Performance art also relies on a pact between artist and viewer; this pact, or agreement, transforms "viewers" into "participants" and ultimately gives those participants some shared authorship in the work created. Kaprow's performances in particular collapsed notions of audiences and performers, making way for a new breed of participant art-goers. Participants are the fallen trees in the forest: without them there is no sound, no action, and the art cannot exist.

While interactivity might arguably have entered the realm of fine art via Kaprow's performances, it certainly finds itself situated in a new media context more frequently than a fine art one today. What is the cause of this paradigm shift? Has the artworld become preoccupied with craft-based works (i.e. sales) as the increasing number of art fairs would suggest? Does interactivity lend itself to technologically based artworks, as there is often a necessity for a viewer/participant to stimulate the artwork? How has the user/viewer/participant's experience changed with the shift of interactive work from performance to technology?

I was recently on ISEA2006's Interactive City steering committee and I was a category judge. I've also been following new media art works for about a decade, when I came across Telegarden and Legal Tender, very early internet telepresence artworks. Throughout the past ten years or so, I've found that often, but certainly not always, "interactive" new media works are subject to a recurring formula: a.) artist creates object/environment, b.) viewer/participant interacts with said object/environment, c.) object/environment makes a shift in color, light, sound, etc, or some other electronic response to viewer/participant. This kind of work isn't necessarily a problem unto itself, but it does raise questions about the nature of interactivity and how it has shifted over time, or perhaps over media. The interactivity of Kaprow's work asked questions about the divide between artist and audience, gallery spaces and non-art spaces, and the art experience versus the art object. The enactment of the performance, of the shared authorship between artist and participant, raised a host of questions about the very nature of art and artmaking. New media art's interactivity (as mentioned above) invites the viewer/participant to share in the completion of the piece, but it doesn't always address critical questions about the nature of the work. However, it does raise some other questions: In new media work, has technology become the stand-in for the artist's presence? How does this paradigm shift affect an artwork's content?

Maybe it's important to take a step back and ask more rudimental questions: what does it mean to make an interactive artwork in the 21st century? What is new media art in the age of interactivity? Does interactive work address questions about the nature of art? Are participants merely human prosthetics for masturbatory technological dreams?

Again, I return to Rich Gold's statement. My conclusion to his postulation about design and art is this: Gold was asking a question in the form of a provocative statement. He was asking his audience to consider extremities: an automaton design world and a narcissistic art world, and he intentionally left out the middle ground wherein the two might be resolved: interactivity. He was performing his statement to an audience he knew was made up primarily of people who were artists or designers or both. And this is where I am reminded of Kaprow again because on some level Gold's lecture was performance in the way that inspires the best form of interactivity: one that settles under the skin just so uncomfortably that it stays with you and speaks to you, that develops into a relationship between yourself and your ideas, that asks you to examine and redefine your understanding of art, that won't allow for closure because there can never be one. It comes around full circle, broadening and blossoming, until questions may only beget questions. And ultimately, we rest on the beauty of the question (to borrow from Robert Irwin) and the hope that there can never be an answer.

The Remix Aesthetic: Originality Mixed and Mashed-up

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> "…the reading of the modern text…consists not in receiving, in knowing or in feeling that text, but in writing it anew."
>
> — Roland Barthes[xxiii]

A Catchy Intro [Abstract, Remix Version]

The turntable, if you've cared to notice, is coming in pairs these days. Phonographs, with their encoded grooves, were originally thought of (by Edison) as a database technology; a record of words and sounds past, timeless, yet susceptible to scratches. Scratching then became something very different with the live remix. The constant rotational speed of the player became variable, and the final form of the record's sound—unpredictable. Records in the hands of a talented DJ are a *medium* and the turntables, spun together, form a musical instrument.

This McLuhan-esque progression of hot to cool record players serves only as an initial image to my inquiry, which is; not with music specifically, but rather, the broader realm of digital media arts (of which digital audio is a category). *How* does the idea of remix manifest itself in a distinct aesthetic paradigm? Considering that the term, "remix" which has been slapped on everything from textbooks to soda cans[xxiv], is at risk of being diluted, it nonetheless conjures up strong sentiments of 1990's dance music. Remix aesthetics are evident everywhere in digital media, from its basic building blocks: *bits*, to the readymade, ease-of-use of design templates, to the cultural fads of sprite comics and video mash-ups. In the last decade, the hardware and software of digital home studios enabled remix production to proliferate alongside technological advances[xxv], but with this came an important shift in thinking.

Today we are moving from the paradigm of the mix to that of the remix. We have databases of "original" media, thus this information age is a time of combining and bringing forth new combinations of images/sounds/ideas. What we often term as "original" in digital media is actually a mix. A mix being a synthesis of tracks that becomes a new, homogeneous whole, a new aggregate, body or molarity. The remix is preferable because it is a variation on a whole/aggregate that allows us, via a superimposition, to see the "original" source elements. As such, the remix is endowed with its own unique aesthetic and correlating persona, that of the *Remixer* who fills the gap between Duchamp's Creator and Spectator.

Remixing is indicative of many cultural trends in digital media. The consumer as Remixer creates new, virtual duets through his/her hybrids, new narratives for video game characters and new futures for mass media by re-marketing it through peer-to-peer file sharing, blogging and chat. Lev Manovich, perhaps the most notable theorist of digital media to date, has written about looping, Flash turntables and "remix" as a possible metaphor for the amalgamation of culture and digitization in general[xxvi]. It is these cultural

reverberations of the remix aesthetic that are my main focus, for an analysis on this level of values, tastes and judgments will expose the remix aesthetic in all of its domains; music, photomontage, the moving image, physical objects, subcultures etc…

Personally, I have found the term "remix" to be handy when connecting theoretical models to class work. The term "remix" becomes a bridge between the colloquial slang of my students *retro*, *techno* and *emo* and postmodern terms like deconstruction and appropriation. In fact, my interest in this topic is continually spurred on by discussions with students. Rethinking the remix leads to a unique perspective on art, authorship, technology, epistemology and the enigma of content and form. Philosophically speaking, remixing is a processual view of things that denies a fixed origin, voice or essential identity and as such, it resonates with important past theoretical statements such as Barthes' *The Death of the Author*, Baudrillard's notion of the simulacra and McLuhan's critique of the literate, private space of the printed word, just to name a few. With the emergence of new academic disciplines that depend on digitization in general; such as those that call themselves Digital Media, New Media or an array of other design-oriented disciplines; we have a new and distinct way of learning, creating and thinking. The remix aesthetic is a diagram with lines connecting to semiotics, critical theory, media studies and other established domains that have helped define these emerging digital disciplines. This paper illustrates how the term "remix" serves as a qualitative rubric within digital media, and simultaneously, as a bridge that links digital-studies to broader aesthetic practices and issues in contemporary culture.

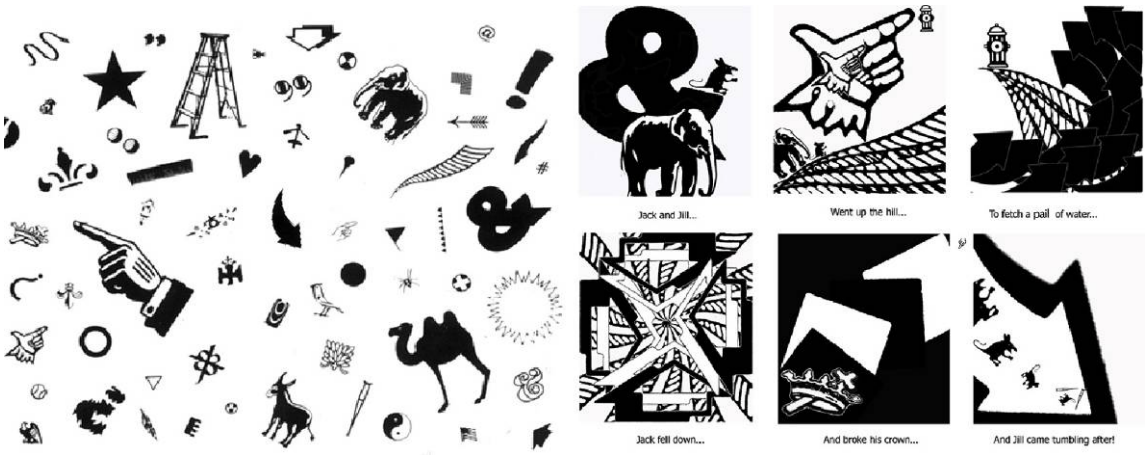
Remixing is *not* an act of imitation, akin to a forgery, yet aesthetically; remixes do run the gamut from the amateur to the professional. Regardless of the height of their artistry, the surge of remixes in the last decade can be attributed to one thing: the *mutability* of the digital source. For digitization enables more complex combinations of these pluralities—of image, sound and information. Technology, it seems, is the perfect catalyst for this act of mixing digital streams; the remix resembles a chemical concoction: nothing new in its elemental purity, but sometimes, powerful when mixed.

From Mix to Remix [molecular to molar]

> 'Precision' is sacrificed for a greater degree of suggestion.[xxvii]
>
> - Marshall McLuhan

The difference between mix and remix is that the former is of a more primary and molecular order, whereas the remix is of a higher, molar order[xxviii]. From the basic processes of cut and paste, to the availability of stock images, loop based music, and design templates; the process of the "designer" of digital media has become a process of creating new combinations of existing things, i.e. new mixes (*not* remixes). We might understand these available stock options as organs for a body. We can mix *simple* parts: new kidneys, lungs, even a heart (via a transplant) and still maintain the same body. Remixing occurs on a higher level, it is the modification of the body itself, a sex change, or a radical transformation of identity leading to a superimposition over the past body, a mother, an addict, a soldier, a cross-dresser…Remix denies essential identity by maintaining a transparency to the previous context, and presents a sophisticated dual image, the former body is not lost, there is a co-presence of the past and the present in this embodiment, which mediates between the past and the future via a new vector of the eternally changing.

To illustrate the difference between mix and remix, let's consider two polemics. First, an example from the graphic design workbook by Judith and Richard Wilde: Visual Literacy. One of the projects devised by the Wildes is an illustration exercise that requires students to illustrate the classic nursery rhyme Jack & Jill using a sampling of 1 bit stock-images. The Visual Literacy workbook offers many examples of students completed projects and personally I have seen over 100 examples in my own teaching.



"Original" Stock-image library. Mix by student Chuck Harris, Canisius College.

The Jack and Jill exercise is a prime example of a mix, because the identity of the individual stock images is transformed by the syntax in which it is viewed in the sequence of the illustrations. So an elephant in one version may be presented as Jack, and in another, the elephant becomes the hill. What occurs is we no longer imbue the elephant with familiar cultural symbolism, (family-oriented, long living, slow-moving, big, republican) but rather, the identity of the elephant has been synthesized into the greater meaning of the full sequence. Each student's project is akin to a new song, in which the elephant is one track in a mix (*not* a *re*mix).

A prime example of a *remix* in graphic design is Paula Scher's much debated designs for Swatch™, presented as an example of appropriation in Rick Poynor's excellent survey of postmodern graphic design entitled *No More Rules: Graphic Design and Postmodernism*. Scher's poster for Swatch™ is a remix of Herbert Matter's 1934 poster promoting travel and tourism in Switzerland (shown below on the left).

Herbert Matter's "original," 1934. Paula Scher's remix poster for Swatch™, 1984.

We can see how the identity of Matter's original, designed to sell Swiss travel and tourism, is slightly altered (mutated, mutilated?) by Scher to sell Swiss watches. Some interesting details include the eyes of the model, which have lost their Aryan blue in Scher's remix and also changed their focus so as to emphasize to the viewer her pride in the Swatches, which have replaced the primary focal point of the Matter's layout, the Swiss cross. Poynor discusses how Scher's work received some harsh criticism, as it does *not* serve either as a parody or as a pure appropriation that attempts to create a third, original idea[xxix]. Whereas a mix is akin to a pastiche that synthesizes into a new identity, Scher's remix is "literal

and descriptive". My own opinion of Scher's poster is that it is an exceptional remix, although, I feel that Scher and other designers who have advocated a serious adherence to historical details in graphic design (fastidious detail to historical fonts and layouts) are missing the point of the postmodern artworks that their designs echo, as it is the *viewers* colloquial perception of Swiss-ness that is more at play here than the designer's fetishizing of historical accuracy[xxx].

This co-presence of the past via the new retelling (the remix) always maintains a transparency to which we perceive the "original", often overtly displayed, albeit not always recognized. Digital media creations that mix stock loops or images, layout templates etc. are *not* remixes per se, rather they are mixes which contain layers or tracks of source elements. The alternative I am suggesting is that we elevate the status of the remix, for it contains, inherently, a form of critical dialogue with the "original" or overarching context. Yet if the remix is always context-dependent and requiring of a superimposition by which we perceive the "original", then does it require a historical knowledge of the original? For otherwise it would be like trying to appreciate a parody *without* knowing the original, but in fact that is exactly what the aesthetics of remix (and our world) asks of us.

Appreciating the Remix [without knowing the original]

It is no longer a question of imitation, nor of reduplication, nor even of parody. It is rather a question of substituting signs of the real for the real itself…[xxxi]

Jean Baudrillard

When I queried my freshmen students, I discovered that the majority recognized Vanilla Ice's *Ice-Ice-Baby* without knowing that the bass line is actually a remix of the Queen/David Bowie hit single *Under Pressure*. The aesthetics of remix does not require a precise historical knowledge of "originals" in the conventional sense, but a more complex view of history that seeks to continually reinterpret itself. Obviously this presents many academic pitfalls, yet, to say that something is "original", one must recognize the *authenticity* of an original, and remix does not. Within the aesthetics of remix, Vanilla Ice is correct in saying that he did not use the "original" Queen/David Bowie bass line[xxxii], not because he added an extra beat to the groove, but because remix denies the very concept of the original. In remix, the "original" is impossible, because the world (or paradigm) is one of copies of copies, a place where we have lost touch, moreover, lost *faith* in the possibility of an original. To understand the depth of this significance, we must turn to Jean Baudrillard's concept of the "simulacra".

Baudrillard is perhaps most noted for saying "The Gulf War did not take place". In addition to bringing much publicity to his writing, this quotation encapsulates Baudrillard's key idea of the simulacra. Essentially, our world is mediated by images to such an extent that it has become hyperreal, Baudrillard's famous quotation refers to how war has no *place*, except perhaps in imagery. On TV, the images of war, physically and temporally displaced, are strung together in a montage, played over a network, which reduces, even the act of killing to a small black and white night-vision image of a dot hitting its target. In turn, the US Army website uses a video game to recruit young men, replacing a signifier of the real for the real itself, this is killing in hyperreality.

What does it have to do with remix? Namely, remixes proliferate because in a simulated world there are no "originals". In a simulated world, even the authenticity of personal experiences has been cut off from the signs that represent them. Within the simulacra, health, beauty, strength, nurturing, etc. have all become signifiers, representing modes of affectation, but the linkage between these signs and their authentic feelings (or signifieds) has been cut off, mainly by way of their cooptation by global mega brands. In this sense, we can portray the Starbucks™ experience as a remix of affective elements, where the customer receives a personalized experience based on a matrix of given signifier variables. Naomi Klein[xxxiii] has pointed out how the Starbucks' product is a remix of the hyperreal experience of community and camaraderie, while in actuality it is cut off from the original meanings of these terms. Resistance requires that we understand our terrain, and if cultural production through digital media reflects a serious engagement with society, then consideration of remix aesthetics, as an outgrowth of the world as simulacra, will be integral to any critical discourse.

Apple's *Garageband* software seems a perfect correlate to the hyperreality of Starbucks™ as it offers anybody the pleasurable experience of composing and playing music via a pixel-mediated process. As such, it is a double-edge sword, for it de-complexifies music. Having taught *Garageband* personally, I have observed its magic in the way it creates, like a flight simulator, a first-person simulation of playing music. Students bop their heads up and down as they enter into a quasi-creative trance when mixing and

matching the pre-recorded grooves. Yet *Garageband* falls short of being a tool for serious cultural production, perhaps due to its simulation of the real experience of playing music. Granted the distinction between live musical performance and DJing is inconsequential to the remix aesthetic, in *Garageband* there is a *branding* of simulated musicianship. As a musician friend of mine remarked, "*Garageband* is the internet sex of music."

Garageband is *not* a remix tool, but rather a mix tool, where stock "royalty-free" Apple™ loops are layered and edited to create songs. In fact *Garageband* will not import commercial songs purchased from Apple's own iTunes music store in their native format (.m4p), which translates to the message: "buy our music, but don't remix it." This technical matter is a small considering that the remix aesthetic undermines Apple's entire "think different" marketing myth. Apple is leading the market forces in digital media that tell us (actually sell us) the false feeling of "originality". The consumer who thinks he is "original" is experiencing delusions of grandeur. He is someone who believes what the marketers and his mother keep telling him, that his reflection is real. Apple sells the simulation of "originality" through a montage of legendary thinkers, and the aura of CEO Steve Jobs. It would be preferable to use *Garageband* to create remixes because the remix does not pretend to be "original", and it is for this reason that other people are interested in your remix, but could care less about your *Garageband* muzak.

Accepting Baudrillard, we should not imagine that "originality" is possible at all (please notice my use of quotations here). Remixes are a conundrum of sorts, because on the one hand they depend on the historical "original", yet the Remixer has a very different conception of originality. By virtue of the Remixer's choices, the remix becomes a single enunciation that is both creative and critical, i.e. the Remixer's subjectivity is infused into the superimposition. The Remixer does not consider "media" as merely a recorder of "meaning", but rather as an interface into which we continually re-interpret, re-record, and re-invent meaning. The remix aesthetic processualizes media and thus opens "recordings" to the future, yet this is accomplished through a very different approach to the "original" or historical.

Remixes manipulate our colloquial or vernacular understandings of history. Remixes lead to a platform for critical dialogue because aesthetically, they are a variation on piece of historical material. Remixes engage people through material that is familiar, but the remix offers a personal perspective on this material, it is the subjectivity of the Remixer, which serves to comment on, criticize or interpret the "original". This willingness to perceive media as *not* the final-form of something leads one to a more postmodern view of the "historical".

We often think of the world today as 'postmodern' because it has lost all relation with the actual world and is dominated by copies and images. The postmodern world is caught up in television, advertising, copies of designer goods, cloning, the meaningless repetition of brand names and computer simulations of just about everything.[xxxiv]

Keeping in mind these domains, of the simulated and the historical, an interesting opposition can be made between a Motown mix created in *Garageband* and a pop-song remix of a historical Motown song (Rapper Yung Gist's remix of *Please Mr. Postman*).

Garageband uses a stylistic matrix to organize its loop library into categories of generic styles of music. *Garageband* is anti-historical, namely because it allows the user to choose a "Motown Drummer" drum loop without ever knowing The Supremes or The Temptations. In *Garageband*, Motown music has been reduced to a stylistic generalization, separated from its historical "precise identity". By virtue of this hyperreal, simulated experience, comes a radical new approach to form, which we might begin to understand as "form-first". By negating an authentic Motown experience, anybody can simulate Motown music. In fact, *Garageband* provides categories for Urban and Country as well, as these forms do not *express* some deeper meaning, rather, the *Garageband* loop library is a closet of affective signifiers cut off from their signifieds; and thus form is available in many styles for the user to try on. Feeling a little Motown-ish today? Garageband simulates the feeling of creating an original Motown song, by separating form from all historical references. In fact, our colloquial understanding of "originality" (as a homogeneous synthesis) is precisely, the destruction of all original/historical source identities.[xxxv]

Conversely, let us consider the hip-hop remix of *Please Mr. Postman*[xxxvi]. From the point of view of many young listeners, they have no knowledge of The Carpenters, or even the "original" performers of the song The Marvellettes, yet here it is, pulled from obscurity for the moment, as something historically-manipulated for young listeners. From the point of view of the creator of the remix, there was a hyperreal connection with this material (perhaps the feeling of a 1950's boyfriend/girlfriend zeitgeist) of

which this remix seeks to deconstruct by ironically overlaying the world of an urban rap hero, thus destroying and simultaneously, archiving the Motown roots of the song. Whereas *Garageband* (mix software) uses the generic "Motown Drummer" beat, rapper Yung Gist remixes the classic Motown song into a series of hip-hop loops. With a *Garageband* mix we have a synthesis of generic elements mixed into a new "original", whereas the remix produces a conglomeration where the heterogeneous source tracks maintain their "original" identities.

Here lies the conundrum of content and form, for which the remix aesthetic has so much to teach us, as form can be imitated (legally) by way of a generic *Garageband* mix, whereas content cannot[xxxvii]. With closer scrutiny, the exact determination of what is form and what is content becomes relative, for the content of the rap remix of *Please Mr. Postman* is merely a more precise (or molecular) rendition of *Garageband's* "Motown Drummer". In the same way we do not say that the content of a table is soil and water, rather, we say that the content of a table is lumber, the content of lumber is a tree, and the content of a tree is soil and water. When we delineate content and form (the term "form" being the expression of the content), we find ourselves in a hall of mirrors, as the "distinction between content and expression is not only functional, it is relative and reversible"[xxxviii].

Why is it as a society, remixes are perceived as the antithesis of "originality"? It is because order is maintained via the private ownership of material (the content of the song *Please Mr. Postman*), but more so, by our belief in an absolute distinction between content and form. For if we dare to accept just a touch more fluidity between content and form, the hope of an effective (representational) communication seems to crumble. When representation is denied (a hallmark of post-structuralism) every representation becomes an invention…every reading becomes a re-writing, every consumer becomes a producer of sorts, or more succinctly, a Remixer.

Mixed and Mashed-up [The Becoming of Digital Media]

> What we can criticize in the forgers, as well as in the truthful man, is their exaggerated taste for form: they have neither the sense nor the power of metamorphosis; they reveal an impoverishment of the vital force [*élan vital*], of an already exhausted life.[xxxix]
>
> - Gilles Deleuze

Remix rocks our conception of media, for media has traditionally been an exact copy of things. A song, book, movie or TV show is the final-cut, so to speak, it is *not* a work in progress, it is an *entity* imbued with being, not a *processuality* in the process of becoming; but the idea of the remix aesthetic is different. Creating with digital media is, at its material base, the movement of *bits*, a mutable entity. As teachers or "creators" of digital media, we inadvertently support a false (product-centric) distinction between producers and consumers, a distinction that the remix aesthetics blurs, and I predict, in the future will become obsolete. Consider the phenomenon of "sprite comics" which are an outgrowth of video game culture, they are comic strips that are created by using the characters of video games. These characters are usually (but not always) recomposited in front of a foreign background[xl]. The sub-cultural activity surrounding the creation and posting of sprite comics is an example of how remixing emphasizes a *tempora*l mode of networked creativity. For people create sprite comics in order to post, to get a reaction and to chat about this activity, which keeps the media (in this case the video game characters) in an ever-unfolding narrative that lives and grows, day to day, into the future, even when the media of the videogame is static (not being played). Of course, this represents a pinnacle in terms of modern-day marketing, insomuch as the sub-cultural group is marketing the product for the company. Video game companies, unlike music labels, generally support and promote this mode of creative collaboration between the professional and amateur, for they are profoundly aware of how the use/misuse of a technology, in effect, invents new technology. Perhaps the current craze for video mash-ups (or video mods) best illustrates this bottom-up approach to innovation, from the Consumer, to the Remixer, to the possibilities of the remix aesthetic for digital media professionals.

Video Mods is a TV show airing on MTV2 that remixes the characters from video games with pop songs resulting in a music video in which the video game characters perform to the music of the song. The popularity of *Video Mods* is due to the remix aesthetic, for these videos are hybrid remixes that present a dual image, the pop song and the video game characters, resulting in a becoming through which the "originals" embark on a new narrative. This opening, this virtual future for video game characters, is made possible by the viewer, who not only plays the video game, but is also encouraged to become a Remixer of it.

Image from MTV2's website offering "Remixer" software application for making your own video mods.

MTV2's website offers a freely downloadable "Remixer" software application that allows users to "take control of the characters" and create their own video game mods edited to the music of their choice. This movement from passive Spectator to Remixer is facilitated by the professional. Video Mods was successfully pitched to MTV2 by two natives of Buffalo, NY, Frank Drucker and Ben Porcari. Porcari is the founder and president of IBC Digital, the animation house that produces *Video Mods* for MTV2. Far from the realm of the amateur, the professional Video Mods broadcasted by MTV2 are created by a team of approximately twenty professionals whose detailed renderings are facilitated by a 1,600-processor Dell supercomputer located at the Center for Computational Research at SUNY Buffalo[xli]. *Video Mods* is endemic of a catchy remix idea that spans the gamut of amateur to professional practitioners of digital media, and perfectly illustrates the remix aesthetic in action.

What do we have to gain by embracing the remix aesthetic? Namely, by choosing to create remixes we expose the futility of the myth of the original artistic genius, a myth that software like Apple's *Garageband* promotes, especially to students of digital media. The movement from mix to remix is a step in the direction of critical dialogue by virtue of the superimposition of the remix, and invariably leads to a discussion of artistic choices. Making remixes, we transform the high, transcendental mode of creativity into a more grounded process, centered in the material (the *bits* of the "original") that becomes mutable in our hands. Remixes are multi-dimensional artworks that offer an engagement with viewers on many levels and encourage new modes of networked collaboration. Finally, remixes run the gamut from the amateur to the professional, diffusing the authority of the Creator over the Spectator via the designation of a new role, that of the Remixer.

Finally, let us consider the critic of the remix, who Deleuze in the above quotation would deem "the truthful man"; for the critic of remix likes things the way they where intended and honors the original form, without ever bringing into question its immanent falsity, namely, that there is no original in a world of copies of copies. The fear of the truthful man is that his children will never do anything "original" because they won't have to, for everything they need will be cut and pasted from the Internet. Practitioners of digital media will find this fear as ridiculous as the old, *press-of-a-button* myth, for surely, remixes are the result of a concerted creative effort from the amateur to the professional level. Again, the truthful man is mistaken; he has confused the Remixer with his alter ego the Forger, for remixing is *not* an act of imitation, but rather a process of mutation or hybridization. As access to information databases has increased, so has the data-mining of bygone styles (example: retro fashion) and access to information will only further catalyze the emergence of new hybrids. What must be maintained is an acute awareness of the simulacra we presently exist within, and a subtle balance between a postmodern view of history (that continually reinterprets the "original") versus the destruction of historical identity that accompanies any creation that pretends to be "original" these days. For Deleuze in the above quotation associates forgery, i.e. pure imitation, with an "exaggerated taste for form" and with stagnation, and yet the simulation of "originality" (in *Garageband* for example) seems to me, intuitively, to be even worse. The remix aesthetic valorizes the opposite, it is media in metamorphosis; it becomes original by beginning with a recognition of the impossibility of originality and survives only, by identifying itself with it's temporal (i.e. *living*) manifestations.

End Notes [a reference to the "originals"]

Ben Porcari, President of IBC Digital, the animation house that produces *Video Mods* for MTV2, was generous enough to speak to me about some of the issues discussed in this paper. What follows is a transcription of a short phone conversation that I had with him, which to some extent, offers some real-world answers to the theoretical questions I have posed.

JO: Is the "Remixer" software, available on MTV2's website something that people are using?
BP: I'm not sure if it's getting a lot of hits, to my knowledge it's more of a novelty, a gimmick of remix software, not sophisticated…

JO: Do you think the show *Video Mods* inspires viewers to create their own remixes?
BP: Yes the show does inspire people, through its combinations of imagery and cool music, mostly to just "think out of the box".

JO: In your opinion, is a remix akin to a new work of art?
BP: A remix is definitely a new artwork; it's just that the palette has changed. In the past, art was a physical medium…it is now informational. And once information became digital, art became a conglomeration of information, information is the new palette. It used to be that to write a song we began with the score, but once the score becomes information, you are making a new work once you start mixing. When we make a Video Mod, we are raiding the source material, extracting from the source elements for our palette. Normally an animated video will cost tens of thousands of dollars, sometime even six figures…We simply said, "hey this stuff is sitting there, lets use it".

JO: What is the process of creating a Video Mod?
BP: We begin by making a match, like Foo Fighters and Star Wars, and well, it turns out that the band members are huge Star Wars fans and they really like the idea. Other times something that contrasts with the band really works well. There are Video Mods that we have pitched that have never hit the airways. There are artists, bands and people that just don't get it. If a song uses three samples, then we must secure the rights not just from the artist, but also from the owners of the three samples. It is easy for an artist to create a remix, but the legal aspects are extremely complex. Essentially this palette is a palette that has legal requirements.

JO: Do you pay royalties to the artists and companies for using their material?
BP: No one is paid for being part of *Video Mods*; they participate purely for the marketing. There are bands that do really get it, like the Beastie Boys, they go beyond being musicians, they are media artists really, they have there own production company and when we worked with them they were extremely supportive.

JO: Have any Video Mods come about by virtue of suggestions from you audience?
BP: Honestly our production process is like a tornado, sometimes people submit great suggestions, but generally we are very focused on producing each episode.

JO: Do you find the people at MTV to be savvy at developing new marketing strategies?
BP: The people at MTV are obviously great marketers, they are global, and they have risen mainly because they have a handle on their audience. They are interested in cool, cutting edge stuff. This show is just an outgrowth of the whole re-purposing aesthetic. Just look at retro culture these days, t-shirts etc…this is the cultural aesthetic and this is what that generation finds cool...It's a sort of rebellion…

JO: What do you think the future holds for Remix?
BP: It's definitely art, but it is art as information, it is by organizing information into databases that we have access to this palette. We have moved into the digital age, times have changed; information is no longer being lost like it was. There is a greater amount of cultural information and because it's digital, it's not going away, its not like the culture of Egypt. Because its digital, its staying around and artists have access to it, so of course there is going to be fine art paintings that appropriate old imagery.

In closing I would like to thank two of my students at Canisius College who have contributed to the research contained in this paper: Jonathan Gorcyca and Nicholas Barone. Below is a video still from "The Re:Movie Project" which hybridizes lines from two source movies[xlii], this shot is from *I ♠ Stars*, a hybrid remix of *I ♠ Huckabees* and *Star Wars,* by Jamie O'Neil, Nicholas Barone and Jonathan Gorcyca.

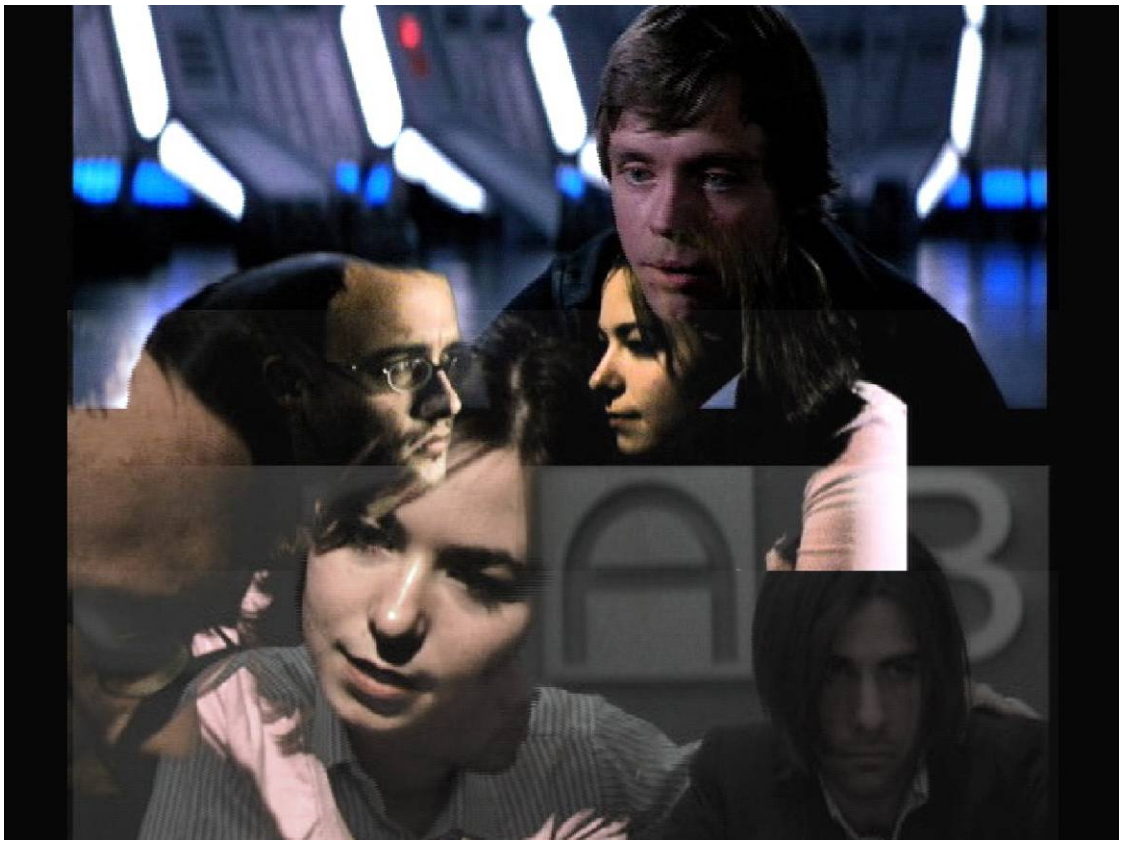


Image from the "Re:Movie" project by Jamie O'Neil, Nicholas Barone and Jonathan Gorcyca.

[xxiii] Excerpt from Barthes' essay, *The Death of the Author*. P.153. Roland Barthes, *Image, Music, Text* by. Trans. Stephen Heath, Hill and Wang, 1978.

[xxiv] O'Reilly Media's SafariU brochure states "Use as much or as little of our content as you want and remix it as you see fit." Coca-Cola Company offers the "Sprite Remix" soft drink (pictured above).

[xxv] "…by and large, it's the phenomenon of 'DJ meets home-studio enthusiast' that has cultivated so many of the techniques used by today's remix producers." Erik Hawkins, *The Complete Guide to Remixing*, Berklee Press, 2004, 5.

[xxvi] "In conclusion let me offer you a different metaphor to think with about this cultural slice which we also call 'new media.' This metaphor is that of 'remix.'" *New Media and Remix Culture* (introduction to Korean edition of *The Language of New Media*), 2003. For a discussion of Manovich's use of the term "remix" please see: http://mailman.thing.net/pipermail/idc/2006-April/thread.html#345

[xxvii] Marshall McLuhan and Quentin Fiore, *The Medium is the Massage: An Inventory of Effects*, 114.

[xxviii] My use of the terms is derived from passages in Brian Massumi's *A user's guide to Capitalism and Schizophrenia* and Deleuze and Guattari's *Anti-Oedipus*.

[xxix] Rick Poynor, *No More Rules: Graphic Design and Postmodernism*, Yale University Press 2003, 80. This is an important point by Poynor, as remixes rarely contain elements of parody, yet they can, and are related to pure parodies by virtue of the transparency to which one views the original.

[xxx] Roland Barthes' concept of "mythologies" or the notion of "social constructions" are better theoretical frameworks for this kind of design analysis. I have invoked Barthes in past writings on Remix.

[xxxi] Jean Baudrillard, *Simulations*, Trans, Paul Foss, Paul Patton and Philip Beitchman. Semiotext[e], 1983.

[xxxii] Vanilla Ice is rumored to have claimed the loop is different by virtue of its extra beat. He also never officially credited Queen/Bowie, yet it is also rumored that the record labels settled out of court in order to provide the "original" artists their royalties.

[xxxiii] To clarify, to my knowledge Klein has not specifically used the term "remix", rather, it is to her superb analysis of the Starbucks brand in her book *No Logo* that I am referring.

[xxxiv] Claire Colebrook, *Gilles Deleuze*, Routledge, 2002, 97.

[xxxv] Roland Barthes posits this idea in his essay, *The Death of the Author*.

[xxxvi] *Please Mr. Postman* is interesting example of a cultural remix in many ways, composed by a collaborative group led by Robert Bateman, the song was originally a Motown hit recorded by The Marvellettes, yet achieved popular acclaim through recordings by white artists such as The Carpenters and The Beatles. Hip-hop artists who have remixed the song include underground rappers such as Yung Gist.

[xxxvii] Although generally, mainstream recording artists and labels do not support fair use of their material, there are a growing number of recording artists who have allowed widespread remixing of their tracks. For more information please see: http://creativecommons.org/wired/ and http://ccmixter.org/.

[xxxviii] Brian Massumi, *A user's guide to Capitalism and Schizophrenia: Deviations from Deleuze and Guattari,* MIT Press 1992, 12. Massumi provides a superb analysis of Deleuze and Guattari's *A Thousand Plateaus,* which in turn refers to the writing on content/expression by Hjelmslev.

[xxxix] Gilles Deleuze, *Cinema 2: The Time Image*, Trans. Hugh Tomlinson and Robert Galata. University of Minnesota Press, 1989,146. Originally published 1985.

[xl] For example the sprite comic "8-Bit Theater" see: http://www.nuklearpower.com/daily.php?date=060715

[xli] See: http://www.buffalo.edu/news/fast-execute.cgi/article-page.html?article=74050009

[xlii] For more information on remixing of Hollywood movies see: http://www.djspooky.com/articles/rebirth.html and http://www.openflix.com/

X Notes on Practice: Stubborn Structures and Insistent Seepage in a Networked World

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I. The Figure of the Artisan

The artisan stands at the outer threshold of early modernity, fashioning a new age, ushering in a new spirit with movable type, plumb line, chisel, paper, new inks, dyes and lenses, and a sensibility that has room for curiosity, exploration, co-operation, elegance, economy, utility and a respect for the labor of the hand, the eye and the mind. The artisan is the typesetter, seamstress, block-maker, carpenter, weaver, computer, oculist, scribe, baker, dyer, pharmacist, mason, midwife, mechanic and cook – the ancestor of every modern trade. The artisan gestures towards a new age but is not quite sure of a place in it.

The figure of the artisan anticipates both the worker and the artist, in that it lays the foundations of the transformation of occupations (things that occupy us) into professions (institutionalized, structural locations within an economy). It mediates the transfiguration of people into skills, of lives into working lives, into variable capital. The artisan is the vehicle that carried us all into the contemporary world. She is the patient midwife of our notion of an autonomous creative and reflective self, waiting out the still births, nursing the prematurely born, weighing the infant and cutting the cords that tie it to an older patrimony. The artisan makes us who we are.

Yet, the artisan has neither the anonymity of the worker drone, not the hyper-individuated solipsism of the artist genius. The artisan is neither faceless, nor a celebrity; she belongs neither in the factory, nor in the salon, but functions best in the atelier, the workshop and the street, with apprentices and other artisans, making and trading things and knowledge. The artisan fashions neither the mass produced inventories of warehouses, nor the precious, unique objects that must only be seen in galleries, museums and auction houses. The objects and services that pass through her hands into the world are neither ubiquitous nor rare, nor do they seek value in ubiquity or rarity. They trade on the basis of their usage, within densely networked communities that the artisan is party to, not on the impetus of rival global speculations based on the volumes and volatility of stocks, or the price of a signature. As warehouses and auction houses proliferate, squeezing out the atelier and the workshop, the artisan loses her way. At the margins of an early industrial capitalism, the artisan seemingly transacts herself out of history, making way for the drone and the genius, for the polarities of drudgery and creativity, work and art.

II. Immaterial Labor

Due to the emergence of a new economy of intellectual property based on the fruits of immaterial labor, the distinction between the roles of the worker and the artist in strictly functional terms is once again becoming difficult to sustain. To understand why this is so we need to take a cursory look at the new ways in which value is increasingly being produced in the world today.

The combination of widespread cybernetic processes, increased economies of scale, agile management practices that adjust production to demand, and inventory status reports in a dispersed global assembly line, has made the mere manufacture of things a truly global fact. Cars, shoes, clothes, and medicines, or any commodity for that matter, are produced by more or less the same processes, anywhere. The manufacture of components, the research and design process, the final assembly and the marketing infrastructure no longer need to be circumscribed within one factory, or even one nation state or regional economic entity. The networked nature of contemporary industrial production frees the finished good from a fidelity to any one location. This also results in a corollary condition - a multiplication of renditions, or editions, (both authorized as well as counterfeit) of any product line at a global scale. Often, originals and their imitations are made in the same out-sourced sweatshop. The more things multiply, the more they tend towards similarity, in form and appearance, if not in function.

Thus, when capital becomes more successful than ever before at fashioning the material surface of the world after its own image, it also has more need than ever before for a sense of variety, a classificatory engine that could help order the mass that it generates, so that things do not cancel each other out by their generative equivalence. Hence the more things become the same the more need there is for distinguishing signs, to enable their purchase. The importance given to the notions of 'brand equity' from which we get derivatives from which we get derivatives like 'brand velocity', 'brand loyalty' and a host of other usages are prefixed by the term 'brand' indicative of this reality.

Today, the value of a good lies not only in what makes it a thing desirable enough to consume as a perishable capsule of (deferred) satisfaction. The value of a good lies especially in that aspect of it which makes it imperishable, eternally reproducible, and ubiquitously available. Information, which distils the imperishable, the reproducible, the ubiquitous in a condensed set of signs, is the true capital of this age. A commodity is no longer only an object that can be bought and sold; it is also that thing in it which can be read, interpreted and deciphered in such a way that every instance of decryption or encryption can also be bought and sold. Money lies in the meaning that lies hidden in a good. A good to eat must also be a good to think with, or to experiment with in a laboratory. This encryption of value, the codification and concentration of capital to its densest and most agile form is what we understand to be intellectual property. How valuable is intellectual property?

How valuable is intellectual property? In attempting to find an answer to a question such as this, it is always instructive to look at the knowledge base that capitalism produces to assess and understand itself. In a recent paper titled “Evaluating IP Rights: In Search of Brand Value in the New Economy” a brand management consultant, Tony Samuel of PricewaterhouseCoopers’ Intellectual Asset Management Group says:

> “This change in the nature of competition and the dynamics of the new world economy have resulted in a change in the key value drivers for a company from tangible assets (such as plant and machinery) to intangible assets (such as brands, patents, copyright and know how). In particular, companies have taken advantage of more open trade opportunities by using the competitive advantage provided by brands and technology to access distant markets. This is reflected in the growth in the ratio of market-capitalized value to book value of listed companies. In the US, this ratio has increased from 1:1 to 5:1 over the last twenty years.
>
> In the UK, the ratio is similar, with less than 30% of the capitalized value of FTSE 350 companies appearing on the balance sheet. We would argue that the remaining 70% of unallocated value resides largely in intellectual property and certainly in intellectual assets. Noticeably, the sectors with the highest ratio of market capitalization to book value are heavily reliant on copyright (such as the media sector), patents (such as technology and pharmaceutical) and brands (such as pharmaceutical, food and drink, media and financial services).” (1)

The paper goes on to quote Alan Shepard, sometime chairman of Grand Metropolitan plc, an international group specializing in branded food, drinks and retailing which merged with Guinness in 1997 to form Diageo, a corporation which today controls brands as diverse as Smirnoff and Burger King.

> “Brands are the core of our business. We could, if we so wished, subcontract all of the production, distribution, sales and service functions and, provided that we retained ownership of our brands, we would continue to be successful and profitable. It is our brands that provide the profits of today and guarantee the profits of the future.”

We have considered brands here at some length, because of the way in which brands populate our visual landscape. Were a born again landscape painter to try and represent a stretch of urban landscape, it

would be advisable for him or her to have privileged access to a smart intellectual property lawyer. But what is true of brands is equally true of other forms of intangible assets, or intellectual property, ranging from music, to images to software.

The legal regime of intellectual property is in the process of encompassing as much as possible of all cultural transactions and production processes. All efforts to create or even understand art will have to come to terms, sooner or later, with the implications of this pervasive control, and intellectual property attorneys will no doubt exert considerable 'curatorial' influence as art events, museums and galleries clear artists projects, proposals and acquisitions as a matter of routine. These 'attorney-curators' will no doubt ensure that art institutions and events do not become liable for possible and potential 'intellectual property violations' that the artist, curator, theorist, writer or practitioner may or may not be aware of as being inscribed into their work.

III. The Worker as Artist

What are the implications of this scenario? The worker of the twenty first century, who has to survive in a marker that places the utmost value on the making of signs, finds that her tools, her labor, her skills are all to do with varying degrees of creative, interpretative and performative agency. She makes brands shine, she sculpts data, she mines meaning, and she hews code. The real global factory is a network of neural processes, no less material than the blast furnaces and chimneys of manufacturing and industrial capitalism. The worker of the twenty first century is also a performer, a creator of value from meaning. She creates, researches and interprets, in the ordinary course of a working day to the order that would merit her being considered an artist or a researcher, if by 'artist' or 'researcher' we understand a person to be a figure who creates meaning or produces knowledge.

Nothing illustrates this better than the condition of workers in Information technology enabled industries like Call Centre and Remote Data Outsourcing, which have paved the way for a new international matrix of labor, and a given a sudden performative twist to the realities of what is called Globalization. In a recent installation, called A/S/L (Age/Sex/Location) (2), we looked at the performative dimension in the lives of call centre workers.

The Call Centre Worker and her world (3)
A call centre worker in the suburb of Delhi, the city where we live, performs a Californian accent as she pursues a loan defaulter in a poor Los Angeles neighborhood on the telephone. She threatens and cajoles him. She scares him, gets underneath his skin, because she is scared that he won't agree to pay, and that this will translate as a cut in her salary. Latitudes away from him, she has a window open on her computer telling her about the weather in his backyard, his credit history, his employment record, and his prison record. Her skin is darker than his, but her voice is trained to be whiter on the phone. Her night is his day. She is a remote agent with a talent for impersonation in the IT enabled industry in India. She never gets paid extra for the long hours she puts in. He was laid off a few months ago, and hasn't been able to sort himself out. Which is why she is calling him for the company she works for. He lives in a third world neighborhood in a first world city, she works in a free trade zone in a third world country. Neither knows the other as anything other than as 'case' and 'agent'. The conversation between them is a denial of their realities and an assertion of many identities, each with their truths, all at once.

Central to this kind of work is a process of imagining, understanding and invoking a world, mimesis, projection and verisimilitude as well as the skilful deployment of a combination of reality and representation. Elsewhere, we have written of the critical necessity of this artifice to work, (in terms of creating an impression of proximity that elides the actuality of distance) in order for a networked global capitalism to sustain itself on an everyday basis, but here, what we would like to emphasize is the crucial role that a certain amount of 'imaginative' skill, and a combination of knowledge, command over language, articulateness, technological dexterity and performativity plays in making this form of labor productive and efficient on a global scale.

IV. Marginalia

Sometimes, the most significant heuristic openings are hidden away on the margins of the contemporary world. While the meta-narratives of war, globalization, disasters, pandemics and technological spectacles grab headlines, the world may be changing in significant but unrecognized directions at the margins, like an incipient glacier inching its way across a forsaken moraine. These realities may have to with the simple facts of people being on the move, of the improvised mechanisms of survival that suddenly open out new

possibilities, and the ways in which a few basic facts and conceptions to do with the everyday acts of coping with the world pass between continents.

Here, margin is not so much a fact of location (as in something peripheral to an assumed centre) as it is a figure denoting a specific kind or degree of attentiveness. In this sense, a figure may be located at the very core of the reality that we are talking about, and still be marginal, because it does not cross a certain low-visibility, low-attention threshold, or because it is seen as being residual to the primary processes of reality. The call centre worker may be at the heart of the present global economy, but she is barely visible as an actor or an agent. In this sense, to be marginal is not necessary to be 'far from the action' or to be 'remote' or in any way distant from the very hub of the world as we find it today.

The Margin has its own image-field. And it is to this image-field that we turn to excavate or improvise a few resources for practice.

A minor artisanal specialization pertaining to medieval manuscript illumination was the drawing and inscription of what has been called "marginalia" (4). "Marginalists" (generally apprentices to scribes) would inscribe figures, often illustrating profane wisdom, popular proverbs, burlesque figures and fantastical or allegorical allusions that occasionally constructed a counter-narrative to the main body of the master text, while often acting as what was known as "exempla": aids to conception and thought (and sometimes as inadvertent provocations for heretic meditations). It is here, in these marginal illuminations, that ordinary people – ploughmen, peasants, beggars, prostitutes and thieves would often make their appearances, constructing a parallel universe to that populated by kings, aristocrats, heroes, monsters, angels, prophets and divines. Much of our knowledge of what people looked like in the medieval world comes from the details that we find in manuscript marginalia. They index the real, even as they inscribe the nominally invisible. It would be interesting to think for instance of the incredible wealth of details of dress, attitude, social types and behaviors that we find in the paintings of Hieronymus Bosch, or Pierre Breughel as marginalia writ large. It is with some fidelity to this artisanal ideal of using marginalia as exemplars that we would like to offer a small gallery of contemporary marginal figures.

V. Five Figures to Consider

As significant annotations to the text of present realities, and as ways out for the dilemmas that we have faced in our own apprehensions of the world, we find ourselves coming back repeatedly to them in our practice – as images, as datums and as figures of thought, as somewhat profane icons for meditation. We feel that these figures, each in their own way, speak to the predicament of the contemporary practitioner.

Figure One: The Alien Navigates a Boat at Sea
A boat changes course at sea, dipping temporarily out of the radar of a nearby coast guard vessel. A cargo of contraband people in the hold, fleeing war, or the aftermath of war, or the fifth bad harvest in a row, or a dam that flooded their valley, or the absence of social security in the face of unemployment, or a government that suddenly took offence at the way they spelt their names – study the contours of an unknown coastline in their minds, experiment with the pronunciations of harbor names unfamiliar to their tongues. Their map of the world is contoured with safe havens and dangerous border posts, places for landing, transit and refuge, anywhere and everywhere, encircled and annotated in blue ink. A geography lesson learnt in the International University of Exile.

Figure Two: The Squatter builds a Tarpaulin Shelter
Tarpaulin, rope, a few large plastic drums, crates, long poles of seasoned bamboo, and quick eyes and skilled hands, create a new home. A migrant claims a patch of fallow land, marked "property of the state" in the city. Then comes the tough part: the search for papers, the guerrilla war with the Master Plan for a little bit of electricity, a little bit of water, a delay in the date of demolition, for a few scraps of legality, a few loose threads of citizenship. The learning of a new accent, the taking on of a new name, the invention of one or several new histories that might get one a ration card, or a postponed eviction notice. The squat grows incrementally, in Rio de Janeiro, in Delhi, in Baghdad, creating a shadow global republic of not-quite citizens, with not-yet passports, and not-there addresses.

Figure Three: The Electronic Pirate burns a CD
A fifteen square-yard shack in a working-class suburb of northeast Delhi is a hub of the global entertainment industry. Here, a few assembled computers, a knock-down Korean CD writer, and some Chinese pirated software in the hands of a few formerly unemployed, or unemployable young people turned media entrepreneurs, transform the latest Hollywood, or Bollywood blockbuster into the stuff that

you can watch in a tea shop on your way to work. Here, the media meets its extended public. It dies a quick death as one high-end commodity form, and is resurrected as another. And then, like the Holy Spirit, does not charge an exorbitant fee to deliver a little grace unto those who seek its fleeting favors. Electronic piracy is the flow of energy between chained product and liberated pixel that makes for a new communion, a samizdat of the song and dance spectacular.

Figure Four: The Hacker Network liberates Software
A community of programmers dispersed across the globe sustains a growing body of software and knowledge – a digital commons that is not fenced in by proprietary controls. A network of hackers, armed with nothing other than their phone lines, modems, internet accounts and personal computers inaugurate a quiet global insubordination by refusing to let code, music, texts, math and images be anything but freely available for download, transformation and distribution. The freedom is nurtured through the sharing of time, computing resources and knowledge in a way that works out to the advantage of those working to create the software, as well as to a larger public, that begins swapping music and sharing media files to an extent that makes large infotainment corporations look nervously at their balance sheets. The corporations throw their lawyers at the hackers, and the Intellectual Property Shock Troops are out on parade, but nothing can turn the steady erosion of the copyright.

Figure Five: Workers Protect Machines in an Occupied Factory
Seamstresses at the Brukman Garment Factory in Buenos Aires (5) shield their machines against a crowd of policemen intent on smashing them. The power of the Argentine state provokes a perverse neo Luddite incident, in which the workers are attacked while they try to defend their machines from destruction. The Brukman Factory is a "fabrica ocupada", a factory occupied by its workers, one of many that have sustained a new parallel social and economic structure based on self regulation and the free exchange of goods and services outside or tangential to the failed money economy – a regular feature of the way in which working people in Argentina cope with the ongoing economic crisis. Turning the rhetoric and tactics of working class protest on its head, the seamstresses of the Brukman factory fight not to withdraw their labor from the circuit of production, but to protect what they produce, and to defend their capacity to be producers, albeit outside the circuit desired by capital.

VI. Significant Transgressions

These five transgressors, a pentacle of marginalia, can help us to think about what the practitioner might need to understand if she wants to recuperate a sense of agency. In very simple terms, she would need to take a lesson in breaking borders and moving on from the migrant, in standing her ground and staying located from the squatter, in placing herself as a link in an agile network of reproduction, distribution and exchange from the pirate, in sharing knowledge and enlarging a commons of ideas from the hacker, and in continuing to be autonomously productive from the workers occupying the factory.

The first imperative, that of crossing borders, translates as skepticism of the rhetoric of bounded identities, and relates to the role of the practitioner as a 'journeyman', as the peripatetic who maps an alternative world by her journey through it. The second, of building a shelter against the odds of the law, insists however on a practice that is located in space, and rooted in experience, that houses itself in a concrete 'somewhere' on its own terms, not of the powers that govern spaces. It is this fragile insistence on provisional stability, which allows for journeys to be made to and from destinations, and for the mapping of routes with resting places in between. The third imperative, that of creating a fertile network of reproduction of cultural materials, is a recognition of the strength of ubiquity, or spreading ideas and information like a virus through a system. The fourth imperative, of insisting on the freedom of knowledge from proprietary control, is a statement about the purpose of production – to ensure greater pleasure and understanding without creating divisions based on property, and is tied in to the fifth imperative – a commitment to keep producing with autonomy and dignity.
Taken together, these five exempla constitute an ethic of radical alterity to prevailing norms without being burdened by the rhetorical overload that a term like 'resistance' invariably seems to carry. They also map a different reality of 'globalization' – not the incessant, rapacious, expansion of capitalism, but the equally incessant imperative that makes people move across the lines that they are supposed to be circumscribed by, and enact the everyday acts of insubordination that have become necessary for their survival. It is important to look at this subaltern globalization from below, which is taking place everywhere, and which is perhaps far less understood than the age-old expansionist drive of capitalism, which is what the term 'globalization' is now generally used to refer to. It embodies different wills to globality and a plethora of global imaginaries that are often at cross-purposes with the dominant rhetoric of corporate globalization.

The illegal emigrant, the urban encroacher, electronic pirate, the hacker and the seamstresses of the Brukman Factory of Buenos Aires are not really the most glamorous images of embodied resistance. They act, if anything, out of a calculus of survival and self-interest that has little to do with a desire to 'resist' or transform the world. And yet, in their own way, they unsettle, undermine and destabilize the established structures of borders and boundaries, metropolitan master plans and the apparatus of intellectual property relations and a mechanism of production that robs the producer of agency. If we examine the architecture of the contemporary moment, and the figures that we have described, it does not take long to see five giant, important pillars:

1) The consolidation, redrawing and protection of boundaries
2) The grand projects of urban planning and renewal and
3) The desire to protect information as the last great resource left for capitalism to mine – which is what Intellectual Property is all about,
4) Control over the production of knowledge and culture and
5) The denial of agency to the producer

Illegal emigration, urban encroachment, the assault on intellectual property regimes by any means, hacking and the occupation of sites of production by producers, each of which involve the accumulation of the acts of millions of people across the world on a daily, unorganized and voluntary basis, often at great risk to themselves, are the underbelly of this present reality.

But how might we begin to consider and understand the global figures of the alien, the encroacher, the pirate, the hacker and the worker defending her machine?

VII. Capital and its Residue

The first thing to consider is the fact that most of these acts of transgression are inscribed into the very heart of established structures by people located at the extreme margins. The marginality of some of these figures is a function of their status as the 'residue' of the global capitalist juggernaut. By 'residue', we mean those elements of the world that are engulfed by the processes of Capital, turned into 'waste' or 'leftovers', left behind, even thrown away.

Capital transforms older forms of labor and ways of life into those that are either useful for it at present, or those that have no function and so must be made redundant. Thus you have the paradox of a new factory, which instead of creating new jobs often renders the people who live around 'unemployable'; A new dam, that instead of providing irrigation, renders a million displaced, a new highway that destroys common paths, making movement more, not less difficult for the people and the communities it cuts through. On the other hand sometimes, like a sportsman with an injury who no longer has a place on the team, a factory that closes down ensures that the place it was located in ceases to be a destination. And so, the workers have to ensure that it stays open, and working in order for them to have a place under the sun.

What happens to the people in the places that fall off the map? Where do they go? They are forced, of course, to go in search of the map that has abandoned them. But when they leave everything behind and venture into a new life they do not do so entirely alone. They go with the networked histories of other voyages and transgressions, and are able at any point to deploy the insistent, ubiquitous insider knowledge of today's networked world.

Seepage in the Network
How does this network act, and how does it make itself known in our consciousness? We like to think about this in terms of Seepage. By seepage, we mean the action of many currents of fluid material leaching on to a stable structure, entering and spreading through it by way of pores. Until, it becomes a part of the structure, both in terms of its surface, and at the same time continues to act on its core, to gradually disaggregate its solidity. To crumble it over time with moisture.
In a wider sense, seepage can be conceived as those acts that ooze through the pores of the outer surfaces of structures into available pores within the structure, and result in a weakening of the structure itself. Initially the process is invisible, and then it slowly starts causing mould and settles into a disfiguration – and this produces an anxiety about the strength and durability of the structure.

By itself seepage is not an alternative form; it even needs the structure to become what it is – but it creates new conditions in which structures become fragile and are rendered difficult to sustain. It enables

the play of an alternative imagination, and so we begin seeing faces and patterns on the wall that change as the seepage ebbs and flows.
In a networked world, there are many acts of seepage, some of which we have already described. They destabilize the structure, without making any claims. So the encroacher redefines the city, even as she needs the city to survive. The trespasser alters the border by crossing it, rendering it meaningless and yet making it present everywhere – even in the heart of the capital city – so that every citizen becomes a suspect alien and the compact of citizenship that sustains the state is quietly eroded. The pirate renders impossible the difference between the authorized and the unauthorized copy, spreading information and culture, and devaluing intellectual property at the same time. Seepage complicates the norm by inducing invisible structural changes that accumulate over time.

It is crucial to the concept of seepage that individual acts of insubordination not be uprooted from the original experience. They have to remain embedded in the wider context to make any sense. And this wider context is a networked context, a context in which incessant movement between nodes is critical.

VIII. A Problem for the History of the Network

But how is this network's history to be understood? To a large measure, this is made difficult by the fact of an "asymmetry of ignorance" about the world. We are all ignorant of the world in different ways and to different degrees. And that is one of the reasons why the "Network" often shades off into darkness, at some or the other point. This is what leads to global networks that nevertheless ignore the realities of large parts of the world, because no one has the means to speak of those parts, and no one knows, whether people exist in those parts that can even speak to the world in the language of the network. Thus the language of the network often remains at best only a mobile local dialect.

A media practitioner or cultural worker from India, e.g., is in all likelihood more knowledgeable about the history of Europe than could be the case for the European vis-à-vis India. This is a fact engendered by colonialism that has left some societies impoverished in all but an apprehension of reality that is necessarily global. The historian Dipesh Chakrabarty has reminded us, "Insofar as the academic discourse of history is concerned, 'Europe' remains the sovereign, theoretical subject of all histories, including the ones we call 'Indian', 'Chinese', 'Kenyan', and so on. There is a peculiar way in which all these other histories tend to become variations on a master narrative that could be called 'the history of Europe'." (6) But this very same fact, when looked at from a European standpoint, may lead to a myopia, an inability to see anything other than the representational master narrative of European history molding the world. The rest of the world is thus often a copy seeking to approximate this original. All this to say: not merely that we have incomplete perspectives, but that this asymmetry induces an inability to see the face in the wall, the interesting pattern, produced by the seepage. We may inhabit the anxiety, even be the source and locus of the destabilization and recognize the disfiguration, but the envisioning of possible alternative imaginaries may still continue to elude us.

IX. Towards an Enactive Model of Practice

Recently in a book on neuropolitics (7), we came across an experiment that is now considered classic in studies of perception, (The Held and Heims Experiment) which might give us an interesting direction to follow now.

Two litters of kittens are raised in the dark for some time and then exposed to light under two different sets of conditions. The first group is allowed to move around in the visual field and interact with it as kittens do – smelling things, touching them, trying out what can be climbed and where the best places to sleep are. The kittens in the second group, (though they are placed in the same environment) are carried around in baskets rather than allowed to explore the space themselves, and thus are unable to interact with it with all their senses and of their own volition.

The two groups of kittens develop in very different ways. When the animals are released after a few weeks of this treatment, the first group of kittens behaves normally, but those who have been carried around behave as if they were blind; they bump into objects and fell over edges. It is clear that the first group's freedom to experience the environment in a holistic way is fundamental to its ability to perceive it at all.

What is the significance of this? Within neuroscience, such experiments have served to draw neuroscientists and cognitive scientists away from representational models of mind towards an "enactive" model of perception in which objects are not perceived simply as visual abstractions but rather through

an experiential process in which information received from this one sense is "networked" with that from every other. Vision, in other words, is deeply embedded in the processes of life, and it is crucial to our ability to see that we offset the representations that we process, with the results of the experiences that we enter into. We need to know what happens when we take a step, bump into someone, be startled by a loud noise, come across a stranger, an angry or a friendly face, a gun or a jar of milk.

In a sense this implies a three-stage encounter that we are ascribing between the practitioner and her world. First, a recognition of the fact that instances of art practices can be seen as contiguous to a 'neighborhood' of marginal practices embodied by the figures of the five transgressors. Secondly, that 'seeing' oneself as a practitioner, and understanding the latent potentialities of one's practice, might also involve listening to the ways in which each of the five transgressive figures encounters the world. Finally, that what one gleans from each instance of transgression can then be integrated into a practice which constitutes itself as an ensemble of attitudes, ways of thinking, doing and embodying (or recuperating) creative agency in a networked world.

For us here, this helps in thinking about the importance of recognizing the particularity of each encounter that the practitioner witnesses or enters into, without losing sight of the extended network, of the 'neighborhood' of practices.

It is only when we see particularities that we are also able to see how two or more particular instances connect to each other. As residues, that search for meaning in other residual experiences; or as acts of seepage, in which the flow of materials from one pore to another ends up connecting two nodes in the network, by sheer force of gravity. Here it is the gradients of the flow, the surface tension that the flow encounters and the distance that the flow traverses, that become important, not the intention to flow itself. Intentions, resistances, may be imputed, but in the end they have little to do with the actual movements that transpire within the network.

X. Art practice and protocols of networked conversation

What does art and artistic practice have to do with all this? What can the practitioner take from an understanding of interactive embeddedness in a networked world? We would argue that the diverse practices that now inhabit art spaces need to be able to recognize the patterns in the seepage, to see connections between different aspects of a networked reality.

To do this, the practitioner probably has to invent, or discover, protocols of conversation across sites, across different histories of locatedness in the network; to invent protocols of resource building and sharing, create structures within structures and networks within networks. Mechanisms of flexible agreements about how different instances of enactment can share a contiguous semantic space will have to be arrived at. And as we discover these 'protocols', their different ethical, affective and cognitive resonances will immediately enter the equation. We can then also begin to think of art practice as enactment, as process, as elements in an interaction or conversation within a network.

For the acts of seepage to connect to form new patterns, many new conversations will have to be opened, and mobile dialects will have to rub shoulders with each other to create new, networked Creoles. Perhaps art practice in a networked reality can itself aspire to create the disfigurations on the wall, to induce some anxieties in the structure, even while making possible the reading of the face in the spreading stain, the serendipitous discovery of an interesting pattern or cluster of patterns, and possible alterities.

This text draws from a presentation by Monica Narula (Raqs Media Collective) at Globalica – a symposium on "conceptual and artistic tensions in the new global disorder", held at the WRO Center for Media Art, Wroclaw, Poland in May 2003.

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http://www.pwcglobal.com/Extweb/service.nsf/docid/210123EF9AEBAC1885256B96003428C6
2. A/S/L: A video, text and sound installation by Raqs Media Collective that juxtaposes the protocols of interpersonal communication, online labor, data outsourcing, and the making/unmaking of remote agency in the 'new' economy. Presented at the Geography and the Politics of Mobility exhibition, curated by Ursula Biemann for the Generali Foundation, Vienna, (January - April 2003).
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Engineering Environmental Seduction: The Arts and Technologies of Natalie Jeremijenko

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> [W]hat would happen if radioactivity itched? Realists, also called cynics, will answer: people would invent something, perhaps a salve, to `turn off' the itching. …. If everyone ran around scratching themselves and with rashes on their skin, and if photo sessions with fashion models as well as management meetings of the united denial institutes took place with all participants scratching themselves, it would have to be assumed that such explanations would have little chance of surviving. In that case, nuclear policy, as well as dealings with modern mega-hazards in general, would confront a completely changed situation: the object being disputed and negotiated would be culturally perceptible."
>
> — Ulrich Beck
>
> From *Industrial Society to Risk Society: Questions of Survival, Social Structure and Ecological Enlightenment*

I. Almost half a century ago, in 1963, Rachel Carson, a meticulous marine biologist, created a revolution in public consciousness and, to a lesser extent, in the practices of industry and governmental oversight, by publishing her globally potent volume, *Silent Spring*. *Silent Spring* was a critique of the consequences of invisible, undetected releases of the chemo-industrial complex on the health of human and non-human life. At the same time, Carson's book was an intoxicating paean to the interconnectedness of living systems, human, non-human, and the ecological substrate on which all living systems depend. How are we to understand the world-wide provocation and subsequent mobilization that Carson's volume precipitated? Her book was a challenge to industry because it was based on a fastidious and, within the limitations of her time, comprehensive compilation of a massive record of scientific literature, culled from journals, newspapers, and the testimony of scientific colleagues. Carson's text was also shocking because scientific evidence was woven into and mediated through prose that was alternately rhapsodic, moralistic, and saturated with tropes that were disturbing and devastatingly effective. Images of invisible poisons, likened to nuclear radiation, yet penetrating our soils and stored below the kitchen sink, stimulated a sense of the uncanny. Fears of the Atomic Age were coupled with a new source of invisible threats--chemical compounds--and these fears reverberated throughout the American public and beyond.

In the post-*Silent Spring* era, we continue to be inundated by chemicals that disrupt our immune and reproductive systems. And we are, at least in certain zones of the globe and society, inundated by scientific information. Surf the Web. At the same time, popular films saturated with special effects have rendered banal the image of planetary catastrophes. The tropes of Silent Spring–the homely images of an imagined 1950s suburban community—no longer have the capacity to move audiences.

The problem then becomes: What forms of mediation can possibly make information accessible to the communities that are most affected by chemo-industrial complex, the nuclear-business-complex, and the global warming industries? How can the findings of science be mediated in ways that can, in the 21st century, inform, move, and mobilize communities for effective political action? How can access to environments and environmental information important to our health be rendered visible and affecting to

differently positioned publics? If aesthetics is the domain of knowledge that asks how we are viscerally affected by objects and environments—how we feel what we feel, how our sensorium registers and responds to stimuli—as opposed to the anaesthetic–the absence or numbing of the capacity to feel–then one of the key questions for contemporary environmental artists and activists is: how to mediate the findings of science in ways that work to activate and provoke, to reach the body as well as the mind, to create the conditions for mobilization.

Natalie Jeremijenko's interventions—experiments at the juncture of engineering-art-environmental staging—her creation of scientifically legible and mediagenic performances, her attempts to make the findings of science moving, even mobilizing, in the early 21st century, are an attempt to ask and to probe this question: what are the conditions of contemporary environmental mobilization?

II. Natalie Jeremijenko is engaged in performance, the politics of visibility, and making significant dimensions of our environment accessible to multiple publics and a broad spectrum of the senses. Her proposed installation in the Hudson River, *Amphibious Architecture,* renders the passage of fish—and other marine fauna, perhaps seals, sturgeon, and bass—visible in a soft, silent, and wonderfully subtle way. Jeremijenko proposes to install a series of anchored vertical rods, each equipped with motion sensors. Each floating rod is illuminated at two points: one light is situated at water level. A second light shines from the rod's tip, three feet above the surface of the Hudson River. Imagine a school of bass, or perhaps a few sturgeon, returning to their ancestral spawning sites upriver. Making its way into the mouth of the Hudson, the school passes through Jeremijenko's reedy marsh of water-animated rods. Sight unseen through her artificial marsh, their swimming motions trigger the sensors on particular rods and this information, in turn, illuminates soft blue lights below and above the waterline. Their aqueous paths are illuminated above the reedy river baffle, rendered into sensory, indeed sensuous appearance. A momentary electric display. Not quite Son but definitely Lumiere.

In *Amphibious Architecture* Jeremijenko brings Hudson River marine nature to metropolitan publics through the mediation of a water-construction. Through her directorial interventions, the movements of river fish are not merely aesthetic elements in an ingenious light show. Their sub-surface presence has the potential to become a catalyst for awareness and, potentially, for environmental action. As they swim through the baffle, triggering points of light, their trajectory provides source-points for reflection. By producing an assemblage that renders these river-travelers visible, Jeremijenko has also crafted a way of provoking an awareness of environmental politics and practices. Consciousness of the river, its creatures, its fluctuating ecologies and the mutual interdependence of human beings, river creatures, and urban technologies – their costs and possibilities -- are highlighted. To name an issue, to illuminate a problem, to signal the presence and regeneration of life in the river is to spark an awareness. Not far upstream from Jeremijenko's river baffle General Electric's lethal sediments, saturated with PCBs, lie waiting on the river bottom. Rhapsody and warning are mutually enfolded within Jeremijenko's river apparatus.

While Jeremijenko's works are linked, in many ways, to a multi-stranded genealogy of earlier "earth works" and contemporary techno-science constructions, Jeremijenko is primarily an environmental dramaturge. More director than actor, she is intensely focused on fashioning mediagenic events in which scripts orchestrate interaction between a variety of actors including neighborhood people, non-human animate/inanimate engineered objects, the media and representatives of government, and non-human nature are engaged, even embroiled. In Amphibious Architecture she designs an apparatus that provides a mobile, loosely linked armature for interaction. Like John Cage, Jeremijenko invites chaos – chance occurrences and natural rhythms--the fluctuations of the river, the movements of fish and waterfowl, the mercurial presence of weather and currents--to interact with her staging. Jeremijenko scores, in a loose sense, the movements of fish, people and water. She inaugurates and orchestrates a riverine event: an unintentional announcement, a mysterious display, a sub-surface performance. Nature's stochastic patterns, the chance meanderings of fish traveling on a trajectory that is millennia old, are tapped and rendered visible through means that are unobtrusive and non-invasive. When the river darkens as daylight wanes, the presence of sub-surface life becomes even more accessible. Something is there. It is moving, it is illuminating its path. Connect the dots. Follow a momentary trace through the river reeds. And then it is gone again.

Jeremijenko's *Amphibious Architecture* injects new layers of meaning and performativity into our local Hudson River landscape. She is fashioning new senses of the word and world of bioluminescence,

extending our sensory capacities to perceive nature in the city. In "The Trouble with Wilderness, Or, Getting Back to the Wrong Nature," the environmental historian William Cronon reminds us of the appalling costs of the American dichotomization of the "wild", located outside the metropolis, and the world of the city, imagined as a zone of pure culture. To the degree that we imagine, write, and draw this dichotomy in our environmental plans and artifacts, we create pure sanctuaries of "untouched nature" and pure urban spaces devoid of oxygen, islands of pure garbage, and rivers saturated with invisible, toxic pollutants. Jeremijenko's projects, including Amphibious Architecture, are directed at reinvigorating the living edge of our human interactions with the natural world. While her interventions have a wonderfully ludic, performative quality that suggests mime, political theatre, and environmental "happenings", Jeremijenko's work is linked to the earlier, profoundly destabilizing work of Rachel Carson.

All projects in nature management and conservation are projects in politics. Jeremijenko's projects are embedded in, and embody, the democratization of access -- to nature, to environmental information, and they are committed to the free movement of non-human nature. Conjure up and contrast, for a moment, the freely moving fish traveling through *Amphibious Architecture* with the dead, eviscerated, dried and stuffed specimens fashioned for the American Museum of Natural History in the 1920s moment of Theodore Roosevelt and his hunting exploits in Africa. Think not only of these dusty skinned zebras and lions, but think as well of the dioramas – deserts, arctic snowlands, and tufted string grasslands of the great plains—the age of plaster of paris, painted tableaux, and stuffed animals. The iconic art of nature preservation in the late nineteenth and early twentieth century was taxidermy.

Make a perceptual jump cut from the displays of the 1920s to the recent attempt, on a grand-scale, to simulate the environments of Africa in the Bronx. In these recent large-scale outdoor simulacra of typical non-American habitats, the citizen-viewer, safely ensconced in her aerial tramway, her Bronx gondola above the sweltering African plain, becomes a kind of omnipotent viewer of the game below. From her plenipotentiary perch above the African veldt of the Bronx, suspended on cables above the landscape, everything seems to become visible: the scopic triumphs, the bio-logical panopticon is mobilized. The colonial fantasy is recreated: instead of black bearers carrying memsahib on their shoulders, the paying visitor is suspended on cables, paying for her views.

Jeremijenko, in contrast, sets a very subtle stage for nature and our interactions with it. The soundless, illuminated trace of a school of fish—momentary blips on the tips of an artificial cluster of reeds – is all we are given to see. Like a chance flashing of fireflies, hovering, shimmering before us for a moment, and then, darkness. Neither shot nor stuffed, not even seen in a totalizing moment, the fish that swim through *Amphibious Architecture* are free agents. The tyranny of commodified nature, our nature Fantasyland--the Disney World prison/prism--is dissolved. The viewer's relationship to the natural world is delivered from the legacy of colonial game parks, fixed dioramas, and ecotourism. No one has paid the price of admission. Nor are any living creatures--whether human or non-human--incarcerated. Viewers are freed from a "pay per view" peek at nature.

Bronx River Area Toxic Feral Dog Release

Jeremijenko's *Toxic Feral Dog Release* interventions, however, make a lot more "noise," are a lot more purposive, and infinitely more focused than *Amphibious Architecture*. Her "feral robotic dog pack releases" are all about making the frightening explicit, about locating danger in the landscape, and about specifying, rendering accessible to public view and investigation the toxic threats of the industrial and post-industrial chemo-nuclear industrial techno-complex. Like a court jester in Shakespearian play -- the one person permitted to point, in the play within a play, toward the poison, or the malefactor, Jeremijenko's *Feral Robotic Dog Pack* constitutes an antic, and deadly serious drama about nature and its corruption. Rather than being handed tired, moralistic environmental placards with slogans painted onto boards, Jeremijenko works with young collaborators —kids in the Bronx as well as kids in the American Southwest--and their teachers, to reprogram the dogs so that they function in new ways that are attuned to their locally polluted, toxified or irradiated sites. The raison d'etre of commercial, mass-produced robotic toys--expensive automata performing inanely banal actions--is thus elevated to environmental tool: a mobilized, environmentally smart prosthesis.

Natalie Jeremijenko sets the hounds running. She and the kids that live in the neighborhood of toxic sites release the pink and yellow Feral Robotic Dog Pack, each wired canine outfitted with sensors capable of detecting and tracking the trajectory of particular, toxic chemical signatures. The dog pack has detected military waste when roaming over regions of Florida. In south Phoenix the pack has located chemical hazards in the American desert outback, and reared up on it hind legs.

"Dog Tag for Diego's Feral Robot named Chuzi" (detail)

At the offending source point, the mechano-hounds are programmed to bay, to rear, to gesture with their bodies. Rather than cornering the proverbial racoon up the tree, children from the Bronx and their mechano pack have treed the offending polluter. The dogs rear up and point in the direction of environmental (in)justice. As director, Jeremijenko releases the management of the robotic dog pack into the hands of the young – those who are not typically included in public processes of environmental assessment and monitoring, or the discovery of health-affecting environmental facts. Afro-American and Hispanic children, the historic victims, or the children of victims of toxic releases, become environmental investigators. The release of the toxic dog pack joins futuristic robotics with a version of the southern hunt with hounds. But in Jeremijenko's hands the event may include the great granddaughters of former slaves, or the children of Caribbean migrants whose ancestors once labored and died in the cane-fields, or the grandchildren of Mexican braceros in the holding, managing, and then releasing the dogs to sniff out the traces of poisons designed, manufactured, and released—dumped, spilled, leaked, or leached into the soils of Bronx, the wetlands of New Jersey, the bombed and mined landscape of the American Southwest, the landscape Valerie Kuletz has denominated a "landscape of national sacrifice." While her techno-dogs are temporarily "kenneled" in art museums throughout the country, Jeremijenko releases them into the hands of the dispossessed, the marginal, the information poor in the information age --those whose bodies have bourn the burden, since World War II, of an American environment-- waters, air, soil, and food--communities that have been irradiated and saturated with toxics, transmogrified through "Better Living Through Chemistry" and a Walt Disney fantasy world of "Our Friend the Atom." Rather than the EPA, it is the local kids who, in Jeremijenko's artful, irreverent environmental dramas, are releasing important information about toxics and their sites in our neighborhoods. "Although these dogs cannot bite," Jeremijenko asserts, "they can bark! They can begin to expose the problem and insist on media attention to it."

On her skates in New York City, or wheeling around her high-technology lab at the University of California, San Diego with her engineering students, Jeremijenko is often likened to the figure of the mime and the court jester, covered in sparkles while her kids and graduate students play. Pleasure and play are indeed part of Jeremijenko's performative strategies and political calculus.The ludic is disarming. But Jeremijenko's environmental interventions are, at the same moment, deadly serious. This engineer-environmental director-artist is fashioning novel forms of social interactions, in collaboration with marginal communities, engineering cultures, non-human engineered creatures, as well as the media world, at the sites of invisible, lethal pollution that we breathe and ingest on a daily basis. Part of Jeremijenko's power is her capacity to fashion such playful, disarming interventions. Carsonian homilies and kitchen-saturated metaphors just don't work these days. Whether Jeremijenko's scripts and dramas will affect public consciousness in significant ways is an open question.

Does it matter how we position her, or name her métier, or specify her primary performance genre? Theatre Director? Performance artist? Information specialist? Techno-provocateur? Earthworker? Environmental Artist? In a post-Carsonian world, in which environmental terror, as material reality and as spectacle --in television ads, subway posters, and movie theatres--is shockingly common place,

Jeremijenko's environmental-engineering dramas and interventions are ironic, amusing, and surprising attempts to make threats visible, to disseminate important information, and to mobilize publics in aesthetically moving ways. One hopes that her dramas, and the information they make accessible to wider publics, may become, in James Scott's words, ingeniously effective "weapons of the weak."

On the Geek as Humanist

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Claudia Hart, The Pelican, 2006, 3D model integrated into photograph

1.

A plump nude inspired by the countless *odalisques* rattling around in my head moves sensuously but also mechanically from pose to pose. Nine sequences cycle, made to evoke not just erotic sleeping but also clockwork. She is called *Machina* (2005) and is a 3d animation I made using *Maya* 3d animation software and the *Mental Ray* global illumination renderer.

In *The Swing* (2006), *Machina* becomes Rococo fleshy decadence. In this animation, she swings on a seat suspended from the sky, in super Mannerist slow time. Her wooded surroundings ebb and flow at another rate, imitating stop-motion photography. Digital trees grow, die and sway in response to *Machina*'s swinging, but hyper-compressed and speeded-up, years passing in a matter of moments. For the trees, I

used *xFrog*, special effects software made to create realistic plant forms, using growth algorithms to simulate biology.

2.

I use only 3d animation and digital effects software to produce these art works. My work expresses some of the same concerns found the type of work typically shown in the New-media art context: the morphing of the machine with the organic, the compression of linear time, the desire to produce an apparently living simulation in the form of an avatar. Yet, in the past 8 years, since I left a career in the Contemporary art world to study high-end digital animation, I have always felt ambivalent about New-media art, a separate sub-sector of Contemporary art with its own exhibition circuit, one that has dramatically burgeoned in the past five years. While Contemporary art has its own gallery system and museum circuit, New-media found a niche within a largely European festival circuit and American academia.

My sense of disengagement from New-media art extends to my experiences teaching 3d animation and character design at the Pratt Department of Digital Art, a production oriented school. What I find there is that my art orientation, learned from showing for years in the Contemporary context, and my training in art and architectural history at New York University and the Columbia University Graduate School of Architecture gave me a different point of view.

3.

Marcia Tanner is a curator who emerged from the Contemporary context. She recently organized *Brides of Frankenstein*, an exhibition at the San Jose Museum of Art (July-Oct 2005) in which she grappled with issues of technology and feminism. For the New Media Caucus open call, which solicited panel ideas for the College Art Association Conference in 2007, she proposed, "Can Geeks be Humanists?" Her proposal apparently elicited "heated bicoastal discussion" and was selected. I am one of the artists she invited to answer the question. The others are Andrea Ackerman, Erwin Redl, – who replaced Jim Campbell - Sabrina Raaf, and Gail Wight. I was only familiar with the work of Erwin Redl and Jim Cambell, two artists who already crossed over from the New-media context into the Contemporary context. I knew that this question would give me an opportunity to clarify for myself my ambivalence, and indirectly had something to do with a difference in values held by two distinct art worlds.

4.

What I believe is implied by Tanner's question and its positioning of the *geek* and the *Humanistic* as opposite is the following:

1. A *Geek* is one who values technology above all. The obsessional embrace of technology by *geeks* is a technocratic embrace, derived from an adulation of the power of technology for its own sake. By positing it as something against the human, Tanner reminds us that today, technology emerges radically from the contemporary bureaucratic military-industrial state and corporatized consumerism. These *geeks* must therefore be against the human, perhaps therefore "post-human", and by implication, *Post Modern* in the theoretical sense.

2. *Humanism,* as posited by Tanner, is geekdom's inverse. It must therefore be outside of and in contradiction to the recent technology boom and therefore somewhat old fashioned, outmoded and perhaps even *Romantic* - the ideal of culture adopted in the 19th and first part of the 20th century. *Humanism* in this context would fall on the side of (traditional) artistic practice and implies placing the individual artistic voice at the center of its value system.

After considering this, I came to the understanding that I reject both terms and would therefore like to propose a different dialectic, one implementing two other terms BOTH of which are associated with theoretical discussions: the one social and the other ontological. I think of this social discourse as emerging from the Marxist and politically motivated sociological theory of the Frankfurt School, and connected to design theory and the discussion of everyday objects. I believe this socially oriented discourse is related to New-media art. On the other hand I associate the ontological approach of the French school of Deconstruction, influenced by Freud and Derrida, with Contemporary art. These philosophies are two different offshoots of secular humanism, BOTH "post human" and *Post Modern* but in different ways, different enough to indicate the diverging approaches of two distinct communities.

5.

I am a lurker on the *iDC* list. Every day I receive several e-mails; it is very active. Its contributors include many well-known New-media theorists, curators and artists including Jon Ippolito, Brian Homes, Amanda McDonald Crowley and Lev Manovich, all respected practitioners in the New-media community. *iDC* is "the Institute for Distributed Creativity," and focuses on collaboration in media art, technology, and theory. Its prime mover is Trebor Scholz, a media artist and professor at SUNY Buffalo, and the *iDC* is obviously a significant part of his practice. Last month, Scholz posted a position paper, *The Participatory Challenge* that elicited active response.

6.

> "Today, people do not merely browse the web. Instead they give away information, expertise, and advice without monetary compensation…Thousands voluntarily participate in open encyclopedias, social bookmarking sites, friend-of-a-friend networks, media art projects and blogs or wikis…(which) exemplifies the growing interest in technologies of cooperation...(This) is the precondition for the emerging paradigm of the artist as cultural context provider, who is not chiefly concerned with contributing content to her own projects. Instead, she establishes configurations into which she invites others. She blurs the lines between the artist, theorist, and curator…(and can) create visibility for discourses and artworks that would otherwise be overlooked…(such) gift communities, or extreme sharing networks, have the potential to inscribe discourses in collective memory, inspire and to some degree shape people lives."
>
> Trebor Scholz, The Participatory Challenge

7.

Scholz's pragmatic approach, his view of theorizing as a form of political activism and his belief that a new technology can provide a better, more democratic life evokes Lewis Mumford and his writings on technology, architecture and urban design.

In his 1934 *Technics and Civilization* (NY: Harcourt) Mumford describes *technics* as dialectic between social and technological innovation. He criticized American techno-culture as being *Monotechnic* - an embrace of technology for its own sake - and makes a plea for the *Polytechnic*, in which an adaptive multi-platform technology and design culture is capable of solving urban and social problems, improving life and enhancing democracy. Later Mumford was less utopian. In the *The Myth of the Machine: technics and human development* (NY: Harcourt, 1967), he criticized a post-War technological development based on unrestricted growth and built-in obsolescence, necessarily precluding good, adaptive design. Mumford called this development *megatechnics*, in opposition to his ideal, an organic model of technology that he calls *biotechnics*.

Biotechnics lead me to Victor Margolin, product-design historian and heir to Mumford. In collected essays, he identifies design broadly as the conception and planning of the artificial (*The Politics of the Artificial*, Chicago: University of Chicago Press, 2002). Margolin sites the American Pragmatist philosopher John Dewey as a conceptual resource and draws on the language of eco-activism, calling for a design of *sustainability* that he posits in opposition to present-day *expansion*, meaning untrammeled consumer hyper-development. He views *sustainable* design as more than the mere semantic shaping of seductive commodities but rather as instrumentation: a vehicle for planning and ordering the world. Like Scholz, Margolin refers to the engineer R. Buckminster Fuller as a paradigmatic practitioner of sustainability.

All of these humanistic design writers are theoretically grounded by Jurgen Habermas, the sociologist and philosopher who dominated the later Institute for Social Research in Frankfurt. Habermas found a way of making technocratic "reason," acceptable. With *The Theory of Communicative Action* (Trans. McCarthy, Thomas, Heinemann, London, 1981) he proposed a pragmatic philosophical model, what he called *communicative action*, in which "reason" is directed not merely towards success or failure but towards cultivating understanding between people. Habermas explained technocratic modernity in terms of the invasion of instrumental rationality into the social realm and responded by banishing technical reasoning from human exchange, though still identifying technology and science as the only way to deal with nature. His ethical and evaluative system paves the way for the approach of Scholz and his colleagues, who view technology art as a tool to be purposefully instrumentalized. By synthesizing these positions, I was able to clarify my own, particularly after reading a new history of digital art.

8.

As I said, I am a lurker on the iDC site and I must admit I'm sometimes tempted to contribute but something holds me back. Recently I read a posting by Charlie Gere that resonated, so I read his book. *Art, Time and Technology* (Oxford: Berg, 2006) which claims to be the first to contextualize art using real-time computing technologies within the broader history of the visual arts. It is organized around the idea that modern art can be read as a response to the increasing speed and accelerating evolution of technology. To Gere, "if art is to have a role or meaning at all in the age of real-time technologies, it is to keep our human relation with time open in light of its potential foreclosure by (them)."(*Op. Cit.*, 13) Gere grounds his history in Jacques Derrida and many philosophers associated with French Deconstructivism.

I identify Gere's idea with my own clockwork animations in which the organic and the human collapse into mechanistic temporal rotations paradoxical to their being. They exist in an environment where time is fluid. They are a representation of this, they are not *literally* it, as they are not pieces of software set to mutate over time, but pre-rendered and looped. I might also add here that I believe in the power of "the signifier," as French Post- structuralist philosophers liked to call representations. I think of art works as metaphors. I would like my animations to invoke "the immense questions of artificial memory and of modern modalities of archivation…this prodigious mutation not only heightens the stature, the quantitative economy of so-called artificial memory, but also its qualitative structure – and in doing so it obliges us to rethink what relates this artificial memory to man's so-called physical and interior memory, to truth, to the simulacrum and simulation of truth, etc" (Derrida quoted by Gere: Jacques Derrida, *Memories: For Paul de Man*, New York: Columbia University Press, 1989)

If Deconstruction is an attempt to open a text to several meanings and interpretations to show the relativity of meaning, then the only constant within such fluidity would be the contemplative process of deconstruction itself. The function of a work of art then, including my own, is one of contemplation. This approach is different from the pragmatic orientation shared by much New-media art and by other forms of activist art and also by the design community. Contemplative art is not a thing meant to be instrumentalized but a thing to be interpreted. It is not a gift of service but rather one that, the more it resonates, the more it offers itself for a moment of interiorized reflection, which on a personal and therefore humanist level, works as a radical resistance to and antidote for the violent speed of untrammeled commercial *megatechnic* expansion.

Let Me Tell You Something: Why I like Movies Better Than Art

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I remember, when I was a teenager, this guy in the apartment downstairs asked me one time if I liked "New Music." I'm still not sure what was creepier, that the question was delivered in a vaguely lascivious, effete tone, or that "New Music" was a term that was both impossibly vague and vaguely insiderish, cliquey.

Now, today I find myself being solicited to write articles about another "new," *new media.* Does that make me a "new media artist"? If so, are there things I need to be doing in order to retain that sobriquet, so bestowed, and if I don't, will I be found out as an imposter?

Like, should I be working with the Internet? (odd, Word wants to capitalize "internet") Do I have to use MAX/MSP? Look, I tried it, okay? I had the idea that I wanted to make interactive installations, maybe manipulate video. But it's really not for me. I thought it would be moving virtual objects around, like moving video around a timeline, but it's a lot more like writing code.

Should I make art using, I don't know, cell phones? See, I can't do that either, because that would be opposed to my position on cell phone telephony and its technological support apparatus, namely the base station antennas that choke our landscape in ever increasing numbers – and which, with their 24/7 barrage of microwave radiation, choke our immune systems. I can't say for certain whether said radiation is harmful at low levels, but I have seen enough reputable studies that strongly suggest that it is, in the long term. Meanwhile, I have seen nothing to suggest that cell phones have fulfilled any kind of need, other than for certain people to get richer. If you *need* a cell phone at this point, it's only because said people have schemed to make them so ubiquitous that you are a social pariah if you don't have one.

It's the way I feel every time I log on to *myspace*. After recently having added an old friend to my stable, I remembered back ten years ago, when he and I started talking via this new fangled thing called email. Around that time, it was getting to the point where, to promote yourself as a creative person, you needed a website. Now you need a website and a *myspace* page. Just in the course of typing this, on my new laptop, I got a message from someone inviting me to join something called *tribeHollywood.com.*

New technology, like any new product, creates its own marketplace, and not the other way around. Of course, people are all too willing to consume; in the land of the *hungry ghost*, we need a constant flood of *the new* to try to fill that spiritual hole, one that has recently found its physical expression in downtown *New* York City. "The shock of the new" is an oxymoron – nothing could be more comfortable and assimilable in our society than "the new."

Far from new versus old, the distinction that has lately asserted itself as the most cogent in defining my artistic practice is one of *diegesis* versus *mimesis*.

Before I get to that one, here's another distinction – *artist* and *filmmaker*. For a long time, I was chiefly known as the latter. I may have been using the "new medium" of video, but I made good old-fashioned *films* – the kind you sit and watch in a darkened theater. Isn't "filmmaker" a kind of artist, like painter or sculptor? The great number of notable filmmakers working outside the conventions and distribution structure observed by even "Independent" and "Foreign" film – think Brakhage, Benning, Kubelka, Insert-Your-Fave-Here – gives weight to that notion.

So, given my own resistance to those same filmic conventions – "feature" length, recognizable categories like narrative and documentary – I have always considered myself aligned with what has always appeared to be the larger umbrella, the more open field of art.

The thing is, the more I have sampled from this supposedly wider field, the more I've come to see that I have hit another wall.

Or rather, something that hangs on a wall.

The image. Along with *the new*, what could be more assimialable? What could be more evident, now, years after the Benetton campaign, than that any image can become an ad? (oh, Microsoft Word knows Benetton! And it knows to capitalize Microsoft!) Slap a logo on a Gursky? Instant ad. Slap a logo on *Citizen Kane* ... where? *Citizen Kane*, the whole, the entirety of *Citizen Kane*. An *image* from *Citizen Kane*, sure, but *Citizen Kane* cannot be made into an ad. It's ironic that Marcel Duchamp is so singularly revered within the field of art but that his decision to stop making images has evidently not been, shall we say, assimilated.

An image that hangs in an art gallery is essentially already an ad. But it's less for that reason that images leave me cold than it is because they belong to the cool realm of *mimesis*. As conceived by Plato and Aristotle, *mimesis* is the quality of showing something, a re-presentation, a reflecting back. Hence *image*, from the Latin root *imitari* "to copy, to imitate." Never mind the Modernist ethic of turning away from the notion of the external world and focusing on the picture plane; that is a contradiction in terms, since all images are inherently representational – seductive simulacra that simultaneously problematize and uphold the appearance of "the real."

Diegesis on the other hand, is the communicative process of *telling* something. And, while *to show* something might imply communication – that is, the need to have someone to show something to, and thereby complete the process – doesn't *showing* smack of narcissism? Narcissus didn't fall in love with a story about himself, he fell in love with his reflection.

What has become increasingly evident to me is that this division in fundamental approaches to the creative act is shall we say reflected in the contemporary marketplace, in the divergent fields of art and film. That is to say, we have the business of art and the business of film, and scarcely the twain shall meet. Can it be just a matter of fate, of happenstance, that a creative endeavor so often thought of as visual can become incorporated into a business that is not the business called art? We can see this in something as prosaic as the kinds of places where these two "arts" are staged – film is in film festivals, theaters, TV; art is in galleries, in public space, in Biennials. They have film in the Whitney Biennial, but by how it's scheduled and displayed, it's obviously second fiddle. It is the former kind of space that is the province of the time-based experiential process of *telling*, while the latter is the realm of image-objects that are to be *shown*.

That is why so-called "video art" has rarely resonated for me; Acconci's pointing at the center of the video screen does not arise out of the *diegetic* tradition practiced by the likes of Eisenstein, Welles, or Godard but, as Krauss shows (in *Video: the Aesthetics of Narcissism*), what Acconci is doing is pointing to the Modernist notion of pointing to "the internal structure of the picture-object" – in other words, he is upholding the *mimetic* tradition of art. He is not talking to me, trying to tell me something, he is creating (even as Krauss may argue that he is interrogating) image.

Lacking an affinity for a tool like MAX/MSP does not stymie me in making interactive art; my art has always been interactive, because it is a *discursive* art. The only "tool" I need is a social practice. I don't find technology particularly seductive, but rather burdensome and destructive, or at least regressive. And while I am not immune to the seduction of the image, I have yet to find myself enticed enough to want to make Hollywood films, in any sense of the term. That strikes me as a precarious position, that of being a storyteller (of a sort) in the land of image-makers. Likewise, certainly with respect to this forum, that puts me in the potentially untenable position of breaking down art not in terms of any kind of media, new or old, but in terms of how much it is a communicative, experiential process and how much it is the most current technological iteration of an image pointing to itself.

And yet if I can find work to line up on both of those sides, then obviously I've been too hasty in thinking of art simply as "the land of image makers." To paraphrase the slogan that once famously advertised one *diegetic* experience, *I am not alone.* There are other artists *out there* who want to engage in conversation, *to tell,* and I think it is precisely that for which "new media" is largely meant to be a vehicle. But as I write this, it doesn't matter what tool I use, nor through what medium it is delivered. What strikes me as most important is not *things* like technology, products, the idea of "the new," but precisely what it is I am *doing* right now – engaging in the old-fashioned, time-honored practice of *diegesis*.

Sensorium: new media complexities for embodied experience

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> The forming of the five senses is a labor of the entire history of the world down to the present.
>
> — Karl Marx, 1844

Digital convergence and accelerated knowledge production are present realities in a networked world of distributed "artificial" intelligence. In fact, we risk becoming so comfortable in this information stream that there is no longer any friction in our navigational systems, nothing that feels "artificial" in this intelligence. Our culture's construction of a networked collective memory, and our hive mind's googling for cached and streaming images off the web, feeds a habit we can't break. But the rarefied virtuality of the "extra-" (supra, infra) human is prompting a rethinking of what '80s cybertheorists denigrated as "meat machines" – those biopolitical processing units we call the body.

Oh yes, the mind-body problem, but not as Descartes could ever imagine it. Virtuality, and the everyday reality of body transcendence, presses us to think the corporeal. We might choose Ernst Mach rather than Descartes to begin thinking with, celebrating Mach's relentlessly physical redaction of "sense-data" for the twentieth century – but we'd still need to process it further, through a Foucault still young enough to theorize "*le corps utopique"* in 1966:

> My head, for example, my head: what a strange cavern, that opens onto the world with two windows. Two openings—I am sure of it, because I see them in the mirror, and also because I can close one or the other separately. And yet, there is really only one opening—since what I see facing me is only one continuous landscape, without partition or gap.[xliii]

Foucault gave us the right questions, even if his "one continuous landscape" is increasingly punctured by multiple screens and messages from times and places other than where we nominally are. The question is what kinds of subjects are we becoming, in these networked brains embedded in their fleshy, neuronal viscera? Now more than ever we need to embody our thoughts – now when that "cavern" and the thick, sensory envelope that provides it with consciousness is studded with earphones, zooming in psychopharmaceuticals, extended with prostheses, dazzled by odorless tastes and tasteless odors, transported by new media, and buzzing with ideas.

Art is the place we do some of our best thinking and feeling, and it's clear that the historicizing and aestheticizing of our sensory location is well underway. Histories of synaesthesia are being attempted, such as the 2005 show *Visual music: synaesthesia in art and music since 1900* at Los Angeles MOCA and DC's Hirshhorn Museum and Sculpture Garden; see also New York Eyebeam's showing of Independent Curators' exhibition, *What Sound Does a Color Make?* The Canadian Centre for Architecture recently

offered a probing exhibition on "Sense of the City," where we learned that gradual modifications of asphalt in the twentieth-century turned urban acoustics from a resonance machine into a more muffled roar of combustion (not incidentally changing urban smells, with petroleum outgassing on a hot summer's day). And the Biennale de Lyon provided a self-consciously hippie gloss on the embodied "experience of duration," with a room of green fog from Ann Veronica Janssens, nerve-stimulators from Carsten Holler, and a claustrophobic (and hairily static) installation of pink balloons from Martin Creed.

Sensorium, the exhibition planned for the fall of 2006 at MIT's List Gallery joins this new tradition, but will probably convey a more conceptual, theoretical, "techie" feel. As the editor of the book project accompanying the exhibition and one of the (low level) consulting curators, I can present here the skeleton of my historical argument about "The Mediated Sensorium," with aspects of the theoretical "Abecedarius" that locates some of our collective work on embodied experience, technology, and the contemporary artists who got us to the thinking point. Although our aim is clearly to take the measure of the moment, my own contributions insist on the modernist history of this present – a history that produced us as subjects and trained us to adapt to higher levels of mediation than ever before. Mid-century modernism, I argue, organized the body in particular ways (especially for US subjects), ways that colonized different sensory and bodily functions – bureaucratically enhancing our aesthetic relations to those functions, and giving them a commodity address.[xliv] Contemporary artists have to deal with these traditions as they enter global art practice.

Dramatically complicating the white cube, refusing the phenomenological certainty it implied, and putting into question the whole Kantian concept of "sensus communis," twenty-first century artists operate nonetheless within the flux of a past sensorium dependent on those entities. Unruly, multifocal, and populous, the nebulous field of "new media art" has one apparent commonality – a movement beyond the old genre categories "painting," "sculpture," and even "video art,"[xlv] in favor of nebulous domains such as "sound art" and "tangible media." Other activities remain uncolonized by taxonomy but may someday crystallize as "olfactivism" (here, in the work of Sissel Tolaas) or "gustibationist" (perhaps the taste of infusions from François Roche's proposed MITea house).

Do these innovative artforms offer an escape from the channeled sensory portals codified at mid-century, or are we merely reinstating the hierarchies of that past in more comfortably prosthetic ways? Does "new media" question mediation itself, or merely add to the looming buzz? There is no monolithic response, no simple answer. Artists and others forge complex relations to technology that range from resistant to scruffily "DIY" to happily compliant; *Sensorium* suggests that no schema can capture the diversity in any present. Similarly, along with Clement Greenberg's legislated mainstream, the culture of the postwar period came to include silvered factories that commented, Pop-wise, on our techno-aspirations (Andy Warhol's desires "to be a machine," 1963), randy performance art that smelled like clean, dead flesh (Carolee Schneemann's *Meat Joy,* 1964), random-looking piles of dirt that pointed out of the white cube to an absent and inaccessible place (Robert Smithson's punning *Non-sites,* 1970s), and even ice-cold snowballs in the street (David Hammons's *Bliz-aard Ball Sale,* 1983).

Hegemony could briefly enforce one extreme to occlude the potential of such sensorily diverse work. In the postwar apogee of the "American Century," purified and isolated senses were meant to be addressed by Color Field abstract painting, hi-fidelity listening, and newly synthesized "Flavors and Fragrances" (Inc.)[xlvi]. These separated domains, and the genre purity enforced to protect them, constituted an anxious response to the mediated sensorium – a regime of "purification" that non-mainstream artists were among the first to contest. For those in the center, formalism offered the user (painter and viewer) a set of positivist protocols that could *produce* isolated sensations abstracted from the bourgeois body (rather than participate in their *re*production) – always ordinated by sight. Yet the rule of ocularity needed constant maintenance. Its dominance was only part of the picture, only a component of indifferently coordinated larger systems that aspiring subjects had to navigate in modernism's several regimes. That larger experience is a *sensorium* – the subject's way of coordinating the body's perceptual and proprioceptive signals, and the changing sensory envelope that constitutes the self.

The sensorium should be seen at any historical moment as shifting, contingent, dynamic, and *alive.* It lives only in us and through us, enhanced by our technologies and extended prosthetically, but always subject to our consciousness (itself dependent on sensory formations). In conjunction with the visuality historians have charted as characteristic of the modern, we should begin to reckon with the auditory, the olfactory, and the tactile as similarly crucial sites with regulatory potential in the sensorium's infinite body.[xlvii] Even for a formalist such as Clement Greenberg, the "modern sensibility" he often mentioned was fragile, precarious, and hard won, requiring vigilance and alertness against the chaos of undifferentiated sensation in a highly mediated world.[xlviii] Technology was an important model for this

process. As Sara Danius argues, "the emergence of modernist aesthetics signifies the progressive internalization of technological matrices of perception. Indeed, to chart how the question of perception is configured in the modernist period, notably sight and hearing, is to witness the ever-closer relationship between the sensuous and the technological."[xlix]

Science is one of our most powerful narratives for organizing sensory phenomena and taking their measure. It is up to art and philosophy to make a *sensus communis* from such research.[l] As Wittgenstein famously theorized, I can never be certain that my "blue" is your "blue," I can only persuade you to share a consensual language-game whose referents are sufficiently stable to function.[li] Through such manifestly cultural systems, modernity believed it had anchored the common senses. Yet the artists of *Sensorium* turn some of those modes of "representing and intervening" against themselves, to destabilize the comfort of shared perceptions and reopen the mysteries of the proprioceptive self.[lii]

Mathieu Briand, *SYS*017.ReR*06/PiG~EqN/5*8*, 2001
Installation view, Ateliers d'artistes de la ville, Marseille, France
Photo by Denis Prisset, courtesy the artist

What do we gain by the deformations, exaggerations, or substitutions found in contemporary art? In this essay I will confine myself to the answers (that only provoke more questions) from the 10 artists in *Sensorium*. When French artist Matthieu Briand translates the body heat of his spectators into the visible spectrum, when Janet Cardiff simulates the whisper of subconscious thought in George Bures Miller's *mise en scenes*, when Parisian architect François Roche uses abject body fluids to support an architectural structure, when Berliner Christian Jankowski maps scientists' fantasies, when Bruce Nauman triggers robotic infrared vision, when global nomad Anri Sala listens to the human sounds of war technology, when Japanese composer Ryoji Ikeda suffuses our bodies with subaural soundwaves, when Norwegian conceptual artist/chemist Sissel Tolaas embeds the smell of sweat in the walls of the white cube, or when Natascha Sadr Haghigian channels sound through the eyepiece of a microscope, we are opened to subliminal histories that we can choose to explore, alternatives to the sensory map that modernism bequeathed to us. Each new wave of technological innovation brings us, as Marx imagined, still more elaborate fantasies of a fuller sensual life – while at the same time sharpening the feeling that some aspects of our sensual past are receding ever more irrevocably behind us.

Olfactivism

Smell, at least since Locke, Kant, and Condillac, has been relegated to philosophical abjection, with fragrance, odor, scent, aroma, perfume, and stench all placed at the bottom of the epistemological hierarchy. The ascendance of sight has always been a useful tool with which to accomplish the further denigration of smell. Because ephemeral, Locke speculated, smell could not stimulate considered thought, and the poverty of our descriptive language for smells was proof, for him, of this low status.[liii]

The linguistic vacuum around odor is so glaring that theorists attempting to study "aroma design...in performance" (Sally Banes) have discussed smell's "ambiguous semiological status," (Jim Drobnick) and its liminal existence "somewhere in between the stimulus and the sign" (Alfred Gell).[liv] *Sensorium* artist Sissel Tolaas addresses this semiotic exile proactively, by working to build a language of smell phoneme by phoneme:

> Tolaas] claims no existing language – she speaks nine – describes smells accurately. The terminology currently used to describe fragrances, sweet, spicy, etc., is limited and generally void of emotion. Therefore, she is developing a new language that attempts to describe 'smells and smelling' in a logical and consistent manner.... In this way, the language of NASALO slowly develops.[lv]

Just as identity marketers used the first super-computer to create the non-word "Exxon" for corporate colonization, so Tolaas seeks unclaimed combinations of letters – Hsidews, for example – to designate new lands in the continent of smell. "Hsidews" was crafted for commissioners at the Andrehn gallery in Stockholm in 2002 (the name comes from "Swedish" spelled backwards), and can now be purchased at bespoke parfumiers on the net for quite a hefty sum. Hsidews offers its users Scandinavian essences mapped by Tolaas using "headspace" technology, combining "notes of Ikea, Volvo, H&M" for the discerning contemporary sensualist. Why not surround oneself with the smell of modernist design in global capitalism? The medieval "language of flowers" had mingled with spice trade lore to fuel the trade of parfumiers in the eighteenth century – the range and scope implied by sandalwood, myrhh, vetiver, and civet were precisely part of each scent's status on the warm and steaming body of its users. Yet of course Tolaas's language of scent tunes up our conceptual antennae; nothing slides onto the "pulse points" easily here. Tolaas's smells are democratic; her urban perfumes (as for the Berlin Bienal) often incorporate volatile ethers she has synthesized from samples of local dirt (with its bits of dog feces), those chemical components that give the city its "signature" smell. Tolaas's odors are frankly synthetic and mediated, and of course their appeal may be greatest in abstract recall, where we can savor the aesthetic development of this linguistically impoverished sense. What she must tunnel through in this ongoing project is modernity's shame and disgust, still quite redolent in present-day discourses of smell.

Sissel Tolaas, *Fear I*, 2005
Synthesized human sweat pheromones micro-encapsulated and embedded in white paint on gallery walls. Installation view, Roebling Hall, New York. Research supported by IFF Inc.
Photo by Elizabeth Beer, courtesy the artist.

In narratives of horror, love, and religious ecstasy, smell wafts up as the most subliminal, the least controllable, the most evocative, the least knowable, and possibly the most gendered of our senses.[lvi] None communicates so immediately and directly to the sites of memory in the brain, bypassing conscious cognition to summon core emotional states associated with the minute chemical combinations that first stimulated the neuron for that specific scent.[lvii] Shifting a right-handed isomer to its left-handed chemical cousin is enough to convince the molecular receptors in our nasal cilia that it is spearmint, rather than caraway, we are quaffing. How strange it is that philosophy banished such a subtle sense, favoring hearing and sight in centuries of "repeated Platonic prejudice" against the limbic sources of knowledge.[lviii]

Resisting this Platonic prejudice proves difficult, unless, like the neurologically-impaired (or enhanced) subjects in neurology case studies, the subject is physiologically compelled to live in the doggy splendor of an olfactory world.[lix] When brilliant novelists such as Patrick Süskind get such a subject in view, he becomes demonic, like the 18th century protagonist of Süskind's 1985 *Das Parfum,* a French parfumier whose outrageous olfactory gifts condemn him to a life of murder and eventual execution in a tale of sensory regulation as extreme as it is compelling. Smell – no doubt because of our long prejudice against attending to its cues – is thought to get us when we're "not looking," to take us unawares and bypass conscious will, like the supposed sex pheramones marketed in email scams. Can this "subversive" quality account for its absence from language? Commodities produced to contain this anxiety about the "unconscious" emanations of stench spread far beyond the body to colonize an entire odiferous environment: Ivory (99% pure!), Lysol, Odol, Mr. Clean, Glade, Listerine, Dial, Old Spice, Doublemint, Tide.... These and other scent-altering components of the modern habitus were meant to remain subvisible (and hence the inflammatory role of their labels in early 20th century modernism, where the German mouthwash "Odol" crops up in collages by Carlo Carra and paintings by Stuart Davis). No accident that the rise of the soap industry in Great Britain was fueled by colonial conquests (palm oil, sandalwood), even as its products were marketed to distinguish the European body from the colonized

one.[lx] Time will tell whether visitors to *Sensorium* can tolerate the chemically synthesized smells of human sweat Tolaas has embedded in the paint of the gallery walls; we have been trained to despise this smell for decades, if not centuries of "civilized" existence.

Not surprisingly perhaps, given smell's centuries-old denigration, this first of our senses (its processing done deep in the rhinencephalon, near the base of the oldest part of the mammalian brain) has been consigned to products like detergents and celebrity scents from conglomerate cosmetics houses – and this isolation may be the reason Tolaas is the lone "olfactivist" in *Sensorium.* (Although we looked at scent-based installations by other artists, she was the only one we found for whom smell is central to her work). One might analogize her to John Cage, whose democratic embrace of "noise" and "silence" placed him at the margins of academic music (but at the source of inspiration for artists, philosophers, poets and other thinkers outside his field). Tolaas's mode of working charts the established affinity between perfumes and smelly abjecta (the requirement that certain of her scents carry a tincture of animal dung is comparable to traditional parfumiers, who coveted the anal excretions of the civet cat for that *je ne sais quoi* of olfactory desire). No aromatherapist, this chemist/conceptual artist is more interested in the ethers of Ikea and the unique "odor imprint" of human sweat than she is in rose attar.[lxi] She rescues smell for conceptual as well as sensual attention, moving her experiments into sites such as a former prison, where she claims to be able to distill "the smell of fear."[lxii] We know that our sense of smell still *functions,* but we've been trained not to *focus* on it – Tolaas's work begins to reverse that incremental process.

The volatile essences of our modernist past could be separated into administrable units that were *dominated and hierarchized* under sight ("sparkling" clean) – the much-discussed "ocularity" of the modern episteme. Has this changed for the artists and readers of *Sensorium*? Late twentieth-century theories of ocularity (at least in the U.S.) were fueled by the growing cultural resistance to hygienic modernism itself. When does smell re-enter modernism's white cube? (Perhaps Surrealism's rotting snails in a taxi, but gloriously redolent in Schneemann's *Meat Joy*.) When does noise trouble the structure of tonal music, or silence become a revolutionary aesthetic? (John Cage, but before him Schwitters' *Ur-Sonate*.) When does touch specifically counteract sight? (Lygia Clark, but before her Meret Oppenheim.) These violations of modernist decorum, historically situated in the practice of the two major avant-gardes in the 'teens and 'sixties, gained salience precisely as modernizing segmentation became most acute. They did so, explicitly in the late '50s and '60s, by counteracting hegemonies to which they formed an "underground." Cage and Allan Kaprow, Schneemann and feminist performance art in general, Julian Beck and the Living Theater, Fluxus et al. – these were then marginal transgressives who widened the wedge of a sensory installation/performance axis that seems to have complicated modernist segmentation once and for all. Clearly *Sensorium* artists Jankowski, Haghigian, Anri Sala and Ryoji Ikeda are somewhere in this penumbra – operating with psychological experience (rather than stable forms).

Psychosensoria

Visitors to the world's biennials (Documentas, Manifestas) are now familiar with this shift from form to experience, opening out from Beuys's concept of "social sculpture" and given its textbook primer by Nicolas Bourriaud's *Esthétique Relationnelle*. Whether slurping water popsicles or Indonesian curries, smelling carbonized paper or shuffling through mounds of coffee, wearing 3-D goggles or headphones, art "viewers" in the new millennium are met with dramatically synaesthetic and kinaesthetic scenarios that produce their newness from the ostentatious destruction of a bureaucratic modernist regime in favor of social and sensory experiences. What is apparent about *Sensorium*, however, is the way exhibition curators resisted this parade of "follies" (as some of them termed those attractive, playful, but possibly dismissable sensory experiences). They were more likely to agree on an artist such as Christian Jankowski, who produced an early video piece, *Let's Get Physical (Digital)*, which was based on actors reading a script crafted from Jankowski's own internet exchanges with his lover while the two were hundreds of miles apart. Exemplifying what curator Bill Arning describes as "low-band-width encounters," Jankowski's script reflects the difficulty of registering emotions, to say nothing of breath and body heat; the actors (found and hired over the Internet, and situated in a set furnished with items ordered on-line) repeat odd lines as they lie next to each other in bed, trying to "visualize" the distant lover (we know these lines from our own typed messages: "how R U? what R U doing right now?")

What Jankowski proposes for MIT suggests his own mediated picture of the place (teeming with inventive, unemotional scientists) rather than predict his intervention. His visits to Cambridge focused on interviews with research scientists, whose emotional and sensory connections to their work will be the basis of Jankowski's production. Arning speculates:

> As in all of Jankowski's work his collaborators become his stars. The scientists whose biographies will provide the narratives for the work will have their stories, motivations and dreams told via archetypal science fiction forms [possibly] *Solaris,* Russian filmmaker Andre Tarkovsky's deeply moral answer to Stanley Kubrick's techno-fetishistic film *2001*.... [lxiii]

Haghigian also plans to interrogate the sensory epistemology of science with a "Singing Microscope" provoked by her reading of a pivotal essay by Evelyn Fox Keller on "The Biological Gaze."[lxiv] Attracted to scientific discourse because of our mythic investments in it as "pure truth uncorrupted by culture," the artist proposes to outfit an old monocular microscope that visitors can *see*, with a tiny speaker that they can only *hear*.[lxv] Like Smithson's critique of "sight" in the Non-sites, where we cannot see the origin of the work's ostensible meaning, Haghigian's music-hall titled "Singing Microscope" will insistently frustrate vision precisely to interrogate the instrumental gaze.

Ryoji Ikeda comes from the world of music, but is closer to Philip Glass than John Cage in his pursuit of intense and overwhelming sonic textures. The visitor to an Ikeda installation often sees aura-like or "target" forms in the center of a blindingly blue field, while pulses of subaural and audible sound seem to rewire the body's own autonomic nervous system. Collaborating member of the Japanese "dumb type" group, Ikeda's work is documented on sites such as <brainwashed.com> and sought by architectonic choreographers such as William Forsythe (of the Frankfurt Ballet). Ikeda's music occupies a bandwidth that is extraordinarily dense but intensely flattened – drones, hums, buzzes, undulating pulses. It is broadly horizontal, like global culture itself. The modulations in this minimalist texture of sound can take the auditor into nearly spatial realms of acoustics; this kind of ambition is reflected in the piece that premiered at the Pompidou in 2004, *C4I* – described by Ikeda as "a new audio-visual piece" to be written as "C quartic I [but] read as 'C hypercubed I' or 'C four I' = 'see for eye'."[lxvi]

The psychological spaces plumbed by Ikeda, Haghigian, and Jankowski are intensely personal and emotional – at the scale of a microscope viewfinder in a single visitor's ear. Anri Sala's work is pitched at a more public, possibly shared cultural and psychological space – the space of intensely felt history and geopolitical conflict as worked out in the body. As Sala noted in an interview with Hans-Ulrich Obrist, "people today tend to cry at the cinema rather than in front of a painting as they did in the past," and it is this space of publicly solicited emotion that interests this young filmmaker.[lxvii] Before relocating to Paris (where he studied film and video), Sala suffered with the rest of his Albanian compatriots as the stable (if repressive) orders of Communist rule collapsed into gangster capitalism in the late 1970s. His videos return us to the site of Albanian memory, which is not reliably housed in archives or documents, but only in the bodies of its citizens – a sensorial memory.

Sensorial Memory

What I am proposing as "sensorial memory" makes sense in the context of Sala projects such as *Intervista* (1997), in which a film of his mother, speaking at a Communist Youth rally (in the '50s?) was located without its soundtrack. The only way Sala could rehabilitate the (always primordial) mother's voice and identify her words was to turn to the local deaf community, who helped the artist re-embody her language and re-constitute its sense. Among the videos shown in installation as part of *Sensorium* will be the 2002 *Natural Mystic*, in which "Sala comes close to making a pure sound installation as he reflects abstractly [on] switches of sensory modalities."[lxviii] What the viewer sees approaching the installation is a state of the art flatscreen and some very cool headphones, mirroring the audio equipment worn by what seems to be a musician depicted in a soundstage on the screen. In Sala's description:

> Then you come close to the screen, take on the headphones and there you get lost to a whirling sound, that seems to start from far away, gets closer and closer until your head shakes with the wind, and then fades away in the distance again, to almost disappear and end up in some funny PUGHH. Indeed, what you see in front of you is a musician in a recording studio. Everything is around him, instruments, drums, keyboard, but he prefers to simply use his whistle in the microphone. It's an environment created by the whirling sound, which transmits to the viewer-listener a personal experience that of the musician himself, while he had listened to the tomahawk missiles flying over his head, exploding somewhere else in the city. Even though the image in front of you is the same, the picture in your head is something completely different.[lxix]

The sensorial memory here is embodied in the young man, intensely channeling the sound of the US interventions in the Balkans as he "replays" the Tomahawk missles' screaming descent – whether or not international cable news chose to document those "forgotten" wars.

The capacity of sound to surround and even penetrate the body of the listener is part of what Ikeda and Sala both (in very different ways) pursue in their work, and what we take away in our own sensorial memories. Janet Cardiff and George Bures Miller, well known in the burgeoning realm of "sound art," are also interested in what some have theorized as our "auditory ego". Is it a coincidence that sound art has appeared on the scene at roughly the same time as iPods and other MP3 players, with their capacity to create an intensely "personal" sonic world? These new technologies mimic the transistor radios and Walkmen of an earlier time, but replace what used to be broadcast media with the "personal" soundscape fantasized among iPod users.

Cardiff and Miller interrogate those old broadcast voices as if they had psychologies, personalities, and lives. What we experience in an earlier work, *Paradise Institute* (2001), are waves of sounds that layer themselves in our listening minds – whispers, rustles, mutterings, cellphone interruptions, and what seems to be the "authorized" soundtrack of the film we watch from our small theater seats. Yet our ultimate realization, as with so much of the work in *Sensorium,* is that our experience has been utterly mediated. Those cellphones weren't ours or anyone else's in the "real" world, nor were the whispers those of an indiscreet neighbor – no, they were the uncanny emanations of Cardiff's minutely engineered soundtrack, made real in Miller's installation. Cardiff/Miller's work has hallucinatory potential – and it is always dependent on the electronic mediation of amplifiers, speakers, recording technologies, and ever more precise technologies of directing soundwaves to the aural apparatus of the human body. Cardiff has, on her own, produced many "walks" in which visitors don headphones to hear her guiding their steps through the city – a *detournement* that is much more psychological than political. As curator Marjory Jacobson writes in *Sensorium*:

> At first we are soothed by "Janet's" breathy, almost hypnotic commands: "Try to walk with the sound of my footsteps, so that we can stay together." "Turn Left." "Turn Right." "Stop here." – but soon we begin to feel the anxieity of displacement that we may lose our way, relinquish our own memories, abandon our own desires, distrust our own senses. Sounds and dialogue ...may become unbearably intense and multi-sensorial.[lxx]

For MIT, Cardiff and Miller are presenting *Opera for a Small Room* (2005) in its first US installation. Creating a fictional persona for the owner of an impressive collection of opera records they bought at a thrift shop in remote Salmon Arm, BC, the artists try to imagine the life of a recluse whose sonic portrait includes voices of hypnotists, the mesmerizing arias of female opera singers, pop cultural cowboy songs, rock-n-roll ballads, and the stage effects of trains and thunderclaps. The sensorial memory the visitor is left with is less an unsettling personal soundtrack than a manically self-referential theatrical romp – we are asked to enjoy the artists' provision of an entirely artificial sensorium, and suspend (however briefly) our anxiety at its simulacral effects.

Janet Cardiff and George Bures Miller, *Opera for a Small Room* (exterior and interior), 2005. Mixed media installation (8 x 9 x 14 ft.) with synchronized lighting and sound ("Roadkill Crow Song," 20 minutes: composition/voice George Bures Miller; guitar, drums, mixing Titus Maderlechner; bass guitar, organ, orchestration Tilman Ritter). Fabrication assistance by Kyle Miller and Carlo Crovato.
Courtesy the artists, Galerie Barbara Weiss, Berlin, and Luhring Augustine Gallery, New York. © Kunsthaus Bregenz, Austria. Photo by Markus Tretter

Angst Management

Anxiety is a tool for Matthieu Briand and François Roche, who probe the exotic in their search for the edges of embodied experience. Is there anything to be made of the fact that Briand and Roche both come from Paris, where Surrealism survives as one of the most powerful tools for approaching technocratic rule? Briand presented in Lyon a full-scale ritual progression, in which visitors could soak in body-temperature water, experience foreign atmospheres, and trade "visions." Roche has built batteries powered by elephants, tent-houses in the middle East, and "snake houses" in the heart of Paris. Roche works collaboratively (as most architects do) in the firm R&Sie...N (the name itself playing on the French word *heresie...*), and makes his buildings utilize warped space, dustwalls, coralline structures and/or hypnogogic states.[lxxi] Yet they are not, for all that, "anti-technological." Roche and his partners utilize cutting edge technologies, albeit sometimes in the service of cutting off from the techno-matrix – as in their prototype *Hybrid Muscle,* designed for Rirkrit Tiravanija's compound in Thailand called "The Land." Meant to leave local water and electricity supplies untouched, *Hybrid Muscle* uses the labor of a water buffalo or elephant to power ten light bulbs, a laptop, and inhabitants' cellphones.▫ Perhaps most salient about their work, however, is its propensity for forcing clients to "face their fears and threats by incorporating them into the architecture," in the words of Jane Farver. As she recounts, "*Mosquito Bottleneck* (2003) is a private house in Trinidad built in the shape of a Klein Bottle.▫ One section is for humans and the other for the area's many mosquitoes, which are known to carry the West Nile Virus. Each species can see and hear the other without coming into direct contact." The polemic that attaches itself to such work comes from Andreas Ruby:

> What is needed, therefore, is a new kind of angst-management that frames the dangers instead of blocking them out, not to senselessly offer us up as victims, but in order to accept their presence and get used to them. If it committed itself to this form of angst-management, architecture would transform from a highly equipped safety bunker to a therapeutic environment that helps to reduce paranoia.▫

Is "angst management" what we want from this architecture, at least in the less dependent form of art? Roche's project for *Sensorium* will require considerable entrepreneurial skill on the part of the List Gallery, which must find tubing and water filtration systems to realize an "MITea house" in which part of the water purified for visitors' tea will come from the sewage system processing their own bodies' fluid ejecta. Less "angst management" than angst *producing*, MITea house will surface the normally hidden treatment of water for use and reuse, allowing us to contemplate those fragile, extensive, and crucial technocratic systems as we sip our tasty tea.

Not everyday angst but "controlled schizophrenia" is what Matthieu Briand seeks to induce in viewers using his viewpoint-switching headset piece. Framed (as is Jankowski's project) by a shared cinematic imaginary borrowed from science fiction, visitors to Briand's project will encounter a portal, an image of an eerily "live" planet earth, and a headset that plunges them into the "cave" paradigm of virtual reality. What the headsets actually offer, however, are live images from another headset – revealing views from other parts of the gallery, or from other sites on the planet.

Ocular Overturns

Vision in general and "ocularity" in particular were the most heavily theorized of our sensory systems, and few need a rehearsal of those theories from Foucault and Deleuze, Martin Jay, Jonathan Crary, et al. What remains important for the artists in *Sensorium* is the way daily vision still constitutes the "ground" for our sensory selves, the fundament of a sensorium otherwise rife with bewildering, rapid change. But that ground is often re-ground, pulverized, shifted, and displaced. So if everyday vision is dazzled but hardly changed by the cascading windows on our computer screens, or the tiny cellphone camera videos that we can zap to each other from remote sites, artists want to make such schizophrenia more obvious.

Bruce Nauman's video installation shows us the *Night Studio* in which his cat, the mice in his bookshelf, and the errant moths are glowingly alive in the spectral dark of his infrared camera. It sees precisely what he does not, and when he does not – his absence triggers the robotic camera, producing an "uncanny" narrative that unseats the ocular's mastery of the soul. Briand's piece is even more unsettling than this country night, for it is not animal senses we get to peek at but the careening un-steadicam of someone's visit to an art gallery. What both artists are invested in, I submit, is the time-honored dream of the avant-garde – to use new technologies to shock us from our complacency and, as John Cage said, "wake up to the life we're living."

Inconclusion

The trust viewers bring to art allows a momentary suspension of some repressive systems, a willingness to be surprised and "reprogrammed" – by Cardiff's sibilant whispers, Ikeda's acoustic-video blast, Briand's schizo vision, or Nauman's animal nightworld. The question, as always, is what happens afterwards, when the dis-oriented visitor reenters the world outside the gallery.

Clearly, the artists of *Sensorium* cannot leave their visitors in a state of ego-pulverization. For Cardiff and Miller there is often a salvaging narrative arc, for Briand, a hope that each visitor might learn to collaborate with another's vision and – as the resilient brain is perfectly capable of doing – learn to navigate through completely scrambled optical coordinates. Tolaas plies the modality of smell to conceptualize our emotional and psychological investments in a mediated olfactory world, surely the smells of the laboring (male) body will be newly aestheticized by her scratch-n-sniff lining in the gallery white cube. Nauman and Sala pace their videos to produce a meditative, emptied, possibly even restorative calm; Jankowski and Haghigian sympathetically explore the subjectivities of scientists who produce the edge of technological change. Ikeda and Roche may be most interested in shattering the dailiness of our sensory worlds, but as art their work also intends to give us "food" for thought.

At this early point in the history of the present, if we can draw a meaningful contrast between the modernist sensorium and the current hyper-mediated one navigated by these contemporary artists, it might come out like this: hegemonic mid-century modernism felt compelled to reintegrate the subject for interpellation in normative capitalism; it is less clear whether the artists of *Sensorium* are willing or able to do that. They salvage the paradigm of the avant-garde, but only so they may fragment the subject and recombine it in unexpected ways, in order that it might view/smell/hear/feel/taste the world differently. Their aesthetic (reflected in this curatorial grouping rather than their self-identified unity) tends to exacerbate the dissociative potential of contemporary technology, with the concomitant utopian ideal that we can rebuild our own subjectivities. Splitting is no longer instrumentalized (buy this mouthwash, hear this note, look at this color field painting), but proliferates as an aesthetic in its own right. Whose glance am I seeing in Briand's work? Is there anywhere I can go to reorient myself after stumbling through Roche's cockeyed parking garage? More and more often, the desired aesthetic rests with disorientation itself. Leaving us open, unbounded, "split" is not meant to produce us as psychotic, but to leave us available for re-organ-ization in terms we might be able to negotiate for ourselves.

Sensorium's artists offer a delirious extension of the sensory segmentation that modernism bequeathed us – but one that achieves an almost infinite molecularization of the subject. One thing is sure – we cannot rest with the hyper-individuation on which modernity depended. But neither are we massing and clumping in a single marketable group or a fascist public. Tethering ourselves to technology (as Sherry Turkle argues in the book's Abecedarius), gives us the possibility of creatively multiple selves. Artifice (in poet Mark Doty's contribution) is our new sublimity. Compounding (in Donna Haraway's revision of the cyborg), is the only way to free zoons to understand their ethically intertwined existence on a shared planet. The drift suggests a *creatively* dissociative self, with technology giving us the capacity to initiate, simulate, or cancel our multiplied subjectivities – or at least imagine the possibilities of such play.

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xliii Foucault, "le corps utopique," 1966 radio broadcast translated and published in English for the first time as "Utopian Body" in *Sensorium: Embodied Experience, Technology, and Contemporary Art*, List Visual Arts Gallery and MIT Press, 2006.

xliv This essay revisits and revises material published in the last chapter of *Eyesight Alone: Clement Greenberg's Modernism and the Bureaucratization of the Senses* (Chicago: University of Chicago Press, 2005), where much more detail is provided.

xlv But see the recent painting shows by Elisabeth Sussman et al., *Remote Viewing* (New York: Whitney Museum of American Art, 2005) and Douglas Fogle, *Painting at the Edge of the World* (Minneapolis: Walker Art Center, 2001).

xlvi The International Flavors and Fragrances corporation, discussed further below, might be seen as one commercial antecedent to Sissel Tolaas's aesthetic operations (such as her spray that delivers the olfactory sensation of eating a hamburger).

xlvii Key scholars informing my own thinking are Jacques Attali, Steven Connor, Alain Corbin, Constance Classen, Jonathan Crary, and Sara Danius.

xlviii The details of this argument can be found in my *Eyesight Alone,* op.cit.

xlix Sara Danius, *The Senses of Modernism: Technology, Perception, and Aesthetics* (Ithaca: Cornell University Press, 2001).

l "...we must [here] take *sensus communis* to mean the idea of a sense shared [by all of us], i.e., a power to judge that in reflecting takes account (a priori), in our thought, of everyone else's way of presenting [something], in order as it were to compare our own judgment with human reason in general... Now we do this as follows: we compare our judgment not so much with the actual as rather with the merely possible judgments of others, and [thus] put ourselves in the position of everyone else..." Immanuel Kant, *Critique of Judgment*, trans. Werner Pluhar, (Indianapolis 1987): 160; Ak. 293-294. See also http://www.sensus-communis.com/, accessed August 2004.

li Ludwig Wittgenstein, *Remarks on Colour*, ed. G. E. M. Anscombe, trans. L. L. McAlister and M. Schättle (Berkeley: University of California Press, 1977).

lii Ian Hacking, *Representing and Intervening: Introductory topics in the philosophy of natural science* (Cambridge: Cambridge University Press, 1983).

liii See the discussion of Locke in Edmond Roudnitska, *L'Esthetique en question* (Paris: Editions ..., 1977), cited in Alain Corbin, *The Foul and the Fragrant: Odor and the French Social Imagination* (Cambridge: Harvard University Press, 1986): 235 n. 6, and discussion of Locke in Corbin, 6. For general references on smell, see Constance Classen, *The Color of Angels: Cosmology, Gender and the Aesthetic Imagination* (New York: Routledge, 1998), and Classen et al., *Aroma: A Cultural History of Smell* (New York: Routledge, 1994.)

liv See Sally Banes, "Olfactory Performances," *The Drama Review* 45:1 (Spring 2003): 69; Jim Drobnick, "Reveries, Assaults, and Evaporating Presences: Olfactory Dimensions in Contemporary Art," *Parachute* 89 (1998): 14; and Alfred Gell, cited by Banes from Drobnick, p. 69. Banes attempts to theorize an "olfactory effect" that can be isolated and studied apart from the generalized flow of sensory images in theatrical experience. She taxonomizes these effects (in my summary here) as illustrative, mood-enhancing, contrastive, memorative, ritual, and/or defamiliarizing; pages 69-71.

lv From "Scent Systems," a London bespoke parfumier that carries Tolaas's perfumes, at http://www.scent-systems.com/sissel-tolaas.htm.

lvi Few Americans will have forgotten the sensation caused by the study that employed 1.5 million readers of *National Geographic* (the September 1986 issue), who encountered six scratch-and-sniff samples and were invited to fill out a detailed questionnaire testing what men and women can smell. "Respondents characterized the odors, namely, androstenone (sweat), isomyl acetate (banana), galaxolide (musk), eugenol (cloves), mercaptans (natural gas warning agent), and a synthetic rose scent, according to a set of category descriptors. The huge sample size and broad range of the survey provides data which can be used to investigate further possible correlations with specific demographics of the sample population, including gender." Shiva Vafai, "Do men and women differ in their capacity to detect odors?" http://zebra.biol.sc.edu/smell/ann/myth1.html.
See also Gilbert, A.N. and Wysocki, C.J., "The Smell Survey Results," National Geographic, 122 (1987): 514-525. Of the many myths regarding smell and human sex pheramones, the one that seems robust under scientific analysis is the presumed olfactory basis for the synchronization observed among proximate females in their menstruation cycles over time.

lvii "Odors are molecules with carbon 'backbones' to which other molecules, like oxygen and hydrogen, adhere. When we sniff, we inhale odor molecules, which then bind to receptors in the nose. There are at least 3,000 molecules that we can distinguish and we have about 1,000 odor receptors in our noses. Different types of odor molecules activate different combinations of receptors, alerting us to what we are smelling. We can distinguish between odors that differ by a single molecule, or between left-handed and right-handed versions -- called 'stereoisomers' -- of the same molecule. For instance, a 'left-handed' version of the chemical carvone smells like spearmint and a 'right-handed' version smells like caraway." Website paraphrasing Dr. Stuart Firestein, in "The Infinite Mind: Sense of Smell," broadcast April 20, 2003; see <http://www.lcmedia.com/mind268.htm> or <http://www.theinfinitemind.com>.
Another website provides this information on psychologist Rachel Herz's research into smell *as* emotion: "Researchers knew that the olfactory system was unique among the senses in that it has direct contact with the limbic system: it connects into the amygdala, our emotional center, and into the hippocampus, a memory center. 'I really believe that olfaction and emotion are the same thing on an evolutionary basis,' Herz says. 'I think emotions are just a kind of abstracted version of what olfaction tells an organism on a primitive level. And that is why I think odor has such a potent emotional cascade.'" Marguerite Holloway, profile on Rachel S. Herz, *Scientific American*, available at http://www.sciam.com/1999/1199issue/1199profile.html

lviii Corbin, 6.

lix Oliver Sacks's many books are filled with narratives of subjects whose frontal damages or autism convey extraordinary olfactory acuity (one scientist discovered an "olfactory savant" living in a British asylum). Sacks also speculates that "the percepts of smells, generated in a very primitive ['ancient' would be less stigmatizing!] part of the brain – the 'smell brain, or rhinencephalon – may not go through the complex, multistage memory systems of the medial temporal lobe. Olfactory memories, neurally, are almost indelible; thus they may be remembered despite an amnesia." Sacks, 1995: 72-73 n. 18. See also Sacks's compelling story of the man who discovered "The Dog Beneath the Skin," a hyperosmia probably due to amphetamine stimulation of the uncus, part of the rhinencephalon, in Sacks, 1990: 156-60.

lx As Simon Schaffer compellingly summarizes, Victorian England experienced a dramatic conversion to the science and commerce of smell, via the entirely new commodity of Soap. See his "The Science Whose Business is Bursting: Soap Bubbles as Commodities in Classical Physics," in Daston, *Things that Talk*, op.cit.

lxi See her scent *Hsidews* (Swedish spelled backwards): "The content of this perfume includes Ikea, Volvo, H&M, wood, water and other 'specifically Swedish' scents." Andréhn-Schiptjenko Gallery, at Artfacts:
http://www.artfacts.net/index.php/pageType/exhibitionInfo/exhibition/8347/lang/1/name/Sissel-Tolaas

lxii "Beauty without irony,"
http://beautywithoutirony.typepad.com/photos/beauty_without_irony_supe/p1010048_1.html

lxiii Bill Arning essay on Christian Jankowski in *Sensorium*.

lxiv Fox-Keller's essay "The Biological Gaze" examines the gendered difference in scientific desires to examine without intervening. Arning quotes: "Looking is inevitable enmeshed in actual touching, in taking the object in hand, in trespassing on and transforming the very thing we look at." Evelyn Fox-Keller, The Biological Gaze in Future Natural: Nature, Science, Culture, ed. George Robertson, Melinda Mash, Lisa Tickener, Jon Bird, Barry Curtis and Tim Putnam, (London and New York: Routledge, 1996) 108
lxv Arning, Haghigian essay, *Sensorium*.
lxvi "Ryoji, news" at www.brainwashed.com accessed December 2005.
lxvii Paraphrased by Marjory Jacobson in her essay on Sala for *Sensorium*.
lxviii Jacobson, Sala essay in *Sensorium*.
lxix Sala, quoted by Jacobson in *Sensorium*.
lxx Jacobson, essay on Cardiff and Miller, *Sensorium*.
lxxi Other principals are Stéphanie Lavaux and Jean Navarro.
lxxii Philippe Parreno's contribution was *The Boy From Mars*, a 35mm film about the project.
lxxiii A Klein Bottle (named after German Mathematician Felix Klein, d.1925) is a one-sided surface that is formed by passing the narrow end of a tapered tube through the side of the tube and flaring this end out to join the other end. See *Merriam-Webster's Collegiate Dictionary,* (Eleventh Edition). Springfield, Massachusetts: Merriam-Webster, Incorporated), 689.
lxxiv See Andreas Ruby, "Mosquito Bottleneck," in *R&Sie… architects: Spoiled Climate*, 142.

(Re)sounding Fantasy and Seeking Pleasure: Brad Neely's Hideously Fabulous Wizard People, Dear Reader

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> Imagine an incessant listening by which one might be engaged or called. Such a listening might provide great pleasure and, in so doing, produce consternation and anxious questioning about the nature of such pleasure. Those questions might concern the psycho-political effects or politico-economic grounds of the submission of oneself to such pleasure. But, in the end, both the fact and the depth of the questioning that is produced by checking over and over again, say, Bach's *Mass in B Minor* seems always to amount to something that's all good.
>
> — Fred Moten, *Interpolation and Interpellation*

In cartoonist Brad Neely's audio piece, *Wizard People, Dear Reader* our beloved everyman Harry Potter becomes the ferocious little potty-mouthed beast we all know in our heart of hearts that he really is. *Wizard People, Dear Reader*, is a CD that you play in synch with the (muted) 1999 movie *Harry Potter and the Sorcerer's Stone*. Neely's grainy deadpan curl takes over the soundtrack and dialogue of the Warner Brothers film turning it into the story of another, decidedly cynical and mature Harry Potter. Listening to Neely's comic portrayal of Potter is an enjoyable experience, and yet his re-creation of the children's story pushes the audience to hear the noises that Neely teases out for us in his reimagining of the film. The grain of his voice and the now audible textures found in the Neely's story, textures that both entice and "produce anxious consternation," inspire, at least for this listener, a slew of questions about Harry's wild ways, and about the nature of the unheard and failed voice.[lxxv]

Tracing Brad Neely's usage of *Harry Potter and the Sorcerer's Stone,* my work speaks to the content of Neely's artwork in order to illustrate how his narrative rupture creates unforeseen identifications and desires both on and off the screen. Neely's impassioned ambiguity towards, and ferocious love of, the *Harry Potter* film allows for a slippage effectively inviting the film to remain open to a range of fantastical dimensions. I point to this tension on the part of the author, between his fandom adoration for the film and his need to ridiculously critique it in his own reproduction, as a site productive anxiety and potentiality, a space of romantically real escapes. [lxxvi]

This ultimately becomes a question of complicity and political/ethical responsibility regarding listening and humor.[lxxvii] What I am gesturing to here is what Fred Moten in his essay *Interpolation and Interpellation* calls "incessant listening" which traces what we might understand as the excess of sound.[lxxviii] This sound surplus, or what he calls a "phonic materiality" is the persistent excess that cannot be fully approximated.[lxxix] This theory is most articulate and helpful when he outlines that an "incessant listening [is one by which we] might be engaged or called. Such a listening might provide great pleasure and, in so doing, produce consternation and anxious questioning about the nature of such pleasure."[lxxx] This question of listening and personal or social responsibility congeals around this problematic of auditory pleasure and violence/masochism and in particular as to where one situates him/herself when partaking in something, sonically and/or visually, that they might enjoy but simultaneously feel uncomfortable by because of the racial, sexual or gender implications.[lxxxi] This

concern, however, begins with a more humble discussion surrounding narrative fissures and gaps. In this paper I am trying to articulate a mode of minoritarian pleasure that occurs through a series of misidentifications and slippages in the reading and rereading of Harry Potter books and films.[lxxxii] This is enabled by both the gap in sound and the gap in the movements of the text itself.

Finding *Wizard People* through a friend in Alabama who in turn got in from her sister in North Carolina, I am not entirely sure how it landed on my San Francisco laptop. This "untraceable exchange" of images, and the trace which is left behind, is what engenders rogue meanings as routes of escape in the visual arena.[lxxxiii] Such secret consumption and distribution encourages personal relationships between viewers and artworks that are unmediated by centralized referents or meanings. Having to locate the text through a series of contacts, and failed attempts places a different kind of affective value on the contacts created in *Wizard People's* acquisition, and in one's relationship to the artwork itself.

Neely's imaginative work to re-gender Professor Snape, recreate Harry Potter's family tree, and theatricalize cultural assumptions about gender, do the important work, for me, ofencouraging new pathways and channels of interpretation and audience involvement in the production and creation of the *Harry Potter* stories. This sort of *re-gendering* I find palpable in Neely's chaotic and adolescently humored homophobic genderqueer moves. Making space for the gender complicated subject, this act of re-gendering challenges the concept that there is only one way to see or read gender, and shows us that, as Judith Butler might say, the very fact that gender needs to constantly be validated and performed only illustrates that gender is not a given or a base from which we move on or out of.[lxxxiv] Neely's gender suggestions illustrate this through a re-conceptualizing of an established gender, and pointing to the arbitrary and performative nature of a delicate binary system.

Neely allows us to see gender as a willful project for both the subject and spectator, this is most clear in Neely's character alterations of Professor Severus Snape. Changing Harry's detested Potions Professor, Snape, into a female Professor *Snake*, Neely effectively produces a new gender for actor Alan Rickman's character. In the *Potter* books Snape's allegiance to the anti-evil camp is perpetually called into question. Perhaps it is no surprise that the filmic Snape is a slightly effeminate long-haired Cruella in billowing black robes. Harry's first encounter with Snape is in the main hall during an all school dinner. Keenly aware of Snape's presence, Harry turns to his House prefect to inquire after him. Neely narrates Potter's first vision of Snape:

> A wicked woman casts a look at Harry that makes his scar hurt. Ouch! This is the weirdest woman Harry's ever seen, a dark, foreboding weirdo that Harry feels certain will be the kind of teacher who paddles for fun. […] He talks closely with his RA. 'Who the fuck is that woman? She's got to be a half troll.' The RA replies, 'No, that's Professor Snake, she sucks for the most part, you know, acting mysterious and theatrical.' 'God, I hate that shit,' replies Harry. 'I'm here to learn, not to watch a performance.'

Not only is Snake hideously female, but she is doubly denounced because of her mysterious air of performance. Her theater of feminine excess mixed with Harry's foreboding hatred, renders the character hyperbolic. Yet this movement to re-gender Snape also taps into *Wizard People*'s impulse to generatively reimagine commercial media. Indeed, to call Rickman's Snape a theatrical lady opens up the door to a world of gender chaos. Alan Rickman is a well-known male actor, and yet Neely declares him a lady. Neely's feminization of Snape is meant as a quip at the Goth school-marm costuming of the ambiguously evil character and as a continuation of juvenile homophobic/ homoerotic middle school aged boy humor. What is distinct about Neely's humor is that it invokes a Dungeons-and-Dragons-cum-hipster humor of the science-fiction fantasy all-male gaming world. This is the disaffected, yet aesthetically witty mocking of difference in a typically veiled liberal manner. Yet Neely's piece, while no doubt conveying the distaste of the hurtful slur, can perhaps be listened to again for its excess; to what is not heard in the aural visual synch. It is possible that this sort of humor illuminates more, and can *do* more than we let it do in our insistencies on piety, caution, and an Enlightenment desire for "civil" yet dishonest manners. Although I would guess that *Wizard People* is not meant to create a space for complicated gender identities to emerge into the Potter kingdom, I contend that his work does just that.

This is where my earlier discussion on masochistic and perverse viewing pleasure emerges.[lxxxv] Were we to watch this strange character denunciation and gendered confusion as camp, the repeat viewings of the visual Snape and the destruction and reorganization of the physical body behind the flowing robe allows for a perverse identification by a differently gendered subject.[lxxxvi] This is to say that the sometimes-violent destruction of gendered coherence can illuminate the desired yet simultaneously searing failures and breakdowns of the gendered subject. The gaps in the stories and viewings allows the text to become

available to non-normative, specifically genderqueer and transgendered, viewing strategies and subjects. This brand of fandom does not produce a product, but instead exhibits an ephemeral viewing pleasure that is itself "productive consumption."[lxxxvii] I do not mean to privilege spectatorship over production of artistic and textual fandom works, but to illustrate the lines of escape and recreation open to an ever-shifting spectatorial stance that are not necessarily open to a fan art exchange which has systems in place to evaluate, distribute, and privilege various works. I consequently place *Wizard People, Dear Reader* in line with a queer process of becoming that is unfixed and always moving towards an idealized, and decidedly unattainable, vision of fashion-forward and body-appropriate-for-the-moment self.[lxxxviii] Utopian performativity as it manifests here is necessarily unfinished in that it reminds us that something is missing in the present, and in that present absence it becomes a longing for a future moment capable of something otherwise.[lxxxix] Although much Science Fiction/Fantasy work is invested in a certain futurity, this sort of longing is not necessarily "prescriptive of futurity" and is often marked by its distopian, apocalyptic, and narratively violent ruptures.[xc]

Where then can we locate *Wizard People* in terms of such pleasures around the ambiguously homophobic and homoerotic narrative? Neely's violent joke is funny. But moving beyond the fandom analysis that generally ends at resignification what might we say this piece is doing in the world? This question is tinged with Fred Moten's "incessant listening," his listening that is attentive to phonic ruptures, excess, and the *"interplay of pleasure and questioning."*[xci] As he suggests, there is more *in* the music than the lyrics, more in the sound than can be fully signified in language. It is that excess space of noise that cannot be fully articulated which holds both the detritus and possibility. In *Interpolation and Interpellation* Fred Moten explains that he is taken up by the gastronomical flavor and taste of the song Ghetto Superstar, and yet he questions the nature of such pleasure. Not unlike Moten, I take anxious and yet ultimately revelatory, pleasure in Neely's juvenile humor and his rereading of Harry Potter. But what then of the "submission of oneself to such pleasures,"[xcii] to the borderline offensive humor displayed in *Wizard People*? By such a pleasurable submission does one become complicit in relegating and ridiculing a non-normative gender identity? My impulse is to cherish all gender chaos whether brought about through heckling pain or through celebratory support because I am simply exhausted by not allowing such pleasure due to an antiquated notion of Humanistic and enlightenment "ethics."

This question of ethics and pleasure becomes most pronounced for me during a scene in which Harry is completing a serious of Wizardly tasks in order to find the Sorcerer's Stone and save the world from the evil Lord Voldemort. Neely narrates as Harry enters the Hogwarts School dungeon:

> Harry is totally disinterested in the next challenge. […] He sees himself dressed as a conquistador, crashing in the phases of werewolves and bigfoots with an enormous telescope. He then goes on to envision himself arriving on the coast of an undiscovered America. He mingles peacefully with the natives, and trades secrets of magic with their shamans. He makes friends, blending bloodlines of greatness. He teaches them wizard spells, and they in turn teach him how to fly across the continent at ridiculous speeds. He learns to slay deer with laser beams from his eyes, and how to make all things around the house out of buffalo parts. […] He'd not worry about clothes, because he'd wear one of those strappy skirts that were popular back then in America.

Neely's parodic portrait of a young and magical America versus the "storm ridden bowels of England" is ripe with colonial tropes. The mythical and magical Native American stereotype is taken-on *and* displaced by the tech heavy talk of learning how to fly across the country at break neck speed and shooting laser beams out of one's eyeballs. What is the difference between this moment and the previous one with Snape? Rejoicing in Neely's mildly offensive chaotic humor seems more complicated when it comes to the question of race. Yet I am curious as to what happens in the ambiguities of the gender move Neely makes versus this science fiction mythic picture he paints around race and American indigeneity. Neely's invocation of the science-fiction "natives" in his aural picture, laid over the film's visual of Harry Potter completing his task to catch a flying key, calls on both the ethnographic image of the Native American, and releases that image from it relationship to the "real." Gerald Vizenor describes the visual "pose of indianness" as that which has been documented and choreographed by dominance and surveillance; the pose created to stand in for and yet occlude any sign of "native presence." Vizenor tells us that "the generative interimages of 'discovered' natives are cutout simulations, without substantive connection or reference."[xciii] It is in such a move that we see the iteration of the "pose of indianness" leaving us not an authentic 'native presence' which it implicitly promises, but instead a repetition of poses and simulations that only lead back in on themselves, and to the camera's desire to produce the Native American in the shadow of surveillance and White homesteading domination. Neely effectively unfetters the Native American from a mythical past, ironically, through re-mythologizing the Native American in a past/present of fantasy. Dislocating the attempt at authentic portrayal, Vizenor opens up

Neely's renarration of Harry Potter's magical desires to "live with a woman who had strong, magical jet-black hair [who would] be enchanted and almost a giant," as a re-mythologizing movement from the frozen image. It is as Vizenor suggests that the "pleasures of tricky virtual images rather than [those] of cultural piety, pretensions, or substantive evidence" that will generate motion and presence out of the interimages of representation. It seems that if we follow Vizenor's cue, it is possible to see the way in which Neely's humor, irrespective of intention, can allow for a pleasurable viewing; a viewing that does not catch the minoritarian subject painfully in representation, but allows for a space of movement and humor.

In Judith Butler's *Giving An Account of Oneself* she traces the problematic of ethics and the need for a social responsibility that allows people to take care of one another without the universalizing violence that is inevitably present in the assertion of ethics. Butler explains the relationality of ethics around the question of susceptibility in regard to accusation. She tells us that the relation to the Other is always present, and always demands of us, not through an innate sense of responsibility or justice, but through our perpetual vulnerability to the Other's ability to question us and impose their ethical demands. We are forever locked into a relationship that does not include a self-defined "I," but instead the susceptible "me" that is forced to respond to questioning instead of actively engaging in a universal self-propelling social or moral code. She tells us that to focus on the "anguish" and "chance" of the ethical address encourages movement away from a possessive "I." This vacation from the "self-sufficient 'I'" in turn complicates the dual, aggressive, and violent conception of ethics through a less strictly choreographed encounter with the Other. Yet how do we translate this question of ethics between two people into a relationship with the always aural screenal, and the visible sounds of the voices heard in *Wizard People*? What is this responsibility of Neely to the audience and of the audience to everyone else in a project such as this? Furthermore, what is it that such an attention to responsibility, even if it may be primarily motivated by our own susceptibility, can *do* in terms of listening and pleasure? What would this "chance to be addressed" and moved, to speak from and be spoken to elsewhere look like? How does the audience concerned with responsibility live up to our radical ideals while cherishing the ambiguity, parodic humor, the fragments and remnants left in the excess of sound and pleasure?

The characters in the Harry Potter stories are ever shifting in a perpetual process of becoming as they grow older, and are reborn in various artistic manifestations. As Neely illustrates in his illegal resurrections of these wizardly creatures, fandom and artistic interpretations always aid in bringing popular characters into and out of focus for their audiences. Remaking the commercial film from his seat on the couch Neely is working towards the yet-to-come life of Harry Potter, as well as a fantastical future in which people can occupy multiple willful, and seemingly contradictory gender positions.[xciv] Neely's generative and humorous viewing has wielded the brilliant work that is *Wizard People, Dear Reader*, suggesting to the rest of us in the audience that spectatorship is a process of contradiction and simultaneity, pleasure and violence. As witnesses staring into a screen, listening to an audio apart, and thinking through our own position in the flows of desire, we can begin to imagine a different kind of world, a world of detritus and excess, a world beside the next where there is more than simply meets the eye.

[lxxv] Majkowski, Tina. "Audible Textures: Blackfire's Use of Polyphony and the Re-sounding of Nativeness," conference paper given at the 2005 Annual Conference Mid-Atlantic Popular/American Culture Association New Brunswick, NJ November 4-6, 2005. The concept of audible textures was developed through multiple conversations with T. Majkowski on the topic of sound and the break.

[lxxvi] I understand Deleuze and Guattari's concept of "lines of escape" and "lines of flight" to be akin to a rhizomatic exit away from signification and off the map. It is a pure intensity of movement, a standing still, yet vibrating to the point of rupture and becoming. They write, "The problem is not that of being free but of finding a way out, or even a way in, another side, a hallway, an adjacency." Deleuze, Gilles and Guattari, *Felix. Kafka: Toward a Minor Literature*. (Minneapolis, Minnesota: University of Minnesota Pres, 1986), 7-8

[lxxvii] Although I realize that the concept of ethics is loaded because of the necessary violence that it often inflicts on those outside of the ethical majority, it is none-the-less a question at the heart of the debate on political, social, and personal responsibility and the cultivation of anti-racist, ant-sexist, etc. spaces and relationships.

[lxxviii] Moten, Fred. "Interpolation and Interpellation." *Experimental Sound and Radio. (*Ed. Allen Weiss). Cambridge, Massachusetts and London: MIT Press, 2001:pg. 116.

[lxxix] Moten, Fred. *In the Break: The Aesthetics of the Black Radical Imagination*. Minneapolis and London: University of Minnesota Press,2003:pg. 222.

[lxxx] Moten, Fred. "Interpolation and Interpellation." *Experimental Sound and Radio*. (Ed. Allen Weiss). Cambridge, Massachusetts and London: MIT Press, 2001:pg. 116.

[lxxxi] Although I separate the sonic and the visual here in order to illustrate the audio intervention made by Brad Neely, I would like to note that for Fred Moten the aural and the visual are always caught up together in a sonic seeing that does not separate the senses. In other words the picture, the visual, is always an aural event in which the phonic substance exceeds the meanings written into the film, photograph, or words.
[lxxxii] I use "minoritarian pleasure" here to denote the enjoyment had by disenfranchised and underrepresented viewers *and* to elaborate on that to include pleasures felt by any spectator who feels personally, socially, or politically invested in the creation or push for a relationality that is self-reflexive and working towards a mutually beneficial social relationship.
[lxxxiii] Hilderbrand, Lucas. "Grainy Days and Mondays: Superstar and Bootleg Aesthetics,.*Camera Obscura* 57,19.3. Durham, NC: Duke University Press, 2004: pg. 81.
[lxxxiv] Butler, Judith. *Gender Trouble: Feminism and the Subversion of Identity*. (New York, London: Routledge, 1999) p.148
[lxxxv] Gaylyn Studlar in a riff off Deleuze's work on masochism introduces a theory of masochistic viewing in film theory regarding the relationship between the cinematic apparatus and structures of perversion. See: Studlar, Gaylyn. *In the Realm of Pleasure* (New York: Columbia University Press, 1993)
[lxxxvi] O'Brien, Michelle. "Contradictions of Capitalism, Perversions of Spectatorship Watching Robocop." <www.deadletters.biz.> pg. 12.
[lxxxvii] Joseph, Miranda. *Against the Romance of Community*. Minneapolis: University of Minnesota Press, 2002: pg. 34. She writes, "At the same time, it will be important to recognize consumption, not merely as consumerism, but rather as a site of performative production, that is, as a highly constrained site of collective as well as individual subject constitution."
[lxxxviii] "To become animal is to participate in movement, to stake out the path of escape in all its positivity, to cross a threshold, to reach a continuum of intensities that are valuable only in themselves, to find a world of pure intensities where all forms come undone, as do all the significations, signifiers, and signifieds, to the benefit of an unformed matter of deterritorialized flux ." See Deleuze, Gilles & Guattari, Felix. *A Thousand Plateaus: Capitalism and Schizophrenia*. Minneapolis & London: University of Minnesota Press, 1987., pg. 18
[lxxxix] Muñoz, José E, "Stages: Queers, Punks and the Utopian Performative," *SAGE Handbook of Performance Studies* Dallas, TX: Sage Publications, 2005, pg. 6.
[xc] Ibid. pg. 6.
Although it is clearly an arguable and contentious point to allocate works to various paraliterary genres, for my purposes I place Harry Potter in both and straddling the genres of Science Fiction and Fantasy.
[xci] Moten, Fred. "Interpolation and Interpellation" in *Experimental Sound and Radio* edited by Allen Weiss (MIT Press: Cambridge, Massachusetts and London, 2001), 116.
[xcii] Ibid.
[xciii] Vizenor, Gerald. *Fugitive Poses: Native American Indian Scenes of Absence and Presence.* Lincoln, NE: University of Nebraska Press, 2000,. 146
[xciv] Bloch, Ernst. *The Utopian Function of Art and Literature.* Cambridge, MA: MIT Press, 1988.

Instrumental Conceptions of Images and the Globalized "Everyday"

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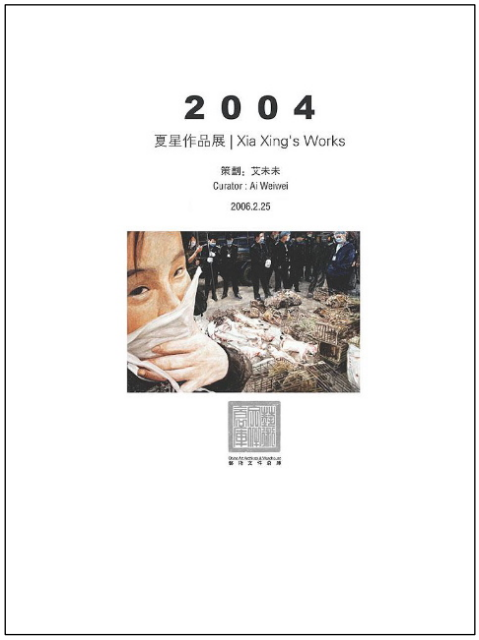
The argument that the "openness" of new information technologies and media practices enables a change in global relations that are historically defined by national politics was rendered somewhat meaningless by the recent compliance of American Internet companies (notoriously Google, although Yahoo, Microsoft and Cisco Systems were equally implicated, if not more so) with China's policies for censuring material on the web.[xcv] Simply put, the cosmopolitan tourism that originated in nineteenth-century Europe has been renewed, extended in new market conditions that derive from conventional capitalist principles for global connectivity. The trade routes for the exchange of media products stay open as long as profits are to be made, while "information" is regulated to serve the national agendas of Hu Jintao as well as G.W. Bush.



Xia Xing, "2004"

In this way, Heidegger rightly observed in 1955 that "technology itself is a contrivance, or, in Latin, an *instrumentum.*"[xcvi] The philosopher who himself was a proponent of German national politics (to the extent that his legacy was tarnished by his Nazi affiliations) recognized that the "instrumental conception of technology" was the way in which science could be manipulated as

a means. In fact, technology must be mastered, "we will master it," Heidegger suggests, because the "will to mastery becomes all the more urgent the more technology threatens to slip from human control."[xcvii] But in the case of the world wide web, the power of a multitudinous human control presents a "will to mastery" that can thwart singular operations such as state censorship – national agendas can be bypassed, made possible through jpeg images circulating via email and blogger circumventions, whether of banned pictures such as the 1989 Tiananmen Square demonstrations or those of military bodybags from Iraq being unloaded on the tarmacs of U.S. airports.[xcviii] At the same time, the heightened degree of Internet surveillance tends to put violators at risk as exemplified by the arrest of Chinese journalist Shi Tao who leaked information via his Yahoo email account (with Yahoo revealing Shi's identity to the Chinese government) as well as the interception of email conversations by the National Security Agency under Bush's warrantless wiretapping program (ruled unconstitutional in 2006 by Michigan federal judge Anna Diggs Taylor).[xcix]

The question, then, concerns not so much how artist/authors (conventionally representing various cultural specificities) affect technological practice but once again, how the artist/authors adapt to their obligatory role as "producers" under Walter Benjamin's prognosis for disseminating information in the age of mechanical reproduction. The globalized "everyday" of today's technosphere is marked by the constancy of crises and social upheavals in the world, especially under the current guise of Terrorism. The idea of "openness" in new media practices merely suggests how those artists/authors are necessarily obliged to participate in the virtual "reality" of such a world. Artist-practitioners of web-based communications cannot avoid being implicated in the globalized "everyday," one that Okwui Enwezor posits in a period of crisis, necessitating vital and critical assessments, including "reappraisals of conditions of production, reevaluation of the nature of artistic work, and reconfiguration of the position of the artist in relation to economic, social, and political institutions."[c] Moving away from authorial specificity, Enwezor advocates collectivity in artistic production – global collaborations – since they critique the "poverty of the language of contemporary art in the face of large scale commodifications of culture which have merged the identity of the artist with the corporate logo of global capitalism."[ci] A collectivity of practice directed at thwarting national agendas, with regard to censorship for example, can be developed simply by producing/reproducing images according to a mindful cognizance of the instrumentality of technological images and the mere possibility of access via the interstitial jpeg. However, while arbitrary borders and boundaries can be transgressed through information technology, the task of expressing something meaningful in relation to the global "everyday" is the most urgent and difficult challenge in the presentiment of artistic technospheres. What the current mode of censorship reveals is how the power of the image itself, in terms of its interpretative value across global constituencies, will determine the future "wealth" of the language of contemporary art. The subjects of Xia Xing's painting entitled *2004*, for instance, "unmask" the terror of hiding information as contra distinct from the aims of surveillance. Relevant to all constituencies along the information highway, the very notion of interpretative value can be understood as the potential for a collectivity of *meaning*, one that resonates as a knowing awareness of the political/social conditions confronted daily across the globe, inclusive but not reduced to issues of sex, gender, ethnicity, race, and class.

[xcv] See Clive Thompson, "Google's China Problem (and China's Google Problem)," *New York Times Magazine*, April 23 2006.

[xcvi] Martin Heidegger, *The Question Concerning Technology and Other Essays*, trans. William Lovitt (New York: Harper & Row, 1977). 5.

[xcvii] Ibid.

[xcviii] According to a 2005 study conducted by the OpenNet Initiative, the filtering of political content in China's emails remains inconsistent. See report by OpenNet Initiative, "Internet Filtering in China in 2004-2005: A Country Study," (Toronto and Cambridge: OpenNet Initiative, 2005)

[xcix] See Thompson, "Google's China Problem (and China's Google Problem)." 155, and also Dan Eggen and Dafna Linzer, "Judge Rules against Wiretaps, N.S.A. Program Called Unconstitutional," *Washington Post*, Friday, August 18 2006. A01

[c] Okwui Enwezor, "The Artist as Producer in Times of Crisis," *16 Beaver*, no. April 15 (2004).

[ci] Ibid.

The Myth of New Media

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The editors have kindly allowed me to indulge in the anecdotal in order to highlight how and where new media discourse conforms to their theme, "Art in the Age of Technological Seduction." Although I have been intrigued by this topic for quite a while, I was prompted to write because of an incidental and far from malign event. In the course of developing a recent research project, anonymous reviews were requested. One response was very sympathetic and supportive (for which I am grateful). The report, however, went on to stress the importance of a "new media" approach, which meant highlighting virtuality, immersion and a multi-media focus. My point in contrast was that such issues were already the focus of earlier twentieth century art practices—particularly the walk through, installation-type practices prevalent in the 1920s.

My project actually had very little to do with new media, but the implication was clear: when it comes to considering these issues today, the theoretical and technological pre-eminence of new media must be acknowledged and accepted. While I repeat that this was a very generous response to my project, the insistence upon the priority of a new media focus stayed with me because I took a different attitude. Yes, virtuality, immersion and a multi-media approach are very important to how new media characterizes itself today, but it is equally true that such ambitions also possess a "pre-history." This pinpoints one of the glaring shortcomings of new media discourse: despite its best efforts, it tends to gravitate to teleological justifications and the denial of legacies and debts (whether artistic, intellectual, historical or technological).

The teleological inclination fosters the assumption that new media transforms, then surpasses and eventually subsumes all previous technical-media possibilities (including all previous thought as well as all previous ways of doing art). The implication is that new technology instantly renders all prior media redundant along with their associated assumptions and worldviews. At its worst, this tacit teleological orientation assumes that contemporary technological advances only now permit thinking about virtuality, immersion and multi-media. (It is the great virtue of Margaret Wertheim's *The Pearly Gates of Cyberspace*, despite its shortcomings, that it traces virtuality in art back as far as Giotto). In short, this techno-determinist discourse presumes that currently available communications technologies allow us to consider these possibilities today as if for the first time.

"Technological seduction" is, however, most dramatically demonstrated at the conjunction where new media arts discourse intersects with the techno-heroic palpitations surrounding the information-communications technological (ICT) revolution. This becomes a rather heady mix when philosophical justification pillaged from poor old Gilles Deleuze is brought into the equation. This overly excited confluence of ideas translates into endless assertions about techno-liberation. Everything becomes a rhizome—the web, subjectivity, art—all in a proliferating weave of endless connectivity, thoroughly dispersed and wonderfully immersed. Remarkably, this discourse implies that only now—with the aid of computers and digital technology—have human beings attained genuine liberation after millennia of struggle. Today we now enjoy our liberated diffusion: industrial-Fordist modernity wilts away allowing authors to become producers, (media) consumers to become editors, and hierarchical aesthetic and social edifices give way to new rhizomatic patterns of endless, meandering multiplicity. True democracy arrives

as everything formerly passive becomes active and we play out our existence as newly realised rhizomatic citizens—all courtesy of the wonders of new technology.

Does anyone truly believe this zeitgeist-obsessed techno-euphoria (apart from the technophiles of MIT)? I doubt it. Yet it remains a prominent, even dominant form of technological seduction today. The Belgian artist Marcel Broodthaers once dubbed this propensity to dovetail complex phenomena into a simplified package, monomania. Art historian Rosalind Krauss suggests that Broodthaers' practice possesses enduring significance for the treatment of media and technology in art. According to Krauss, Broodthaers' approach seeks out the "redemptive possibilities encoded at the birth of a given technical support"—that is, before they were closed down to suit more instrumental purposes. In addition, his approach is to linger in the wake of "high orders of technology," just at the point where they render "older techniques outmoded," thereby allowing us "to grasp the inner complexity of the mediums those techniques support." (Krauss, *A Voyage on the North Sea": Art in the Age of the Post-Medium Condition*, New York: Thames & Hudson, 2000)

Unfortunately, Krauss mitigates the challenge she gleans from Broodthaers' approach by launching a rearguard action to salvage the sanctity of the medium—albeit with an updated, more adept and complex consideration of what a medium may mean. Nonetheless, it remains an endeavor ultimately committed to border patrols critically policing the perimeters of the medium. This rearguard action to shore up the medium exposes the limitations of the traditional art-historical approach in the contemporary situation. Yet her depiction of Broodthaers' art as one in which old and new media, old and new technologies collide and play out various permutations without any discernible sense of priority reveals what has proven exemplary for subsequent practices. Such an approach underscores the cannibalistic nature of technological innovation, suggesting how the "new" is rendered "obsolete" relatively quickly. It also indicates how the attempt to define a practice technologically as well as to ride the cusp of the forever "new" is prone to redundancy eliciting perpetual anxiety rather than permanent revolution.

A recent example in Brisbane confirms the enduring influence and efficacy of this approach. I am thinking of an event dubbed "Tournament of the Tools" held during the recent "Straight out of Brisbane" (SOOB) festival—"A festival of independent & emerging arts, culture & ideas" (15-20 August 2006). The idea of the "tournament" was to pit teams (of artists and other willing participants) against each other in a battle between high and low tech, "hi-fi" and "low-fi," "analogue versus digital." Each team was to pit "dynamic kinetic machines against each other in a fight for glory." Of course, the audacious ambition outlined in the précis appeared to outstrip the event itself and, as one might have expected, the hi-tech gadget broke down and "short-circuited" before the team could even start demonstrating its prowess. (I similarly recall enduring a conference paper in which the presenter ran through the usual Deleuzian-inspired exaltation of new media as one of endless flows and multiplicity. However, the presenter spent 15 out of the 25 minutes allocated trying to fix the non-functioning technology. Once fixed, the presenter resumed as if the technological malfunction had never occurred. It certainly had no impact on the theory because the insistence upon flows and rhizomes continued unabated—perhaps suggesting that the theory amounts to the best encapsulation of the possibilities of the technology!)

As you've gather by now, I was warmly disposed to the challenge of the "Tournament of the Tools" despite the ineptness of the presentations. This is not because I'm a Luddite or even opposed to new media. It's just that I'm in sympathy with the grand intentions espoused by the organisers of the "Tournament of the Tools": "We sought out artists using New Media technologies to compliment older, antiquated technologies and methodologies, as well as artists who don't necessarily even acknowledge a distinction between media, but use what they have at hand to best express their ideas." (*SOOB 2006 Artistic Program*, 11) To me, the Tournament offered a humorous, less pious and gleefully irreverent way to debunk "art in the age of technological seduction."

This is not to say that the 2006 Tournament of the Tools didn't exhibit pieties of its own. The event had the unexpected consequence of revealing how the blind exaltation of destruction stands as the direct correlate of "art in the age of technological seduction," which resides at the more fanciful end of the spectrum toward techno-determinism and Disney-like future-ism. Both polar opposites are as naïve as one another: one exalts techno-liberation, the other freedom from constraint in violent and spontaneous acts of destruction. It shows that the 2006 Tournament of the Tools didn't rise to the more subtle and complex challenge posed by the organisers: "In pitting both camps against each other we hope to destroy their current conceptually-simplistic forms, and reveal a contradictory nether zone of fusion, loose ends, resuscitated life-forms and broken pieces of New Media art theory." (*SOOB 2006 Artistic Program*, 12) Simple oppositions still prove seductive. The crucial critical challenge, however, is to confound the elevation of analogue over digital, new tech over low tech and to burst the bubble of techno-inflated

hype. For this reason alone, the Tournament remains a proposition worth pursuing and further developing.

If we do not pay sufficient attention to pre-histories, or rather legacies, as well as to the seemingly antiquated, then we will overlook the fact that compelling "technological" considerations have been posed by seemingly "pre-technological" (i.e., pre-new media) practices and theorists. Of course, this was the ambition of the research project that I touched on at the outset of my anecdotally induced discussion. This is not to assert that it's all been done before and better. We need to heed legacies for failures as much as successes and we also heed them to take account of how the vanguard stance in art persists today only in its transmutation. By this, I mean that it can no longer be identified simply with a fascination for the new, the up-to-date and the position of the "advance force." Instead vanguardism in art has turned into a concern for the defunct, the by-passed, the overlooked and the redundant (perhaps to some extent this was true from the beginning). This suggests a concern to seek more complex amalgamations between the old and the new that appear far more equivocal, far more ambiguous, fraught and perplexing. It is at the point of these incongruous amalgamations where contemporary art and new media practices and discourses will most fruitfully intersect.

Afterword: Artifice and Interactivity

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Although I've been invited to add an afterword commentary to the collection of texts 'Art in the Age of Technological Seduction,' I find in reading the cogent and thoughtful Introduction by co-editors Legier Biederman and Joshua Callaghan that there may be little to add to their observations and quite justifiable cautions except in the way of a personal reaction to the issues raised in the volume.

My first reaction to reading the essays collected here was, to paraphrase someone, maybe Lenin, that whenever someone mentions 'new media,' I always want to reach for my gun. Perhaps not for the reasons that provoked the old remark about 'culture' just paraphrased, but mainly because of the fact that all the talk of new media, digital interactivities, sensoria, new genres, etc., etc., seems (with very few exceptions) so consistently and boringly predictable, theoretically shallow, critically naïve, technologically positivist, politically and socially disengaged where it is not outright fascistic and spiritualist, and so breathtakingly a-historical as to provoke, after some three decades now of following this discourse on and off screen, an emotion bordering on if not disgust then maybe just plain old fashioned *ennui*. One wishes truly to reach if not for some revolver than for some appropriately rude noise in the face of all the super-charged techno-fetishistic blather, and of all those hyperbolic claims for each new matrix-friendly techno-sublimity, which have become so Teflon-like these days as to slip off the mind half-way to being uttered.

Digital media do not exist in a vacuum, but are inescapably part of a massive globalized representational industry, part of an uneasily interwoven and dynamically changing network of fields, professions, and institutions which has arisen over the past several centuries with the aim of attending to the questions and problems of the nature of relations between subjects and their environments, although with disparate and often contrary and apparently irreconcilable motivations. Digital media are one facet or inflection of artistry or artifice recently inserted in this pre-existing and vast global system

Andrew McNamara has put this very aptly when he speaks of its tendency 'to gravitate to teleological justifications and the denial of legacies and debts (whether artistic, intellectual, historical, or technological)….[which]….'fosters the assumption that new media transforms, then surpasses and eventually subsumes all previous technical-media possibilities (including all previous thought as well as all previous ways of doing art).' He also observes 'Does anyone truly believe this zeitgeist-obsessed techno-euphoria (apart from the technophiles of MIT)? I doubt it.'

Unfortunately, enough believe in this corporatist, scientistic, and politically neutered ideology to continue promoting and institutionally supporting it. Having been around MIT three decades ago and having been involved in designing and directing its (then new) program in the history, theory, and criticism of art and architecture, which made a home for nascently technophoric and zeitgeist-obsessed MIT technophiles, I can appreciate the historical, theoretical, and critical amnesia of those who were in the forefront of digital adventuring – although in all fairness, this was not a case of amnesia, which implies a forgetting of what one once know, but rather an ignorance of what one had never learned about in the first place. The Hewlett-Packard motto 'Invent!' sums up a functionalist attitude of invention for its own sake, and promoted a naïve tabula rasa attitude about re-inventing history which has not a few links to well-known fascisms of the past and believe-or die monotheisms of many times, places, and cultures.

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You've just read my first reaction to reading the essays in the collection. My second reaction, having read the co-editors' Introduction, is to endeavor to get beyond my spleen's screen by trying to explain exactly why and how yet another anthology on new media and digitalisms seemed to be the straw that threatened not only this old camel's back but even those of that noisily critical pack of camels in what may be loosely termed 'visual studies,' who have been typically running around in all directions for quite a long time. Why is new media stuff, which seems so detached from the historical, critical, and theoretical contexts of debates on representation, artifice, and performance over the past three decades, not to speak of the past two centuries, so, well, boring? The reason may be fairly straightforwardly expressed, but will take a bit of space to more substantively articulate.

What is nowhere even remotely acknowledged in current discourse on new media is the most basic problem of all: the inherent *ambivalence* of artifice (of any kind) in *simultaneously creating and problematizing* the world (of any kind) in which we may find ourselves. This is the dystopic subtext of the techno-euphoria just referred to. A problem whose articulation 2500 years ago in Plato's *Republic* led to the acknowledgement of the *dangers* of art for any community, and the need to banish the arts from that state and protect its citizenry and maintain the decorum of its ideal social orders. This was a problem that was (and remains) simultaneously political, philosophical, psychological, religious, technological, and aesthetic.

This ambivalence was powerfully present in the circumstances which provided the context for a series of lectures I gave in Denmark in Fall 2006 on the problematic relations between art and religion in the contemporary world, my visit coinciding with the anniversary of the publication by a Danish newspaper of cartoons depicting the prophet Mohammed in what was considered by many members of the Islamic version of monotheism as an instance of blasphemy, punishable by death. The incident, exacerbated by misinformed and uninformed debates in the media of many countries east and west, triggered protests by literally millions of people around the world, resulting in many deaths, the destruction and burning of religious institutions of the two other monotheisms, and the boycotting of many western non-religious institutions. The media magnified the controversy as one between 'religious dogmatism' and 'freedom of speech,' reducing it to differences between two (spuriously irreconcilable) absolutes.

Key to all the protests was less the unflattering portrayal of the prophet and more importantly *the very portrayal itself* of that person, a stricture against his depiction having been in effect, or so it was claimed by some of the most vociferous, for much of the past 1400 years. But the charges of blasphemy soon became muted as it came to be more widely known that within Islam itself there have been a variety of attitudes toward representation not only over time but across the many different cultures, societies, and ethnic groups making up the vast global mosaic of the Muslim world, whose diversity easily equals that of Christianity. In fact, monotheistic faiths such as Christianity, Judaism, and Zoroastrianism share with Islam a deep ambivalence about art and its relations to religious dogma and institutional practice.

Nevertheless, despite these ambivalences, what remained unclear in much of the media mis- and dis-information was any attempt to understand the logic and cogency of strictures against representation. *Why* is representation (of any kind) potentially dangerous?

Such ambivalences in fact precede the historical appearance of post-tribal monotheistic religions themselves, and so the issue is wider and deeper than its explicitly 'religious' construal. At the historical origins of earlier European philosophical speculation on the place and purpose of the arts in society are also deep ambivalences and ambiguities about art's cultural, political, and religious value to a community and its citizens. Aspects of this ambivalence - the contest between iconophilia and iconoclasm, or between the love of images and their destruction - persist down to our own times. In fact, they are reflected in the very structures, theories, methods, and missions of the three institutions and professions which, since the middle of the 18th century, have co-constructed what we call today the visual arts: those peculiarly modern domains of knowledge-production or epistemological technologies known as aesthetic philosophy, art history, and museology.

Ambivalent and antithetical attitudes toward the arts are particularly notable in societies linked to the major monotheistic faiths, since what has been at stake in all of these traditions was the core problem of the relationship between the material world (however construed) and its hypothesized immaterial foundations, sources, or origins, commonly crystallized in the idea of a singular 'spirit,' force, or divinity.

Such an opposition (perhaps one might better consider it the fabricated double-bind) between materialism and immaterialism lies at the very heart of the problem of art itself. Artistry and religiosity are so essentially connected that it has seemed to not a few over the centuries that art and religion are if not different names for a common phenomenon, then perhaps different answers to the same set of questions; different ways of phrasing fundamental questions regarding the origins, nature, and consequences of human existence itself. Indeed for some, concepts of divinity were less a cause than a symptom of a people's manner of comprehending and representing things.

Artifice, and in particular what Plato called the pantomimic or mimetic arts - problematize seemingly secure oppositions between what we might want to believe are fact and fiction; history and poetry; reason and emotion - all of which art threatens to reveal to be circumstantial and mutable effects of human artistry.

What artistry or artifice created for Plato, then, was not some 'second world' alongside the everyday world in which we live (the modern fantasy worlds of art history, museology, shopping, or digital media); he was quite clear that what art created *was* the world in which we really *do* live our daily lives. The problem he attempted to address was fundamental to philosophy, politics, and religion. If we believe that a particular made thing 'represents' some essence (either metaphorically 'contained' in some thing or absent and elsewhere – the 'soul' or 'spirit' of its time and place), then it is obvious that the essence purportedly 'represented' may be represented in other ways, problematizing the existence of that essence itself. Leading one to imagine that the essence supposedly represented is in fact created by its so-called 're-presentation.' Such an awareness obviously has the potential to undermine the claims of any political or religious power to security and truth. As Plato was perfectly aware in *The Republic* in his attempt to describe what would constitute an ideal state.

It is this conundrum that is precisely the problem. The 'divine terror' (*theios phobos*) that art, according to Plato, induced in the soul was simply the terrifying awareness of exactly this: that works of art don't simply 'imitate' but rather *create and open up* a world, and keep it in existence, as Heidegger put it in discussing the ontologically creative potential of artworks in his famous essay 'The Origin of the Work of Art,'[cii] where the experience of art is taken to be fundamentally religious in nature. Or where, perhaps more precisely, the nominal common *distinction between* art and religion (or art, science, and religion) is itself problematized and rendered circumstantial rather than ontological. This is an issue of the truth or falsity of imitation or representation: is a work of artistic creativity an imitation of some ideal essence, immutable truth, or transcendent reality, or is mutability itself what is 'transcendent'? Is the transcendent a supreme 'entity' above all things, or is it the taking-place, the very palpable reality, of every thing?[ciii] What, in other words, is the ontological status of an art object (physical or virtual)? Is it an effect of a pre-existing soul, spirit, or mentality, or is that spirit or mentality an after-effect of artifice itself? The materialism / immaterialism double-bind infects the heart of all of these problems.

In all of this it is essential to be aware that nominal distinctions between art, science, and religion, are European Enlightenment categories which had little relevance prior to the 18th century in Europe itself let alone elsewhere (and which have waning resonance today). To speak of 'art' (or science, or technology) as a trans-historical or trans-cultural phenomenon is not a little problematic, since such a notion is an artifact of modern disciplinarity, and a product of a field of relationships serving specific cultural, political, and ideological functions in relation to the formation of the modern nation state.

Both Heidegger and Agamben argue that in the modern age we are cut off from the essential (and dangerous) powers of art because our relation to it has been subjectivized – and in a curious way secularized by the (pseudo-) sciences of aesthetic philosophy, art history, and museology. Artworks have been domesticated into serving as mere reflections or *exemplifications* (re-presentations) of hypothesized social-historical processes, as artifacts of individual or collective values or mentalities, as objects for stylistic consumption or for the judgment of individual 'taste' - the common currency of virtually all art historical theories and methodologies since the 18th century – in contrast to the more interactive aesthetics of modernity's premodernity in the West. As commodified exemplars of value, mentality, artistic genius, or personal or collective 'style,' artworks elicit oddly passive reading, appreciation, admiration, explanation, and interpretation, rather than active spiritual engagement. Instead of spiritual engagement we have the absurdities of 'art criticism' (whose very language is a thinly-veiled, secularized version of ethical judgment). The art object (in any medium) is reduced to being an historical, aesthetic puzzle eliciting cleverly articulated solutions – the authoritative and magisterial pronouncements of the sanctioned critic, historian, employee of Sothebys, or the clever and articulate art history student.

*

One final word. Over the past two centuries, what we commonly refer to as 'art' has served as the site *par excellence* for the production of the fictions that, woven together, make up the fabric of our modernities and postmodernities - the phantasms of identity, ethnicity, class, race, gender, nation, sex, indigeneity, and otherness, which we imagine to be 're-presented' in the products and effects of individuals, groups, ethnicities, genders, nationalities, races, etc. (this pen – or that painting - encapsulating the very 'soul' of France; this video game as the very 'essence' of Koreanness, etc.) The key metaphorical conundrum of our post-Enlightenment modernity – replicated endlessly in the lunatic fantasy worlds of every shopping mall - has been that the *form* of your work should not only *be* but be *legible as*, the *figure* or physiognomy of your 'truth;' an emblem, symbol, echo, reflection, or re-presentation of who and what you are. It doesn't take much reflection to appreciate that this is a modern secularization of earlier modes of Christian piety and of the care of the soul, where the state of one's soul is to be manifested or represented by its 'good works.'

This *amalgam* of ethics and aesthetics manufactured by the industries of visual representation and spectacle (what contemporary cultural critic Samuel Weber termed the 'subject-object matrix[civ]) - is what institutions such as art history and museology have entailed and afforded: every object always ultimately staged as an object-*lesson*, and a 'lesson,' moreover, with palpable exchange value in the commodity marketplace. Which itself dovetailed historically with the commodification of the modern self: you 'are' your stuff; your possessions. Or, strictly speaking, you 'are' what your stuff appears to 'say' about who and what you are, which engenders the fantasy - the cornerstone fantasy of capitalist modernity - that more and 'better' stuff can 'speak' more and more truly of your continually evolving selfhood. It's not difficult to appreciate that all of this capitalist mumbo-jumbo is fundamentally a secularized theology – as indeed Marx himself made quite explicitly clear when he referred to the modern commodity as fundamentally theological in nature: this was Marx's central point in his exhaustive critical analysis of the capitalism that, to paraphrase Walter Benjamin, smothered 19th century Europe like a rolling fog, obscuring the material relations between people and things, making of those relationships (immaterial) fetishes.

The task of the modern citizen, then, became that of building and furnishing the temple of one's solipsism. (As, in other words, a temple of *entelechy*,[cv] which entailed a particular topology of relationships between subjects and objects.).

*

One (really) final word. The creation of the modern discourse and praxis of what we call today 'art' entailed the fabrication of an epistemological technology in service to the creation and maintenance of the nascent modern nation-state in the late 18th century. It also entailed the fabrication and maintenance of an *amnesia* about what 'art' might have meant prior to this time.[cvi] This has been characterized as having had the effect of creating a 'glass floor' sealing off and secularizing modernity from the much more explicitly religious production, use, and significance of artworks. The 18th century invention of 'aesthetics' entailed divesting artifacts of their formerly religious or other functional meanings in favor of their more 'purely' formal or artistic qualities. Such a development was quite explicitly promoted by the founders and directors of the new post-Revolutionary civic museums in Europe and America in the late 18th and early 19th centuries, who (for example in the case of the Louvre), saw themselves as quite literally *liberating* the essential artistry of objects from its religious and aristocratic captivity.[cvii]

This created what can best be termed a hygienic fire wall between art in modernity and its pre-modern history, which it has taken a couple of centuries to excavate and rediscover. What that fire-wall (or glass floor) created was the phantasm of 'art' as a pan-human phenomenon, useful to art historical and critical appropriation in the service of theories of race, gender, and ethnicity (to speak of an art is to speak of and for a people, etc).

The discourse of 'the myth of new media,' to use Andrew McNamara's term, is in fact a mythology, which so far has involved a comparably amnesiac 'hygiene,' purporting to erase its embeddedness in its own social, cultural, political, and historical circumstances, in favor of a phantasmatic 'pure technique,' generative of unimagined new worlds of interaction and artifice. In fact, we've all been there before. But that's not the most important lesson to be learned from re-engaging the three-decade (or more) adventure of our various digitalisms; more significant in my view is the re-illuminating potential of new media in linking itself to discourses, debates and controversies over at least two millennia about the

individual and collective place and purposes of the arts (in all media). The trick is in getting rhizomatic adventurism to look over its shoulder, if one can visualize rhizomaticism having a shoulder to look over.

We should all help it along. Art, after all, is not a kind of thing, merely a thing to be passively read or consumed, as the after-effect or re-presentation of values or mentalities. Artistry has always been understood as creating and opening worlds; as a catalyst for thinking together interactively; as the production of phenomena mooted for collective engagement. As modes of mediating with by embracing otherness – that of ourselves no less than of others.

Art, in short as expressing (but never exhausting) the inexpressible. Of 'giving to airy nothing a local habitation and a name.' With all that that entails. Which is precisely why art is dangerous and terrifying, as Plato well understood, but was unable to accommodate in his ideal city-state. Understanding why artifice (of any kind) is dangerous because of foregrounding the fabricatedness of any fabrication, would allow contemporary discourse around 'new' media to acknowledge the ethical force of all artifice, and to engage with it ethically, which is to say dialectically and historically.

[cii] Heidegger, 'The Origins of the Work of Art,' in Martin Heidegger, *Poetry, Language, Thought*, *trans*. A. Hofstadter (London: Harper & Row, 1971 [*Der Ursprung des Kunstwerkes, Einfuehrung von Hans-Georg Gadamer*, Stuttgart: Reclam, 1960, 1967]); Friedrich Nietzsche, *The Will to Power as Art*, *trans*. D. F. Krell (London: Routledge & Keegan Paul, 1981).

[ciii] Paraphrasing Giorgio Agamben. *The Coming Community*, trans. Michael Hardt (Minneapolis: Univ. of Minnesota Press, 1993): 14.5.

[civ] Samuel Weber, *Mass Mediauras: Form. Technics*. Media (Stanford: Stanford Univ. Press, 1996): 73.

[cv] *Entelechy*: 'the realization of form-giving cause or energy, as that which contains or realizes an end or cause; a supposed supra-mechanical agency (*vs*. mere potential existence) immanent in an organism or body, and directing the vital process toward the normal whole or perfect organism. For Aristotle, the 'soul' is the 'form' or *entelechy* of an organized body' [Webster's *New International Dictionary*, 2nd edition, p. 852].

[cvi] D. Preziosi, *Brain of the Earth's Body: Art, Museums, and the Phantasms of Modernity*: The 2001 Slade Lectures in the Fine Arts at Oxford (Minneapolis & London: Minnesota Univ. Press, 2003).

[cvii] On which see D. Preziosi and Claire Farago, *Grasping the World: the Idea of the Museum* (London: Ashgate, 2004), esp. the essay by Jean-Louis Deotte, pp. 51-64. The writer discusses Napoleon's 'liberation' of objects from churches, monasteries, palaces, and mansions around Europe to be placed in the collection of the Louvre Museum. The director of the Louvre considered this liberation to be the freeing of the 'aesthetic value' of these once religious or other artifacts.

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Notes From the Field

Anecdote: in the mid-'60s, I went with my girlfriend to her volunteer post as an art facilitator at a local community center in Cleveland's Little Italy. The idea was to provide an art-oriented experience for second and third graders during the period after school let out but before their parents could pick them up. My friend had difficulties because when she put out "traditional" materials – paints, crayons, paper, etc – the children would all create extremely similar images, similar to what they had been taught to do in school. For instance, one student would say "I'm going to paint a boat!", and then they would all paint the same boat, consisting of a vaguely circular arc with a triangle and a stick-figure on top, sitting above a row of blue scallops. Telling them to think of individual things to draw drew only blank stares. In order to force them into doing things they hadn't been taught, she brought in varieties of uncooked pasta and some glue. The pasta became *their* "new media". This resulted in a much wider variety of projects, as the children experimented with the media (eating some) and found its intrinsic possibilities individually rather than being told "do this; now do this." I believe a similar thing happens whenever unfamiliar substances or technology are introduced to people, and also when people begin to look at their ordinary surroundings from a different, "artistic" perspective (perhaps a similarity to the Dada people here): people are freed from the constraints of received instructions and forced to try novel behaviors.

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The practices and definitions of new media arts are reliant on modernist models of the avant-garde. The contemporary movement, "new media arts," continues and extends the anti-material and anti-commodifiable programs of 1960s conceptualism. Art critics and historians working on contemporary new media arts are speculators of sorts vying for position in the eventual canonization of the movement.

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My goal in all of my video projects, whether interactive or not, is to suggest a new type of documentary, whereby the reality of the locale viewed is questioned by its (digital or otherwise) visual navigation/display, at the same time that the very intervention implied by the visual rendering of the site becomes an integral aspect of its perceived character. The aim of the work is not to convey a coherent physical space or a linear narrative, but to make use of space as an interface (or metaphor) for the representation of other types of sequences (e.g. temporal, thematic). The unfolding of this space functions principally as a means to uncover a comment about--or a reaction to--a social, political, personal or cultural world.

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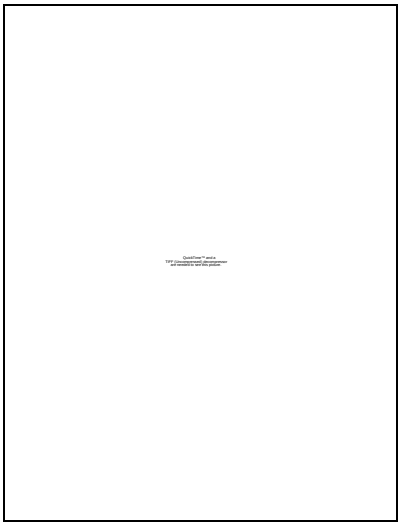
"It's amazing what you get used to – this has been going on for two years now. You do adjust. If you had seen me at this point last year I was not in the best of shape. If you had seen me at this time a year before, I was a complete wreck. You get used to it – there's a certain absence – you're under a certain pressure – the conflict gets woven into everyday life. It's like oh yes, another thing – like going to work, cooking dinner, or whatever. It's just something that's there – it becomes somewhat mundane – in spite of the fact that it has a rather toxic, sharp, pointed edge to it at the same time.

... at this point it is just sitting and waiting, and so it's not really something visible, something to talk about – it is just sitting around and waiting. And you know... the anxiety of waiting."

— Steve Kurtz, July 15, 2006



Video stills from a work in progress by Angie Waller and Jim Fetterley

FROM LEFT TO RIGHT: Steve walking through his neighborhood in Buffalo, some teenagers called out "Professor Al Qaeda" when Steve passed by; the abandoned Buffalo State Asylum for the Insane from 1880- designed by Henry Hobson Richardson and landscaped by Frederick Law Olmstead; The Founding Fathers Restaurant – a charming bar decorated in presidential memorabilia (the owner, a former social studies teacher, asks presidential trivia questions in between drink servings); NEXT ROW: Screening area at Hallwalls new location at the former Asbury Delaware Methodist Church; Steve pointing to the Atlas Group photo thumbnail on the Mass MOCA Interventionists Show invite – this card was noted as "terrorist writings" when police initially searched Steve's home after Hope's death; a bacteria Steve is growing at his house; Smartlab toy Steve acquired since his arrest – originally he had a "gooey germ" toy that was confiscated by the FBI during their raid for suspicious materials; NEXT ROW: Some of Steve's remaining books – the books related to research on CAE's latest book, Marching Plague were confiscated by the FBI, all of the art/philosophy books were left on the shelf; a view of Lake Erie –a place Steve goes to relieve stress; Steve in the car; Steve's home office; NEXT ROW: Steve's refrigerator door decorations; Steve's name plate outside of his SUNY Buffalo office; the front of SUNY Buffalo's Center for the Arts (the campus closely resembles a corporate office park); close up view of the Center for the Arts building; Steve's home biology lab (what remains of it); a banner on a neighbor's porch pointing out the house next door that has been slowly falling down towards them while the owner is in Florida; NEXT ROW: bacteria that Steve keeps in his refrigerator; Steve sitting at the desk in Hallwalls where the CAE defense fund checks are administered; Steve outside SUNY Buffalo; the FBI building in Buffalo where Steve and people filming Steve are well known; NEXT ROW: Steve's house; close up of Steve's lab; the road to SUNY Buffalo where Steve teaches.

Angie Waller
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Angie Waller and Jim Fetterley's documentary about Steve Kurtz: www.couchprojects.com
For information about Kurtz and the CAE Defense fund: www.caedefensefund.org

“the enviromantic love triangle”

always there is nature.
nature is abundant and generous.
nature is wild, impetuous, violent, unpredictable.
society comes along.
society is attracted by nature.
nature offers society many things.
society fears nature, can't explain nature.
technology comes along.
technology is seductive.
nature is indifferent to technology.
society and technology have an affair.
nature is not jealous, but society distances itself from nature.
society starts to feel protected from the violence of nature,
but nature offers society things that technology can't.
society starts to take advantage of nature.
technology begins to grow in influence.
technology is envious of society's dependence on nature.
technology mimics nature, becomes wild, impetuous, violent, unpredictable.
society is hurt by technology.
society begins to fear technology.
society feels guilt for its mistreatment of nature.
society sees nature in a new way.
society gets infatuated by nature once more.
technology can not live without society.
technology gets sexier, more alluring.
society lusts after technology.
but always there is nature.
society is stuck in the eternal enviromantic love triangle.
and that is where we are today.

Komninos Zervos, 1995
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http://www.gu.edu.au/ppages/k_zervos
http://users.bigpond.net.au/mangolegs
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While my work, being performance, performative video, photo, drawing or whatever is considered (by me) to be very much my own, and I somewhat attempt to control its distribution, it is the result of (not always any or all, or in this order), of appropiation, usurpation, inspiration, modification, departure from other existing pieces (call it art, or media, or movies, advertising, songs, books, pictures, memories, anything). it constantly reffers to the in/out of myself as affected and effected by the in/out itself. In other words, I do not exist in a vacuum and it would be impossible to "author" my work, without a relationship and a relation to other than the self. By that token, my work could be the inspiration to others, or sampled, usurped, exhalted, destroyed... Which i may dig or not, but is the way it is (please pardon my lack of articularity). In terms of "new media", I prefer to relate to it as "all media", or actually "contemporary media". I am not a scientist, I don't invent new media; at the most I use what I manage to figure out of the existing technologies out there...

Lucas Michael
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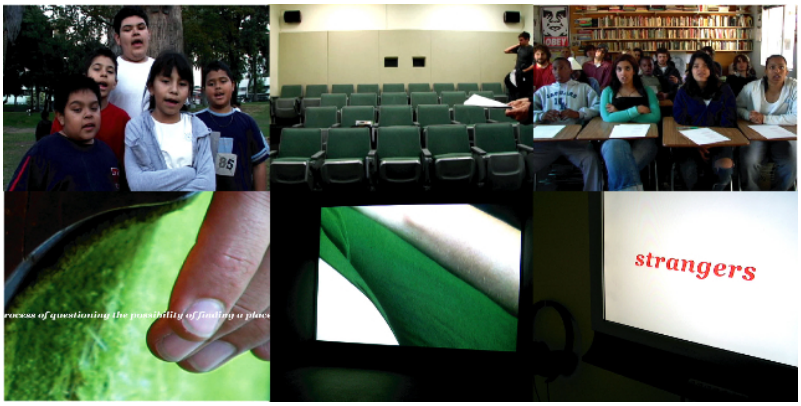
My goals are not based primarily on technology itself, but on the development of a personal language through technology. Video art is particularly intriguing to me as a means of rethinking representation as it defies traditional criteria, even limits, of the art object. At the forefront of cultural and aesthetic discourses, audiovisual has changed the contemporary art scene by stimulating conceptual, political, personal and poetic approaches.



The moving image allows me to work with and through time, and therefore to not be limited to one single image or one single object (e.g. one single statement). It opens up the possibility to conceptualize and narrativize the work in a different manner. Not only the specificities of the medium determine what I do, but also my practice and thought are probably better materialized by video than by other means. As many other artists, I have found in the audiovisual experience a solid basis for reflection and communication. My project-based work reveals a cinematic approach that pervades all my creative process. As a matter of fact, a large number of independent European and American filmmakers and video-makers have been influential in my visual and conceptual discourse. As Gilles Deleuze pointed out, *"the question is no longer: does the cinema give us the illusion of the world?, but how does the cinema restore our belief in the world?".* And, thereby, the screen does not function as a window anymore, but rather as a "table of information."

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The current fears of surveillance – the uncanny feeling of works like the RSG collective's Carnivore – are fears that the new technology will be a re-incorporation of a centralized, "star" network in which a small group of people will exert direct control over the rest of the Body Politic. To imagine that technologies – like those of information visualization – autonomously produce Machiavellian nightmares --like the "star" network -- is a mistake. It is a mistake made when one forgets the art of self governance.

The art of democratic governance is not the same as a tyrant's art of governance. A democratic art must reimagine the topology of couplings within the Body Politic as rhizomatic –
as multiple and heterogeneous interconnections between people and things that facilitate a self-governance – a governance without a tyrant at the center. Technological innovation to support this vision contributes to, what Michel Foucault has called, a "technology of the self:" a technology designed and practiced to support self-governance. This is the problem for a democratic aesthetics of information visualization.

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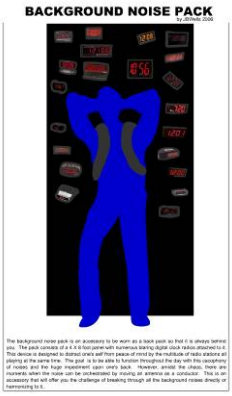
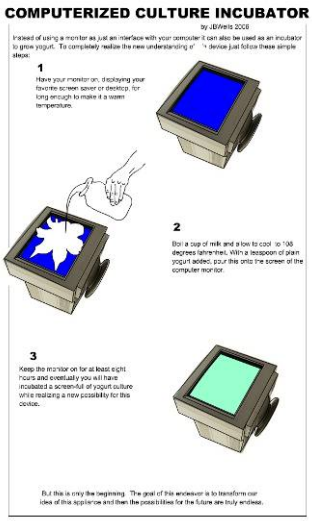
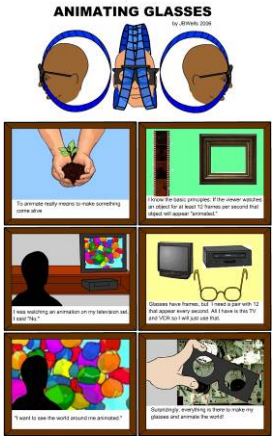
Excerpted from Warren Sack's essay, "Aesthetics of Information Visualization," in */Context Providers/, eds., Christiane Paul, Victoria Vesna, and Margot Lovejoy, University of Minnesota Press, 2007 (forthcoming).*

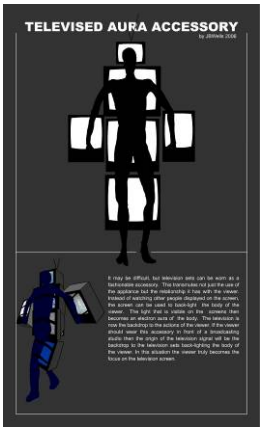
Devices For A Different World: While technology is guided by dreams of the future, I thought I would take a moment to reflect upon the appliances and gadgets we are already surrounded with either in our homes, thrift stores or landfills. What do we do with this mounting societal detritus of outdated technology? This has not been truly addressed by designers and developers. The projects presented here explore new possibilities for these appliances. I do not maintain that these are practical ideas but my goal is to apply imagination to what is already real in an effort to un-fix our notions of the objects around us and thus the world. The four projects presented are:





Computerized Culture Incubator, 2006
Animating Glasses, 2006
Televised Aura Accessory, 2006
Background Noise Pack, 2006





Jeffrey Wells
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To remain fresh, new media needs to define itself vis-à-vis a generative concept. To remain complete, it must attend to a holistic concept. New media is not naturally bound to a utilitarian, reductionist and representational (or narrative) assumption as in much of multimedia and data visualization. C5's concept is quasi-Objectivist in that it declares a mind-independent reality that we are in contact with via data and that this data is processed into information that can be acted upon rationally, becoming generative of experience that leads to embodied knowledge. But it short circuits Objectivism via the real's prehension of data (abstract machines) and data's entailment of the real (co-evolution), holding that information and the resulting human activity is generative of changes to our environment such that we change the real and continue to sample data about it, then execute this cycle perhaps infinitely in a productive sequence that includes the diseases of feedback and especially a great deal of uncertainty. You can act rationally, and even for brief moment heroically master the real, but in the end you can't avoid blowback. Think for example of Iraq War 2.0 and Donald Rumsfeld's revolution in military affairs which got it right (a small informated force *can* dominate the conventional battle field), but also wrong (insurgency and asymmetrical warfare adjusts and *can* inflict itself on a highly cyborg but under-soldiered occupier), making Rumsfeld one of history's arrogant half-rights (to match the arrogant half-wits of his president), and not to mention yielding another severe blow to Ayn Rand's Objectivist legacy. So what is new media art to do? Perhaps it is time to evolve away from older notions such as heroic critical practice and move toward generative and productive models of dialog and action that further entangle the real. C5 researcher Geri Wittig discusses landscape data and its role in a holistic, adaptive earth system; essentially claiming that data and information technology today play a catalytic and autopoeitic role in the co-evolution of humanity and earth as complex system. She posits elsewhere that discovery emerges also from other experiences that were not necessarily modeled to begin with. In other words, generating and attending to holistic experience and openness to the sublime where data flows (which is now everywhere), and the surprises that wash over us is the path to discovery.

Computation is by now an embedded system in our cultural enterprise; it co-produces the real unlike any other time in history. Attending to all of the abstraction layers (including energy) and how these produce the material world generatively is the key to defining future exploration of new media. At the end of a revolution (the beginning of an evolutionary stage) new media must embrace generative interaction between data and the real. The age of looking at our multimedia belly buttons is drawing to a close!

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Where Art Thou Net.Art? A Report on Zero One / ISEA 2006

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This essay was originally commissioned for Rhizome.org.

The long awaited 2006 Zero One / ISEA took over San Jose, California two weeks ago in a sprawling, city-wide, mega-festival celebrating art and technology in the heart of Silicon Valley. Much has already been written: from daily observations in the local papers to a feature in the New York Times, from the Blogosphere to the listserves. As one who has been immersed in the new media scene since the late 1980s, I would like to contribute a bit of historical context to the discussion: I offer my commentary from a pre-millennial perspective, when the dream emerged in the 1990s, during an era of optimism and promise, the dream of a new art form that would side-step a mainstream art world mired in curators, museums, galleries, objects, and old aesthetic issues. This was the dream of Net.Art, a revolutionary new international movement of artists, techies, and hackers, led in large part by the unassuming, unabashedly ambitious new media curator from the Walker Art Center, Steve Dietz, now director of Zero One.

These were heady times indeed. I met Steve in 1997 while I was in residence at the San Jose Museum of Art. His research had brought him to the holy Mecca of new media, Silicon Valley and the community of artists in the Bay Area who had been working with new technologies since the dawn of the personal computer. He wanted to meet Joel Slayton (director of the 2006 ISEA Symposium), so I escorted him over to San Jose State University where Joel is head of the CADRE Laboratory for New Media.

Shortly thereafter, Steve launched two groundbreaking Net.Art exhibitions, Shock of the View, and Beyond Interface, both of which brought together leading Net artists exploding on the scene: Mark Amerika, Natalie Bookchin, Masaki Fujihata, Ken Goldberg, Eduardo Kac, Jodi, Mark Napier, Alexei Shulgin, to name just a few. It was a time of artistic transformation, new paradigms, hypernovels, distributed authorship, globally extended, real-time, robotic, collective art. It seemed anything was possible. By 1999, David Ross was Director of the San Francisco Museum of Modern Art, Intel was pouring millions into Artmuseum.net, and there seemed no end to the surging tide of experimental new media art. It was at that time that early discussion began of an international festival of art and technology in Silicon Valley. Ground Zero was formed by Beau Takahara, which would later become Zero One.

But with the new millennium the tides would turn: Natalie Bookchin announced the death of Net.Art, the tech boom was a bust, and both David Ross and Steve Dietz were ousted from their museum jobs for harboring visionary aspirations in an economic downturn. So with the announcement that the Zero One Festival and the ISEA Symposium would launch in 2006 in San Jose with Steve Dietz at the helm, it was something like the Phoenix rising from the ashes.

And it rose with a bang! “Seven Days of Art and Interconnectivity,” with over 200 participating artists, an international symposium, city-wide public installations, exhibitions, concerts, performances, pubic spectacles, performative-live-distributed cinema, wi-fi interventions, container culture, skateboard orchestras, digital dance, sine wave surfing, datamatics, surveillance balloons, a pigeon blog, the squirrel-driven Karaoke Ice Battle on wheels, and to top it off a nostalgic, bombastic blast-from-the-past from Survival Research Laboratories. The 13th International Symposium on Electronic Art Exhibition took over the sprawling South Hall at the Convention Center, with its themes: Interactive City, Pacific Rim, Transvergence, Edgy Products, and on and on… enough technology to wire a third world nation.

And so, with all the buzz, and the sheer largess of this ambitious festival of new media, I couldn't help ponder how it was connected to the original Net.Art dream, when a new art form arose from networking every computer on every desktop and engaging a global audience in new, pervasive ways that became possible as technology was increasingly ubiquitous and transparent. The Net.Art dream would call into question our relationship to the new media, as art has always aspired, to critique its impact on our lives, our culture, our communications systems, our relationships, our view of the world, our own changing humanity in a technological world. I couldn't help but to wonder, what exactly happened to that dream, once driven by a small fringe core of artists, writers, thinkers, and curators, and now practiced by literally thousands of techno-artists emerging from every university and art school across the planet, many of whom converged in San Jose for Zero One / ISEA.

The first thing that came to mind was that art and technology no longer exists on the fringe of the artworld, and in fact, the demarcation between art and engineering has blurred considerably. At Zero One you couldn't tell the artist from the engineer (Billy Klüver must be rolling in his grave). Joseph Beuys' notions of social sculpture, or Allan Kaprow's participatory Happenings now inform the new systems of art that have dissolved the distinction between artist and non-artist, between performer and audience. For example, the Interactive City theme, organized by Eric Paulos, sought "urban-scale projects for which the city is not merely a palimpsest of our desires but an active participant in their formation." In the installations of Jennifer Steinkamp at the San Jose Museum of Art, I saw suburban moms taking snapshots of their kids in strollers bathed in layers of colored light. In the Listening Post by Mark Hansen and Ben Rubin, also at SJMA, the artists orchestrated chat room discussion in real-time from around the globe. Etoy's mesmerizing Mission Eternity involved a trailer installation parked outside SJMA in the downtown Plaza, which investigated personal data storage for the afterlife (ashes to ashes, bits to bits). There was good art and there was bad art, but everywhere you turned there was art or something like art permeating the physical spaces of downtown San Jose (including the mobile light rail cars and the dome of City Hall), as well as the invisible ether of the airwaves, from bluetooth networks to cellular tours (the latest rage). There was very little time to spend with any particular work, everyone was engaged in high gear moving from one venue to the next. In Bill Viola's keynote address, he made the prescient remark, "artists are jumping into a train for a high speed ride while they're still laying the tracks ahead." The hyper-adrenalin flow resonated in the on-line commentary as well, where, if you read the considerable Blog chatter surrounding Zero One / ISEA, you would find that the experience became concentrated on sheer movement and the social networking that reigns supreme at all conferences and festivals.

And so what about the dream of Net.Art? Those of us who have spent countless hours in the past decade bemoaning the loss of the dream, could now say that the dream had been realized (for better or for worse). I heard artist friends complain about the democratization of Net.Art, the selling out of Net.Art, the "mainstreamization" of Net.Art, and other remarks I won't mention here, and yet, I think that we would all agree that the uber-dream of Net.Art – to dismantle the precious nature of the object, an art that would defy the walls of the museum, that would, as expressed in Roy Ascott's Museum of A Third Kind, reject the notion of the physical museum space altogether, the dream of Net.Art as a force that would rewire the experience of art – a "fantasy beyond control" according to Lynn Hershman – had become a living, breathing reality in San Jose for those compressed, seven days.

And if you turned to the Blogosphere there were plenty of critics: Patrick Lichty, "There are many topics, like locative media, data mapping, ecologies, and so on that are being explored. On a rhetorical level I have to ask whether these are the right ones and why these are the ones that are compelling to us." And on the CRUMB list (Curating New Media), I found an insightful comment by Molly Hankwitz, "I think the process of interaction must be done very carefully. The worst thing is the mainstreaming of situationism into a middle class playground."

Finally, I turn to Mark Amerika, one of the original dreamers, for a closing observation, "Net art is in many ways still the most alive and accessed art movement ever to NOT be absorbed into the commercial art world… and that's fantastic!" Perhaps the success of Zero One / ISEA was in its commitment to concentrate on experimental media art, to emphasize media art's inclusive, democratic, and participatory nature, and lastly, that contemporary art must embrace the new technologies - shamelessly, fearlessly, defiantly. Net.Art may be dead, but Net Art 2.0 is alive and kicking.

SIGGRAPH 2006 Exhibition: Audiovisual Art

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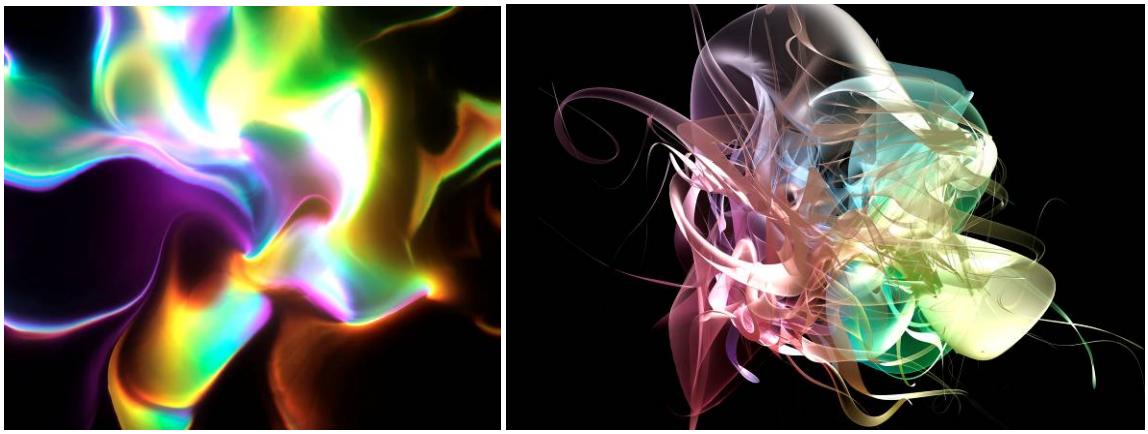
SIGGRAPH 2006 Exhibition
Boston, Massachusetts USA on August 1-3, 2006.
Boston Convention and Exhibition Center
http://www.siggraph.org/s2006/



Dennis Miller, *Reflect*, 2006 (left)
Dennis Miller, *Introspection*, 2006 (right)

The SIGGRAPH 2006 Exhibition provided a snapshot of the state of audiovisual art: the established masters, upcoming talents, and new technologies which may soon reinvent the medium.

The dominant exhibit in the show, Charles Csuri's retrospective entitled "Beyond Boundaries" spanned his seminal contributions from the dawn of computer art to the present. Early work included black and white plotter adaptations of old masters, such as Cézanne and Degas. The recent works are three-dimensional moving sculptural paintings displayed in a full range of color on large plasma screens. Striking detail and a rich palette reflect Csuri's technical mastery. His visual symbology extends naturally from his progressive graphics techniques: ribbons as a building block of form, glass objects and shadows which balance the composition and exploit graphical ray tracing, and whirling flecks of paint and virtual plaster. Rooted in Western Fine Art, Csuri continues where Dali, Kandinski, and Klee left off, in his own unique digital dialect.

Works by animation master and composer Dennis Miller appeared in the Animation Theatre (Reflect, 2006) and in print (Introspection, 2006). These works depict elaborate, multilayered objects and settings, which evolve from one composition to another. Working with the added benefit of a music composition background, Miller allows his work to unfold over time with formal organization and a keen sense of pacing. Few animation artists today rival Miller's textural richness, organic treatment, and sheer creativity. Details and discussion on Miller's work appear in the recent text, "Art of the Digital Age" by Bruce Wands.

A Laser Plasma Display implied a possible future of animation art. An alternative to holography, this exhibit consisted of three-dimensional images moving through space high above the ground. The projection medium is only air, and the images consist of animated dot matrix shapes projected by high-energy lasers producing a plasma-emission effect: tiny points of animated, colored lightning. Currently

better suited for commercial purposes, this technology is not practical for in-gallery applications due to the loud crackling sound from the rapidly expanding air and the smell of ozone. In spite of the science-fair ambience, this striking display of laser technology brings us a step closer to a world of imaging free from tubes and screens.

MIT featured a device targeting children, but with obvious intimations of the future of digital painting. A large plasma screen presided over a tray of colored objects, such as green apples, red balls, and a blue textured cloth. The artist presses a paintbrush-like wand against the desired object, such as an apple or ball, triggering a small digital camera in the brush to take an image of the object. The plasma screen canvas is then painted upon by physically moving the brush across the screen surface. The small, digital image is rendered by computer across the screen in a stream of digital paint: apple green, ball red, textured blue, or any object the artist has last "imaged" with the brush. A hands-on demonstration revealed that the visceral effect of painting on this digital canvas is enormously more satisfying than painting with a mouse or even a high-end digital pen tablet. Children and Picassos of the future may someday be grateful.

Art in the Right Place: The Singapore Biennale 2006

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Singapore Biennale 2006
September 4th – November 12th 2006
www.singaporebiennale.org

Asserting oneself to gain attention is a difficult task in a world where multitudes are trying to be heard. In 2006 Singapore is endeavoring to accomplish just this. *Singapore: the Global City – World of Opportunities*, a yearlong calendar of events taking place in Singapore, makes a case for this micro-nation to be taken as vital member of the global community. Culturally anchoring these events is the Singapore Biennale 2006, another manifestation of the successful mode for exhibiting art that has branched out across the world.

Using 'Belief' as its theme, the Biennale undertakes the immense task of shaping a nebulous subject into a form for all to engage. In his curatorial statement, Artistic Director Fumio Nanjo, points toward a moment of reflection where "the meaning of belief can be used to understand what it is that binds us together as human beings." The Biennale provides the space for this moment in a country where cultures and beliefs converge. This leaves the audience to decide how belief might be understood.

In viewing the work, questions of belief in what or for what purpose continually have to be dealt with. Considering these questions in terms of the international artists, the ability to specify a relationship at moments is a difficult matter. Mariko Mori presents *Tom Na H-iu*, a piece referencing the monoliths of Celtic standing stones. Made of a transparent material, the piece is connected to a computer at a cosmic particle facility in Japan via the Internet. As particles are detected at the laboratory a signal is sent to the work, triggering the object to come alive with light. Carsten Nicolai gives us *syn chron* to peruse, a space filled with electronic sound interacting with projected light. Leaving these dynamic works, I am contemplating my understanding of how sights and sounds drive my daily activities. How minute moments, moments that pass without notice, have purpose and worth.

In *The Last Supper*, Swedish group Bigert and Bergstrom take the macabre tradition of feeding the soon to be executed into consideration in a 58 minute video. The question of how belief resonates through a culture seemed to permeate here as I sat glued to my seat. Johanna Billings video work *Magical World*, cemented a belief in the future as children singing of hope are contrasted with the dreary context of Zagreb, Croatia.
While international artists bring a flair and depth to the Singapore Biennale, it is the Biennale's ability to present and promote local artists that remains for me a primary objective. The work of artists Erika Tan, Ho Tzu Nyen, Lim Tzay Chuen and Rizman Putra, is the baseline for the future of the Biennale. Erika Tan's multi-channel video installation, *Becoming*, delves into the construction of the self. Through the guise of a puppet, the artist travels through an education of words, phrases and nationalistic ideas. Rizman Putra's performance and installation, *Sonto Al Loyo: The Elegy of a Man and his Weapon of Choice*, incorporates an alter ego who uses different musical genres to sing about destruction. In these two pieces we see a rethinking of Singaporean identity. An identity that is an amalgamation of cultures forced to define itself as something else. Not having the time to build from within, it grasps onto that which is in front of it. Ho Tzu Nyen moves in a similar vein, deconstructing Queen's Bohemian Rhapsody to its narrative foundation and re-filming the song as a movie with a miss-match of local, amateur actors. What is displayed is a video filled with Asian faces and stylized movements, giving a western form an Asia twist.

Lim Tzay Chuen removes himself entirely from the gallery space, residing solely in Biennale literature. His project consisted of spraying pheromone throughout one of the gallery sites as a way of making attendees fall in love with the space. It is a gesture, containing conceptual strength, yet is lost in the flurry of activities. This lack of presence places the audience in the quandary of understanding a performance that is totally unseen.

Spread out across Singapore these and many other works inhabit a multitude of spaces. From what was once City Hall to the National Museum, a Chinese Temple to a dilapidated army barracks; the works reside in places of texture and depth. Fumio Nanjo described them as places of power, owning to their prescribed use, past or present. These places speak a language of their own, having voices that add or subtract from the work. The issue is moderating between these voices.

In the end, the experience of the Singapore Biennale is about listening. It is taking the time and making the effort to hear what is taking place around you, editing out that which is not needed. In my experience belief comes through the desire to listen, no matter what the context or situation. Belief is about processing and taking the time to understanding. That takes place inside us and defines who we become.

Spring Edition, 2007

Theme: *Bits, Bytes and the Rhetoric of Practice: New Media Artist Statements*
In this edition of media-N we invite new media arts practitioners to submit personal artist statements and examples of their practice. The commentary (no more than 500 words) should describe the work and contextualize it within the field of new media practice and ideas. In addition, include a short biographical statement (no more than 100 words) at the end of your artist statement.

Event reviews: The editorial board also invites proposals for reviews of exhibitions, events, festivals, conferences, etc. See examples of reviews in the current issue.

New Submission deadline: April 30, 2007

Paper format and **media format** for *Bits, Bytes and the Rhetoric of Practice: New Media Artist Statements*

We seek artist statements of no more than 500 words, with an additional biographical statement of no more than 100 words. Please use a standard word-processing program such as Microsoft Word. PC and Mac versions are both acceptable. You may use italics, boldface, and diacritics, but do not use HTML tags (such as <p> or <i>). It is best to send the review as an email attachment in Microsoft Word.Please do not cut and paste the review into the body of an email, as formatting may be lost or changed in the e-mail transmission.

Include no more than 20 examples of artwork (this could be still images, video clips, audio clips, etc, as applicable.) Media Formats: jpeg, avi, swf and additional formats on case by case basis (mov/mpeg/wav/aiff). Be sure to attach these files separately as well as in the body of the text.

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