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SCALE



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Scale June contributors:

Brad Borevitz [bborevitz@ucsd.edu], Corrie Colbert [corriecolbert.com], Dave Singley [davesingleyforsale.com], Eric Deis [ericdeis.com], Fox Harrell [cs.ucsd.edu/users/fharrell/], Joe Winters [severalprojects.com], Joel Swanson [hippocrit.com], John Richey [johnrichey.org], Jon Phillips [rejon.org], Joseph Goguen [cs.ucsd.edu/users/goguen/], Kelly Sears [kesears@ucsd.edu], Kim Manchester [kmanchester@ucsd.edu], Mark Oliver [marko@ucsd.edu], Matt Hope [matthope.org], Michael Podolak [gl0tch.com], Nathaniel Clark [leda.ucsd.edu/~nsclark/], Neil Stuber [neilstuber.com], Pablo Hadis [phadis@ucsd.edu], Patrick Deegan. [pwdeegan.org], Phillip Shafer [sikestyle.com], Rachel Beth Egenhoefer [rachelbeth.net], Regina Sanz [rsanz14@hotmail.com], Scott Peters [papercicada.com], Vance Tran [vancetran.com]

* thanks to many others who uploaded anonymously

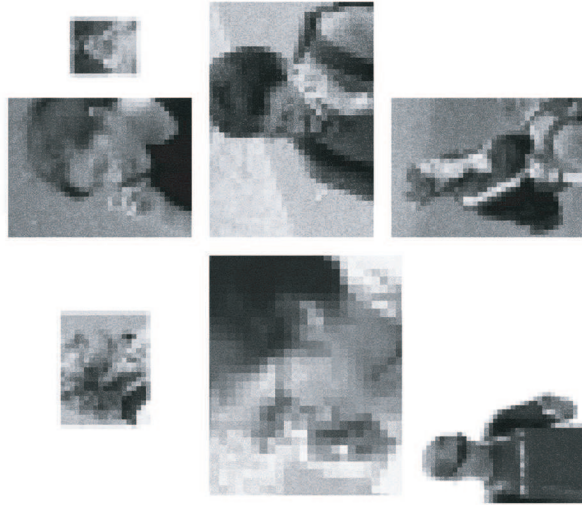
Guest Editor: Neil Stuber

Neil works with Motion graphics and makes posters and stickers in his spare time. He is a graduate at UCSD but by the time you read this he'll probably be living in Brooklyn. He would like to give a shout to Aubree for teaching him the German word for squirrel". He would also like to thank Jon and Patrick for giving him the "editor of the month" award.

<http://www.neilstuber.com> 

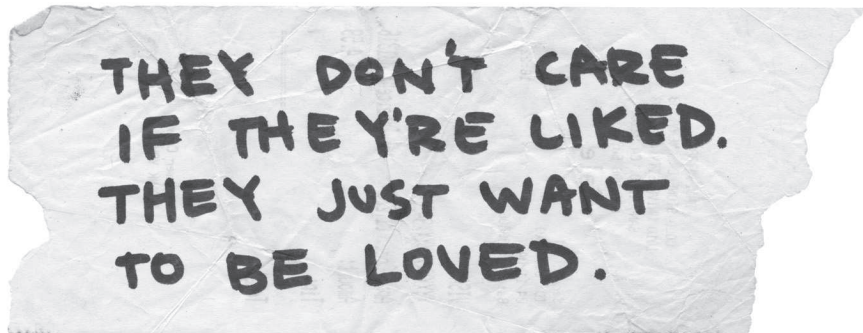
The sound system overloaded, etc, but I think the band insisted on overdriving the p.a. for the sake of intensity. These guys are getting old, but they don't care, the keyboardist with long gray hair and a pink bandana, his tone is from the late 70s and sounding too piano, when it should sound thick and from the early 70s. There is a Japanese kid in the audience in front with wild hair and he's got pink splatter painted creepers and a pink silk screened muscle t, so Tokyo. He's waving a pretend cowboy hat along with the music. A long hair in the front row dancing crazy. The singer has still got it - the moves the way he works for the people in the audience and so sweaty. He points and the crowd looks or leans. The most amazing design on the kick drum, a sun, sunrays, and the band's name - golden dawn. So simple. So good. They don't even need the name on the drum, the design says it all. Man, the singer even has his sunglasses on, even though its dark and small in here. And everyone has hair here, and its keeping time with the music, with the keys and the bass, and kicks on the sun on the bass drum. The singer is singing about evolution and reorganization, and its so relevant today. He says, "things getting crazy everywhere." He's right. The Japanese guy in the front, in the creepers is looking happy and gets it. He is also getting the blues rock riff that is washing over this place. "Anybody got in ventilation?" says the guitarist. The singer says "Yeah, we got ventilation, it's this song." And it was, it was like a second wind in this long hot set, even the audience is sweating crazy. But now there is too much straight rock, I want more jams, I want to be inside the sun. It's so hot and all the hair is sweating. Ian is looking for a seat on the floor and he's got a rolling rock, sits down. Some guy sitting in a tight Hawaiian short, sitting behind Ian in a folding chair slouches down, practically wraps his legs around Ian on the floor, its that kind of show. The guitarist wears a wicked solo face - sex face. The keyboardist is drinking SO much Jim Beam. They launch into a classic, it sounds like an anthem and the long hair in the front row is going wild and everyone is feeling it - feeling music.

-Kelly Sears



Essays on
Loneliness

Pablo Hadis



john richey. untitled. (they don't care) 2004 www.johnrichey.org

"Anybody got in ventilation?" says the guitarist. The singer says "Yeah, we got ventilation, it's this song." And it was, it was like a second wind in this long hot set, even the audience is sweating crazy. But now there is too much straight rock, I want more jams, I want to be inside the sun. It's so hot and all the hair is sweating. Ian is looking for a seat on the floor and he's got a rolling rock, sits down. Some guy sitting in a tight Hawaiian short, sitting behind Ian in a folding chair slouches down, practically wraps his legs around Ian on the floor, its that kind of show. The guitarist wears a wicked solo face - sex face. The keyboardist is drinking SO much Jim Beam. They launch into a classic, it sounds like an anthem and the long hair in the front row is going wild and everyone is feeling it - feeling music.



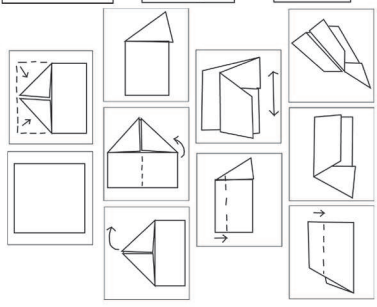
(Mark Oliver's poop. A least someone submitted right?)

From: owner-grad@jupiter.ucsd.edu on behalf of Neil Stuber
Sent: Monday, May 31, 2004 12:13 PM
To: grad@jupiter.ucsd.edu
Subject: lets go.

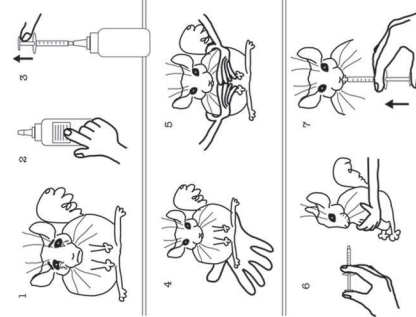
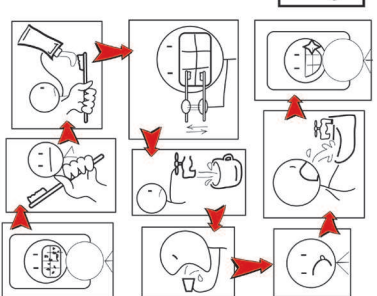
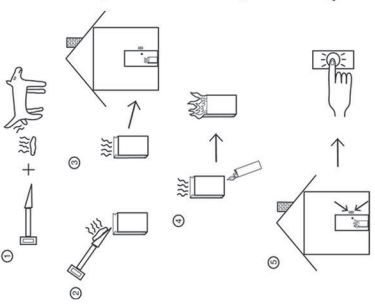
you guys are a bunch of fucking losers!

how often do you get free publishing offers?
it'll take you ten minutes to format something for this months SCALE.
Im accepting everything. **yes. everything gets in.** I need it by tonight at midnight.
I understand if you are hung over from looking at art in Tijuana, or nervous about the flea market in LA, but give me a fucking break!

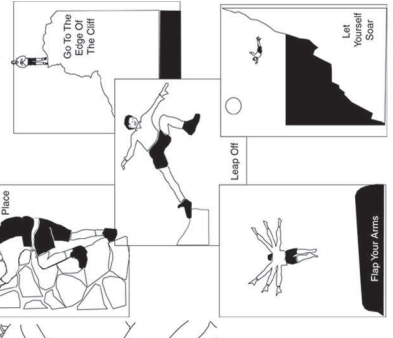
cultural producers my ass.
your friend.
Neil



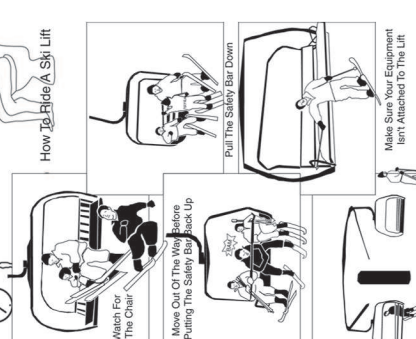
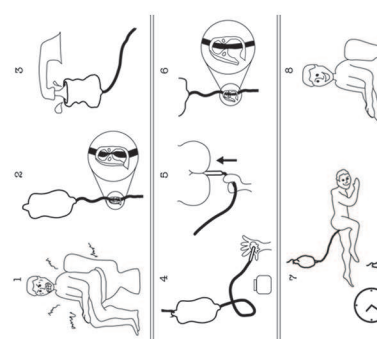
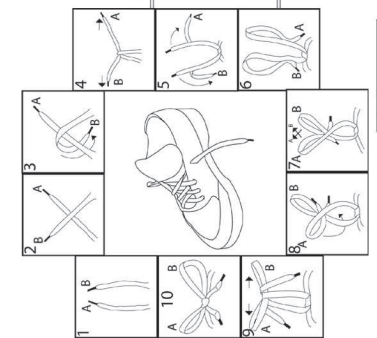
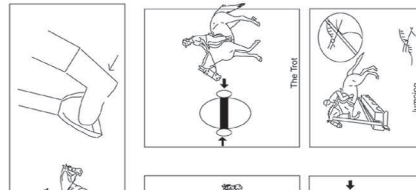
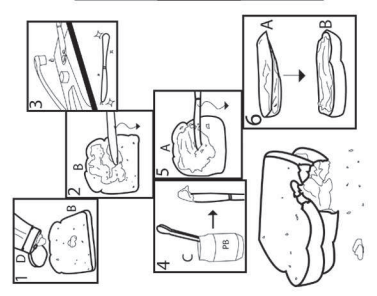
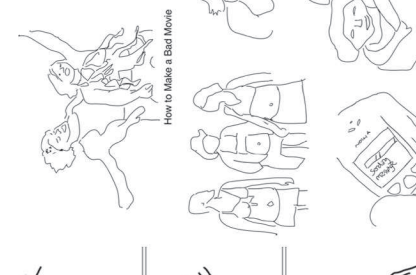
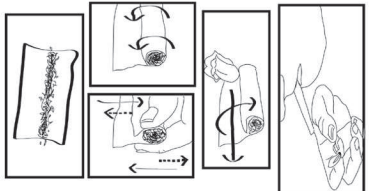
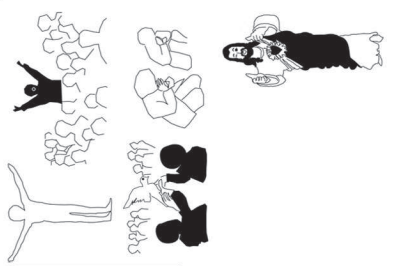
The Classic Dog-Poop Trick



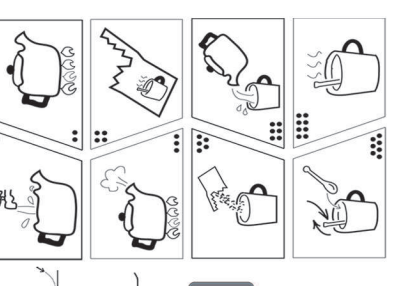
How To Fly



How to become a cult leader..



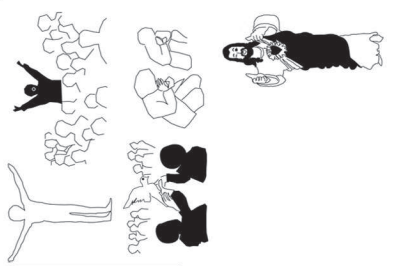
How to put on griptape



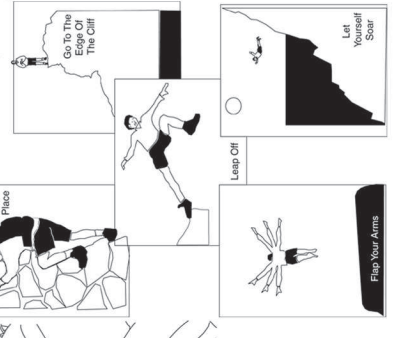
HOW TO GIVE A CAT A BATH...



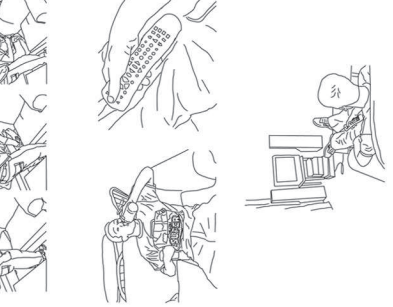
How to become a cult leader..



How To Fly

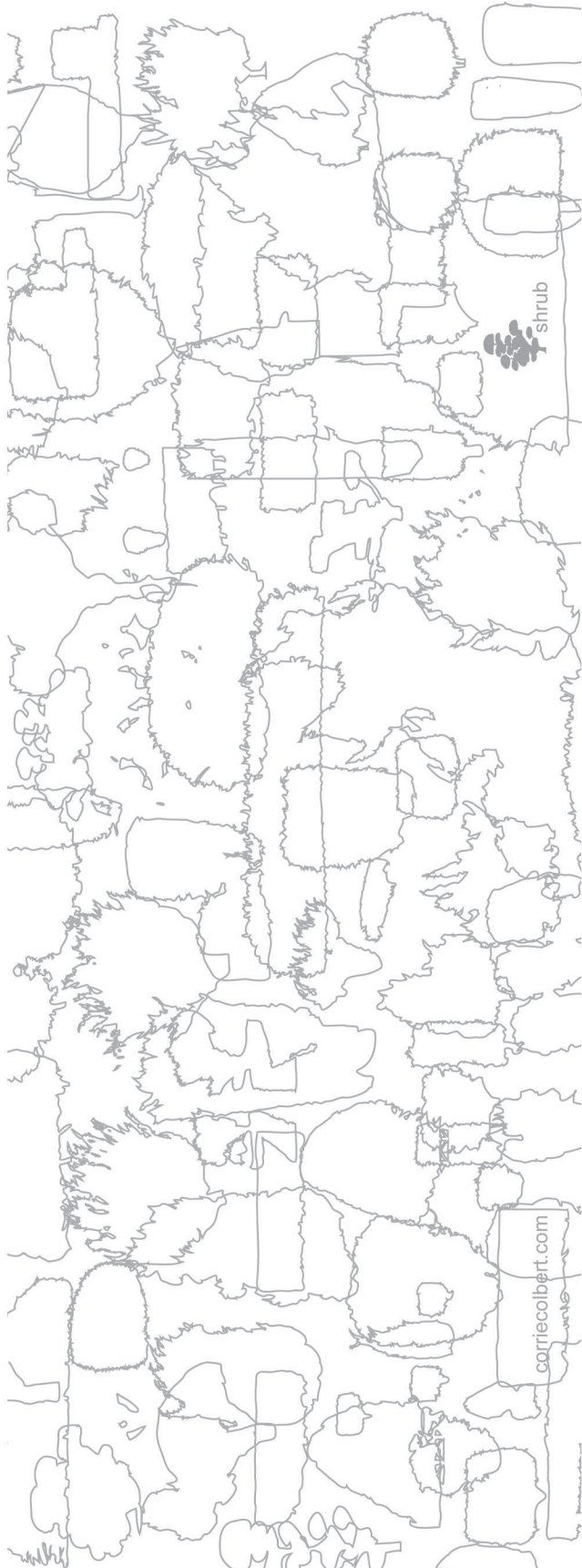


How To Ride A Ski Lift



Remember To Get Off





Megan O'Connor

How to Choose Art for your Bathroom

A bathroom can be a sterile, boring place, but it doesn't need to be. Here's how to choose and display art - and make sure the art survives.

1. Identify the spaces you want to fill. You may need to rearrange towel racks or change the way the shower door opens to get the layout the way you want it.
2. Decide on a color scheme if you haven't already.
3. Select a theme if you have one handy. A guest bathroom can provide a perfect opportunity to display your collection of Peter Pan memorabilia or Las Vegas plaques.
4. Choose items that evoke relaxation, cleanliness and general health if you don't have a collection handy - vintage vitamin advertisements or spa posters, for example.
5. Check flea markets and rummage sales for ideas. A bath room is the perfect place to let your funky, creative self take over. How about an old lithographic plate for a laxative advertisement or a series of vintage postcards of watering holes?
6. Frame the pieces well if they're paper, using archival quality mats and sealing the backs. Light, water and steam in bathrooms can pose unique threats to art, but if you frame the pieces well, they'll be fine.
7. Seal the pieces if they need it. Anything porous, such as a plaster wall sconce or papier-mâché mask, will do better in a steamy bathroom with a coat of polyurethane.
8. Make it a point to check your art once in a while. Light changes during the year, so something that's fine in December may find itself in direct sun come June, and a piece that's fine one year may take on moisture damage the next year if the backing comes loose.

Rachael Bath



**Christopher Marcom Being Dead,
Alan Turing Contemplates Emptiness
As He Encounters A Series Of Boys
Thus Arriving At The Possibility Of Computation**

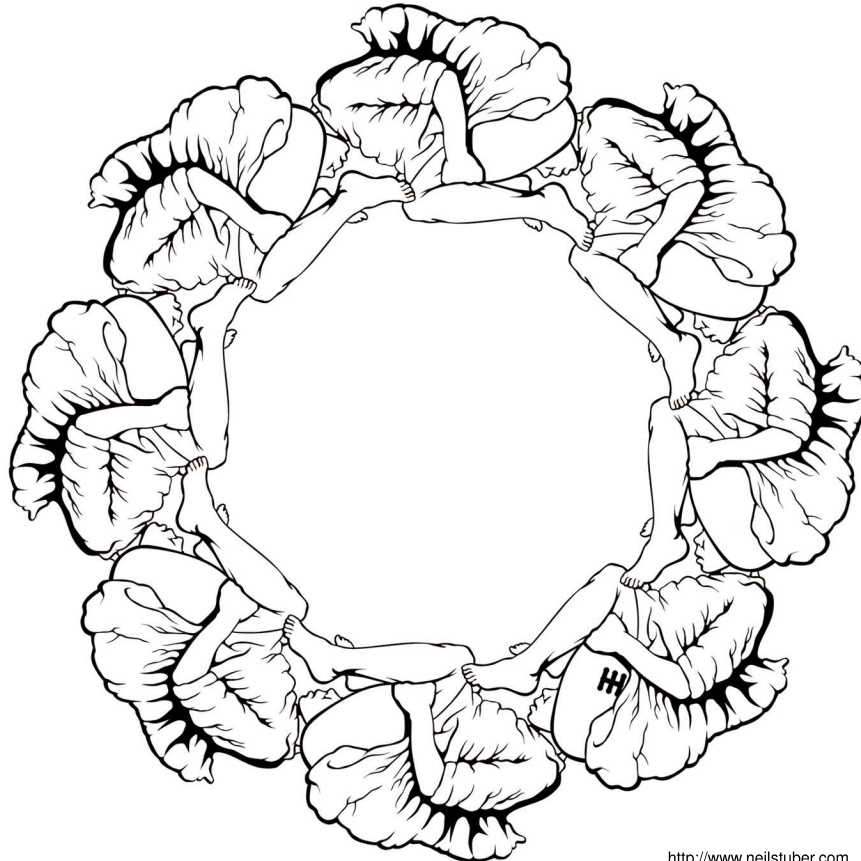
The invention of the computer is traced to what came to be called the Turing Machine after the author of the 1936 paper "On Computable Numbers, With an Application to the Entscheidungsproblem" in which it was proposed. The tragic life of the Alan Turing is here figured as an embodiment of his invention.

At 18, Turing's loss of Christopher created a painful absence that he never successfully mourned. In the cruising practices of an England still governed by the same sodomy laws that condemned Wilde to prison, Turing sought solace and elicit pleasure. Eventually, in 1950, his contact with one boy led to charges of sodomy, a sentence of chemical castration, the loss of access to the computer he built with his own hands, and a downward emotional spiral that led to his suicide.

The narrative of Turing's life makes of his flesh and ours a computational body which precedes and follows the computer's entry into our consciousness and our lives. At the level of sexuality, emotion, and intellect a certain hollowness suggests a use: the serial filling and voiding of an emptiness which amounts to work – as both the mechanism and the vocation of programmatic exertion.

We collaborate across temporal spans by inhabiting positions we imagine other's to have once claimed. Our bodies become spaces for the habits of others. This is how we work. This is how we love. This is how the machine goes and how it breaks. This is how we break.

Brad Borevitz broke this here



<http://www.neilstuber.com>

CVS

Concurrency, Versioning, and Systems

& Other Essays About Collaboration by Modern Cultural Producers

<http://cvsbook.ucsd.edu/>

Editor – Jon Phillips

Contributors – Nathaniel Clark, Patrick Deegan, Joseph Goguen, Fox Harrell,

Bryce Harrington, Matt Hope, Tim Jaeger, Neil Stuber

ABSTRACT – CVS is a collection of essays by multiple authors working in seemingly disparate fields of cultural production: the open source software world, art, critical theory & writing, artificial intelligence, sound system design, music mixing and graphic design. This book posits CVS, or the necessity for concurrency, versioning, and systems as a framework with which to discuss current creative practices involving collaboration. CVS also is a technology used commonly in the Open Source software world to synchronize source code between multiple authors. This shared repository for group memory, usually used for software code, in this project extends the notion of code to encompass other languages (semasiographic: writing and graphics). This is a discussion of the concepts of synchronization, goal orientation and the use of technological systems to enable synergistic activities by contemporary cultural producers, defined as artists, designers, computer scientists, DJs, VJs, and writers. For this sampling of the book, five essays are presented: the “Introduction to CVS” by Jon Phillips, “MESH.FM” by Nathaniel Clark, “Raposa Vermelha and the 7 Griot Machines” by Fox Harrell, “Against Technological Determinism” by Joseph Goguen, and “Scale” by Patrick Deegan. CVS Book is a weaving of concepts and topics by emerging producers that are defining the landscape for the 21st centuries' social, aesthetic, scientific and cultural contributions. To read the most current version of the unabridged book, please visit: <http://www.cvsbook.ucsd.edu/>



If you resist monolithic universalis and encourage fractured, fluid and multiple perspectives while having an incredulity toward metanarratives that are subverted through fragmentation, consumerism and deconstruction, you should WEAR THIS SHIRT.

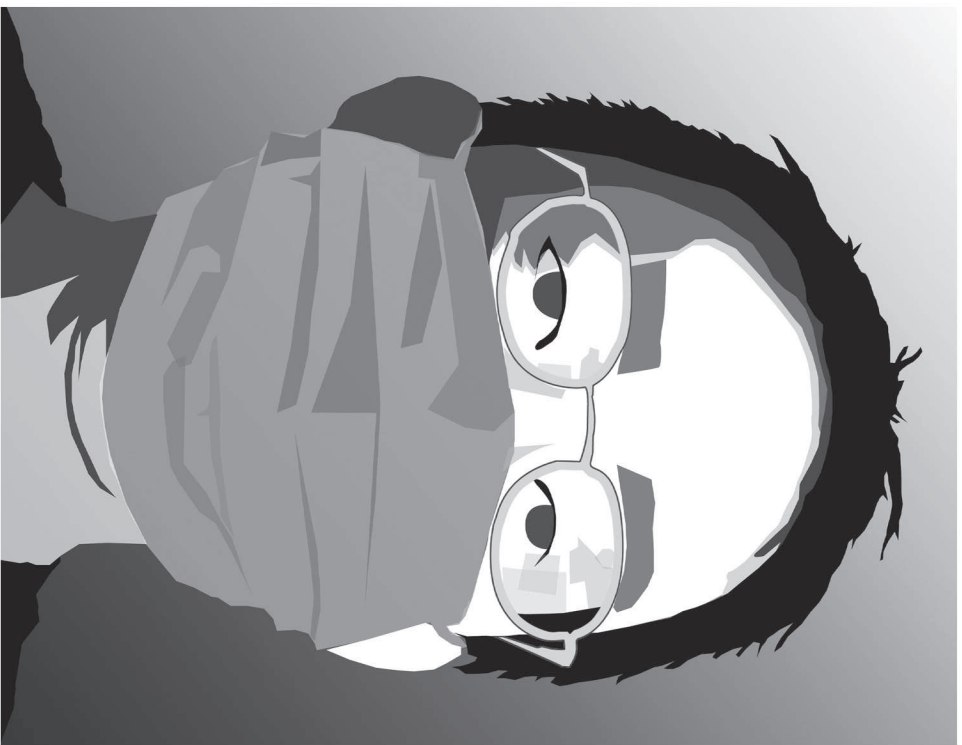


If you are one of the slow-ass, hold everyone else up in line mother-fuckers that go to the post office and make the postal worker take out every mother-fucking stamp pack because you can't decide if you want the puppies, antique toys, arctic tundras, flags, garden bouquets or early football stamps you should WEAR THIS SHIRT.

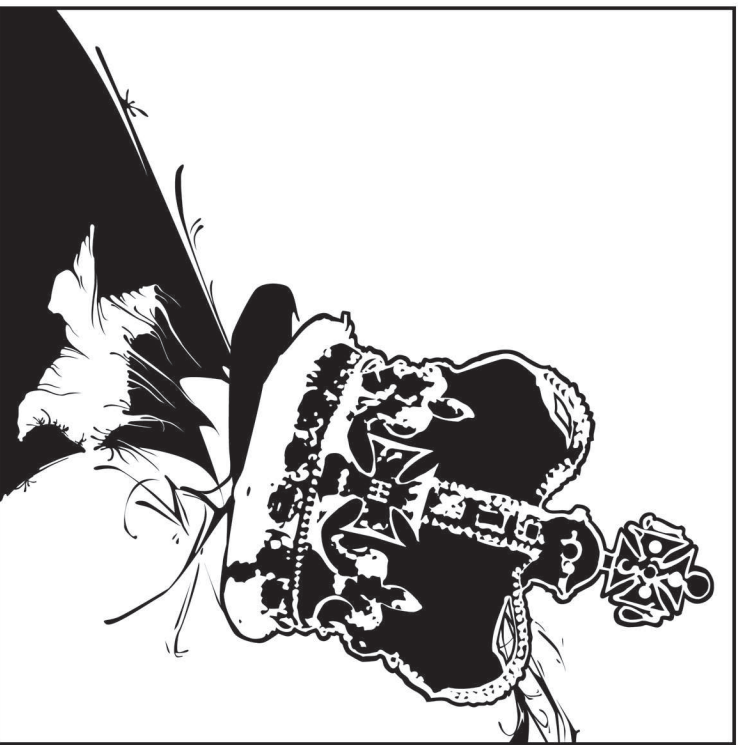


If you, after deciding what stamps you want, then present the postal worker with contents to go into a package and expect them to provide the box, tape, fill out the forms and put the stamps on the package you should WEAR THIS SHIRT.

corrieolbert.com



vanceltran.com



nelistuber.com

Introduction to CVS Book

Jon Phillips

Have you ever planted a tree? Although this seems so basic, it is a truly rich experience. I've just arrived in Columbia, Missouri, USA from the California Mount Olympus, aka academic life in La Jolla, California at the University of California, San Diego. This is my parents home, where I grew up, and its my 25th birthday. I'm sitting here resting, enjoying the cool spring breeze while sipping some green tea and talking with my Mom and Dad about future plans. Yes, I am in the final days of pulling this book together; I am quite stressed and need to gather bibliographies and final writing edits from the authors. I really need to get a rough draft sent out to various editors: But, I know that the key to connecting the ideas presented is already here, over my head, providing shade and a pleasant space for us three to catch up. It is an enormous Sugar maple tree that now towers over my parent's back yard; I've missed several years of its growth while away at college and regrettably more from being too invested in my head to notice its stature and effects.

My Mom reminds me that I planted it as an 8 year old – a tree that I brought home from elementary school Arbor Day festivities. On further inspection, I notice little green and red pod-like butterfly eggs attached to a leaf that on first glance appear like berries. I move closer and scan the veins that run down a singular leaf. Amazing! There are all manner of color changes from dark green to light brown to bright reds. Meanwhile a little ant roves around steadily on some mission.¹ Each centimeter of the leaf has a micro-world unto itself. My Mom then mentions that she sits outside when it rains and never gets wet. I tilt my head up and see that stratified sheets of leaves have grown just so that the water from the rain is collected and distributed around the tree. I realize that this is an adaptation so that water trickles down around the tree to various root systems under the ground. I then pan down to the tree's thick base and circumspect where it emerges from the ground; moving closer to the bark and base, I can see the roots moving outward, disappearing and reappearing, in expansion from the core of the tree.

After stepping back, I look around the yard and see the other brother and sister trees of various ages surrounding this maple. One tree specifically is pushing itself into the space of this tree. It has reacted by growing less on one side and in effect, this towering tree has grown more towards the east. I then scale out and remember my recent flight back from California to the Midwest. There is a progression from the artificial Southern Californian green abruptly to the reality, desert sparseness, and then gradually from the Colorado Rocky Mountains' snowy peaks to the dense lush green vegetation of Kansas and Missouri; I feel quite connected to my roots from this vantage point, but even more by being with my parents.

This tree's growth is a collaboration. I feel quite responsible for its placement here, yet realize that its care has taken so many more complex interactions. I received the tree from someone who originally nursed the sappling from a seed. Given to me by a teacher, my Mom helped me plant and keep it watered while young. The cluster of natural events that has allowed it to become a complex network and a part of other networks seems at times beyond me.

Similar to the maple tree, the complexities of associations that enable my own existence are beyond my analytical faculties. It is amazing that I am here writing this introduction, touching these keys on my laptop keyboard. And, now that I've brought my laptop outside, I've wirelessly connected it to my main computer in San Diego and am receiving e-mails from this same position. It is astounding that humanity uses silicon, the most abundant mineral on the planet, in integrated circuits at the heart of our machines. We then in turn use these technologies to further classify, simplify, reduce and expand our perception of the complexity of natural occurrences in order to further understand life (how is technology unnatural?). As Geof Bowker and Leigh Star have pointed out, to classify is human.² And, while the tree obviously is a metaphor often used to visualize the Internet's structure,³ I'm amazed that I am a part of both systems – planting collaborations and nursing networks.

I prefer to exist in close proximity with various networks of interaction and structures of participation

¹ We should ask EO Wilson or Steven Johnson (*Emergence*. New York: Scribner, 2001.) what the ant is looking for.

² Geof Bowker and Susan Leigh Star. *Sorting Things Out: Classification and Its Consequence*. (Cambridge: Mitpress, 1999).

³ The tree structure is routinely used by projects like CAIDA (Cooperative Association for Internet Data Analysis) and representation of computer file hierarchies.

which enable people to understand complexity and relate to one another. The modern Western world, and particularly, American sentiment of the self-made individual, the epistemic subject and the myth of individual author is a dominant theme of the twentieth century.⁴ This has been famously critiqued by Herbert Schiller in the 1970s as a primary media myth of the modern consumer's "individuality" structured by mass media.⁵ Also, Jack Stiller in his book *Multiple Authorship and the Myth of Solitary Genius* notes that "the Romantic notion of single authorship is so widespread as to be nearly universal."⁶ This still echoes into these first years of our new era. The view espoused in this text however is both a practiced critique and a reshaping by network of the present hegemony of sole authorship; for it is provided in this book that **all authorship is collaborative**. This critique does not deny the importance of strong individuals. Hence, why I state that I, emphasis on self, prefer to exist closer to these networks of interaction. While a standard book might have one person's name embossed onto the cover, or an artwork might be signed by an artist in Duchampian recognition of final versioning rights, this is an obfuscation of the multitude of events and associations providing the emergence of one version of a shared project, typically called a "final product."⁷

This is not some erasure of individuality, but a push towards a collection of strong individuals in a network as Manuel Castells highlighted in *Rise of the Network Society*.⁸ While there is a strong misconception that the Internet would force extreme communal activity or some sort of collective Utopian intelligence⁹, the rise of the network has led to the rise of the individual where there is a "bipolar opposition between the Net and the self."¹⁰ Sociologist Raymond Barglow states: "The historical shift from mechanical to information technologies helps to subvert the notions of sovereignty and self-sufficiency that have provided an ideological anchoring for individual identity since Greek philosophers elaborated the concept more than two millennia ago."¹¹ Thus, technology is helping to dismantle the very vision of the world that it helped create. This provides a basic theory that when one is in less proximity to explicit participation with a network (Internet and social groups), the local dominates the global; the self dominates the network. These two views are in constant opposition, yet to reduce such a struggle into a linear spectrum is to wound the intricacies of interaction. Marc Auge adds more variables to this contemporary conflict by discussing Super-modernity as not simply a reduction to a battle between collective and self, what he calls the "mass individualization of references," but more accurately combines an analysis of the overabundance of events and the overabundance of space¹²; for never before in history has the erosion of local culture been so terrorized by the new International global style, or 'world culture' consisting of these three elements, in which an individual must define one's self in more nuanced ways and through various diverse skills in collaboration with other specialists.

The goals of CVS book are to provide a framework for discussion and a context for production, with the core concept being collaboration; a reason to discuss and analyze current working practices through working practice. But practice itself seems anachronistic, as now our runtime/real time tendency as a global culture is to exist in the action – practice is now performance. With the overabundance of events "we need to understand the whole of the present" and find a working path through the "growing tangle of interdependencies."¹³ CVS book is a Google search through this growing web of connections; it is a slice of the modern cultural producer's practice. This entire project has arisen from a time period (December 2001 – March 2003) where several of the participants in this project were involved in more direct and what are considered "real time" events which encouraged rapid (almost artificial) brainstorming and realization of ideas (projects) in imitation of current media and contemporary thought.

⁴ Jack Stiller. *Multiple Authorship and the Myth of Solitary Genius*. (Oxford: Oxford University Press, 1991).

⁵ Herbert Schiller. *The Mind Managers*. (Beacon Press, 1973), 8-11.

⁶ Ibid, 183.

⁷ This concept of a final version, or product is actually false as well, but will not be argued here. Objects are in constant change and revision, much like ones collective knowledge, or an individual's identity.

⁸ Manuel Castells. *Rise of the Network Society*. (Oxford: Blackwell Publishers, 2000), 21-25.

⁹ Pierre Levy. "The Art and Architecture of Cyberspace," in *Collective Intelligence*. (New York: Perseus Books, 1994).

¹⁰ Castells, 3.

¹¹ Raymond Barglow. *The Crisis of Self in the Age of Information: Computers, Dolphins, and Dreams*. (London: Routledge, 1994), 6.

¹² Marc Auge. *Non-Places: Introduction to an Anthropology of Supermodernity*. (London: Verso, 1995), 40.

¹³ Ibid, 28.

The tools did not determine action, but the limits of their use, or rather participants' ability to perceive uses, in relationship to social application of media theory and computational metaphors created structures for participation.

The actualization of this book highlights the transition and adaptation from those experiments in favor of networking between historical events and present action on this book in prediction of future directions. The push and hype of immediacy of experience has saturated discourse on digital cultural practice. Walter Benjamin, Roland Barthes and others are often quoted in trying to further satisfy the cultural producer's work with constant closer proximity to their own identity, an erasure of the space between both. This shrinking latency of experience, possibly similar to Moore's Law (but for cultural production), is satisfied with progressively more efficient technological implementations. And, just as it might be the Age of Mechanical Reproduction¹⁴, this does not mean that technology determines social organization and activity as Raymond Williams states through his critique Benjamin's work. Similarly, Jay Bolter and Richard Grusin theorize that a viewer unswervingly wants hypermediacy and transparent media where "...to get past the limits of representation to achieve the real" is what is desired.¹⁵ This assumes that the ultimate satisfaction of a viewer might be the fulfillment of a directly mapped real time experience and interaction. This does not take into account the viscosity of the human body – the limits of self¹⁶, but rather promotes what I will call an accelerating **real time determinism**, a force that many authors from Lunenfeld to Virilio to Levy have promoted as somewhat Utopian and beneficial to society. In spite of these dominant digital cultural discourses, CVS book problematizes this view in favor of finding a better way to collaborate between multiple authors, and also a bold realization that real time systems are not enough to develop more thorough arguments. Not all arguments can happen as real time conversation between multiple participants. Party conversations from a distance are homogenized noise, whereas focused thought, or more developed arguments exist as asynchronous distributed authorship between participants. This is conversation on a slower time-scale, where the unit of conversation is larger texts that cite other sources and build upon arguments over time, rather than the immediate desire of the real time determinist's direct person-to-person confrontation.

The question then is how can scholarly and more thorough texts be produced using new methods? While in contemporary society there has been heavy demand for technology to support conversation with chat, telephones, blogs, and media production; the push for adapting these systems to a deep and wide discourse has not been as high of a priority as the real time variety. The technology has existed for some time to support this type of collaboration similar to how the technology for Voice Over IP (VOIP), blogging, and instant messaging has been possible, yet didn't accelerate for ten to fifteen years from possibility to feasibility. Perhaps this complex phenomena happened only after technological socialization, the inexpensive availability of smaller devices, and the willingness of contemporary society to accept a higher rate of communication as being necessary to support business and personal life.

CVS has enabled discourse to move forward because of the local social necessity for developed continuous thought rather than fragmented bits of ideas. Something about the saturation of fragmented media culture, mass media's proliferation on multiple surfaces (televisions, projections, flat screens, on cell phones) in multiple spaces (bars, shops, kiosks, airport) is quite tiring. The hyper-twitch of modern media and coffee-culture is quite temporary; people do need downtime and do need sleep. Also, as people get older, they want to connect with history and regulate the rate of input, computing, and output; yes, our bodies do age and we do have some control over this. The faster one moves and multi-tasks in emulation of modern technology and fragmented mass media, then the more one consumes¹⁷; less is culturally produced (ideas and thoughts) and more goods are passively consumed. This has been embraced by modern society and is why our children are so twitchy.¹⁸ But, how can relationships between people become stronger? How can we develop a higher quality connection between multiple threads of the past, present, moving towards the future? How can we produce coherent statements and develop

¹⁴ Or, was that the last era.

¹⁵ Bolter, Jay David and Richard Grusin. *Remediation: Understanding New Media*. (Cambridge: The Mit Press, 2000), 54.

¹⁶ Please read Joseph Goguen's essay in this book, "Against Technological Determinism" for a great argument against this type of media determinism, which is also a form of technological determinism. However, also note that Jay David Bolter and Richard Grusin are aware of this argument as pointed out by British Marxist Raymond Williams in their book *Remediation* on page 76.

¹⁷ Schiller, 25-26.

¹⁸ Ellen Seiter. "Children's Desires / Mother's Dilemmas: The Social Contexts of Consumption." *Sold Separately: Parents and Children in Consumer Culture*. (New Brunswick, NJ: Rutgers University Press, 1995), 7-50 & 235-238.

more thorough arguments?

The more thorough text, or longer essay requires more time to create and read than a real time conversation of similar length. Whereas quicker pop songs, International global style in modern cities, and unlimited broadband web surfing per-month are enticing, they are also quite limiting. For one can only take in so many news feeds, have so many friends, and fly to so many cities in a year. One must understand the limits of the body as our eventual death is inevitable. It is a hard limit, but is one type of barrier for information gathering. The library is only open so long, and while the Internet might always be on, people are not – we break down and cannot immortally consume information. In order to mediate, content must be filtered. Thus, we use Google to search for images in a haystack, or a store-locator from a website to find a local pizza joint. Also, rather than wasting two plus hours at an anonymous Hollywood blockbuster, or on a full-day movie download from Suprnova.org, the heuristics of data mining and selectivity of content¹⁹ is desired now by many. Beyond existing in the hyper-moment, or being determined by the increasing promixity to real time experience, which can never actually be achieved, one needs space and time to research and relate ideas to history and other people. This position is not neo-Luddite, nor reactionary to some weak idea like information overload, but rather is a significant place from which to create thorough (or more connected) content.

Much like the trusty book, the need for scholarly texts is not going anywhere for the foreseeable future. In the Epilogue to *The Future of the Book*, Umberto Eco projects the current need for books: “Even if printed on acid paper, which last only seventy years or so, they are more durable than magnetic supports. Moreover, they do not suffer power shortages and blackouts, and are more resistant to shocks.”²⁰ While this is true, the gap of benefits between the book and the e-Book, as open content author Cory Doctorow has trumpeted, is shrinking.²¹ Thus, as cultural producers, the problematic between real time and render time²², book and e-Book, represents an available slot which needs to be filled with content. CVS book is in between both of these dichotomies as it is created on-line in both real time and render time (wait time), and exists as an electronic version, but will be published onto paper for future iterations. So why not increase the efficiency with which this type of media is developed, or increase the distribution of these texts out into the world through electronic augmentation? What new possibilities exist for this format? CVS book is a remediated book; it is creation of scholarly discourse, but still further it is the application of our newest social software and successfully employed social practices (tried and true Open Source software and community practices) that extend the book as a form. Carla Hesse in the same 1996 volume (at the beginning of the public Internet) postulates that a new mode of temporality provides public communication (fostered by new technologies) and is one in which public exchanges of written word will happen in real time, reshaping the literary system.²³ In the public sphere this has obviously happened (and continues to progress) with the pervasiveness of cell phones, laptops and instant messaging, but this has not overtaken the need for the literal non-hypermediated text. Isn't that what the individual already provides and has learned so well from our machines? There still is a need for the buffer, for memory, and for the book – for if real time communication is to dominate the scholarly text and book, similar to communication, there must be a memory of previous conversations and cognitive foreshadowing of what has and will be talked about – is written discourse not an iteration of this conversation? When one watches a streamed video, is the buffer not filling? Are books not already storage mediums for our real chat logs? Well yes, as Eco noted, paper has a longer shelf life than our modern magnetic storage media, but is still a form of storage.

This book employs three primary uses of **CVS**. **1)** It is this **book** titled CVS, Concurrency, Versioning and Systems which is a context and reason for participation by multiple producers. **2)** It is an **Open Source technology** called CVS, which is used as a way to synchronize writings between multiple authors. **3)** It is the **lead essay** written by myself which defines a **framework** for discussing successful collaboration on shared goal-oriented projects. These three contributions provided are an unearthing of current working practices by writers, artists, deejays,

¹⁹ As Lev Manovich would say in reference to Apple Computers famous ad campaign, “Think DJ”

²⁰ Umberto Eco. “Epilogue,” in *The Future of the Book*. ed. Geoffrey Nunberg. (Berkeley: University of California Press, 1996), 299.

²¹ Check out Cory Doctorow's great presentaiton on the future of the eBook, which he says is neither E, nor Book, in a tongue and cheek fashion. See Doctorow 2004 in the bibliography.

²² Yes, I wanted to orphan this idea, as real time is the opposite of render time. Rendering implies that a process will take some time rather than be instantly gratifying. Possibly the opposite to real time is render time.

²³ Carla Hesse “Epilogue,” in *The Future of the Book*. ed. Geoffrey Nunberg. (Berkeley: University of California Press, 1996), 32.

veejays, theorists, programmers, and developers, expressed through the development of thorough texts.

While this book has tried to avoid the current visual and textual noise of the inclusion of a homogenization of many semasiographic systems (graphics, texts, etc) as textual remediation of explicitly computational media, this book develops ideas primarily through written text. Yet, much like the 8 year old version of myself planting the young maple sappling, the planting of this book project delineated from wanting to facilitate deeper discussions, and connections with disparate concerns in order to catalyze activities and interconnections between multiple people. This will truly be a success if the ideas contained within are nursed, watered, and distributed, to be further seeded elsewhere.

I will briefly outline a few major ingredients of this text with a specific local bias that presents the context for this work and will end with a short chapter by chapter connection of the writings. This book is designed with multiple concepts, where each essay can standalone as its own seed for future endeavors. If you would like to skip ahead or around in the texts, vis a vis hyper-linking, then please go right ahead. For the duration of this book, when the title of this project is presented, it will be called CVS book, CVS as framework will be identified as such, and any unmodified use of CVS alone is in reference to the Open Source technology CVS.

Historical Context for CVS Book

The history of this project is intertwined with MESH.FM, the journal Scale, and current local practice. Also, the majority of authors represented in CVS book are in the early career-building stages and as such, this text has much to do with the use of current technologies and the value of contemporary media. Very much are the author's and myself reading about and participating in the latest Hip Hop, video games, electronic music, Lisp programming, Jamaican sound system design, computer hacking, Open Source culture, street art, Capoeira, graffiti, and social software. The primary interconnection between the participants is academic research at the University of California, San Diego. I particularly chose to attend UCSD, rather than other new media-centric programs in the fall of 2001 in the Visual Arts Department because I intuited the program was near a threshold of development where I knew that I could connect together the different resources available and push activity to a crest. I wanted to initially study with Sheldon Brown and Lev Manovich, both tops in the field. Also, UCSD offered excellent funding, lots of free space, and time to experiment. I often joke that UCSD's best offer though is free fast Internet – a major catalyst for the modern cultural producer.

Eventually, the lack of activity surrounding San Diego and UCSD's art and contemporary culture, the downside of living in San Diego, led to the creation of MESH.FM²⁴, an emergent collective of people, which heralded that there were no local informal spaces for creative experimentation. The lack of activity in the local scene, the use of computational and DJ metaphors, bountiful resources, and most importantly, people that could connect these resources together, catalyzed the formation of MESH.FM. The events that MESH.FM generated – sound rivals, parties, global web streaming – and projects – ad-hoc supercomputer cluster, multiple sound systems, and open huts – in some part still exist (which Nathaniel Clark expounds upon in his essay). Unfortunately, but positively, the group could not support the consistent roll-call for real time experiences, and the resources, both conceptually and economically, ran out.

MESH.FM's application of metaphors linked with the three fundamental forms of deejaying as described in Ulf Poschardt's book, *DJ CULTURE*, I underline them here to provide a template for further discourse.²⁵ The first is **mixing** where two records are mixed to create a third form. While art has been dealing with the concepts of appropriation, re-appropriation, and collage, mixing takes its cues from the technological innovation of the original acetate record technology, inexpensive playback, and the overflow of newer iterations of pressed content (optical CDs) onto a medium in order to transition between multiple sound sources.²⁶ The second form is **remixing** which is “the deliberate diversion of a piece towards a particular context, a particular purpose. The remix brings a greater or lesser amount of the old piece into a new form, and according to the remix one might speak of a new song or a carefully renovated form of the old song.” The remix resounds in the re-development of past (art) histories as “a

²⁴ See Nathaniel Clark's essay “MESH.FM” at the end of this book for further edification on the issues I touch upon.

²⁵ Ulf Poschardt. *DJ Culture*. (Quartet Books: London, 1998), 32-25.

²⁶ Ibid, 33.

remix [that] can not only adapt to a new context, but also make an old (and brilliant) idea contemporary.”²⁷ The third form is the electronic entrapment of sound, or **sampling**. It makes possible the digital storage and manipulation of all kinds of sounds. Sampling makes it possible to transfer authentic sounds into an emerging artistic product.²⁸ This immediately brings to mind an array of common objects, or a bank of metaphors, all at a user's disposal to construct on demand (COD) in real time. While these deejaying concepts were originally applied to the art of sound manipulation, they were remixed for contextual, physical, and conceptual operations on objects, histories, styles, and events. These powerful forms are updates to the traditions of appropriation, quoting, referencing, and stealing with the added practicality of technical application through computational and scholarly implementations.

Similarly, computational metaphors were employed to broaden the artistic possibilities of MESH.FM. Specifically, the primary physical interfaces of modern computer systems such as input, computing, and output, were used through common language (conversation) to discuss the manipulation of physical resources. This along with reading as many O'Reilly computing books as possible, like *Learning the Unix Operating System*²⁹, provided a rudimentary understanding of Free and Open Source culture for several participants. New media clips, people, funds, and food would enter into a context, i.e., from 5 – 9 PM on a Friday night with tens of people at a time entering, defining and exiting a space (such as a gallery in San Diego or rented empty store-front in Los Angeles). Upon entry, these “resources” would be computed (mixed, remixed, and sampled) by the people present and then they would output further remixed media and social action through the enhanced conglomeration during linear interaction. Eventually, through a growing interest (primarily lead by myself and Nathaniel Clark) in Open Source culture and Linux, these ideas, a subset of computing, came to dominate the metaphoric mixing and sampling of the MESH.FM ideology. Specifically, the recontextualized aphorisms of Open Source like “release early, release often” and “patch first and discuss later,” as well as more unspoken reductive remixes, or uses of the terms “open” and “source,” further extended MESH.FM into new territories. In addition, the actual technology of the Open Source revolution began to be used as in the realization of the Brainstorm Linux Supercluster, and in my own personal work. The actual adoption though of Open Source and my induction into these communities did not happen till approximately six months after the last event.

When MESH.FM eventually ran out of resources, and the main participants needed personal down time, I dedicated my newfound peace to Open Source Software and culture; I wanted to learn. I generally avoided large groups in favor of a tight-knit local network of friends to focus my mind and squeeze more time out of my schedule to learn Linux. During this low-key time, the relationships between the author's in this book grew stronger as another local network flourished from local nourishment; the network of friends, scholarship and development progressed outward from the strengthening of the individuals which in turn reinforced the local network.

Thus, the ultimate integration between the rapidity of MESH.FM and the newfound focused scholarship first took the form as *Scale*, a journal of aesthetics and computation primarily developed by myself and Patrick Deegan. In a novel fashion it is a web-based front end for a PDF submission system where the remediation of newer media is placed into a rather traditional form, the scholarly journal. From this monthly periodical it became apparent that longer essays needed to be collected, edited, and published into a cohesive whole.

Originally, CVS consisted as a project strictly between four authors: Linda Kim, Neil Stuber, Joel Swanson and myself. The original concept indirectly related to this new technology I used, CVS, and thus the book became about versioning and collaboration between us four designers. Each piece of the book would be open for anyone to create graphs, charts, text and graphics onto the pages, yet there needed to be some simple way to negotiate the transactions between the four authors. The specifications for the project were 100 pages, full color and a decent budget to print a few thousand copies. This iteration of the project died out when the resources were no longer available, people's schedules shifted and it seemed that the visual noise of current graphic design books turned out to be not nearly as interesting as a scholarly collection about collaboration. Conceptually this project also seemed dry because it had the red flag of many a nineties new media cliché. Like a project MESH.FM created where a small generator powered a microphone and speakers to project the sound of the generator itself back out

²⁷ Poschardt, 33-34.

²⁸ Ibid, 34-35.

²⁹ Grace Todino, John Strang and Jerry Peek. *Learning the Unix Operating System*. (Sebastopol, CA: O'Reilly & Associates, 1993). Also, check out <http://www.oreilly.com> to learn about all the wonderful O'Reilly books, of which many can be found for free on-line.

into the air, the question became, why is this interesting? Joel Swanson asked why the book couldn't simply take shape as something tangible like a children's novel. He asked if a specific instance might be better than using this old "recursive discursive" approach. I agreed with his assessment. Why is it necessary to self-referentially construct a system that both creates content (scholarly texts) and is about the creation of these texts when one (or a group) could create multiple brilliant examples using this system? Lev Manovich's Soft Cinema project handles this beautifully with his first movie "Texas", constructed on the fly using his algorithmic cinema generator developed in association with ZKM. Later, his developers, under his guidance, worked the kinks of the system, and he released a second iteration, "Mission to Earth" at the USC Art in Motion festival V (April 2004). If the system is only about itself, then the progressive develop of content will be constantly intertwined with the system of development. Thus, I began to redevelop CVS book as a collected set of essay about collaboration rather than clichéd recursive content.³⁰

Eventually, CVS book became a hybrid project using a WIKI and CVS to collect authored texts into a centralized location so that others could view and modify the content. Whereas the original approach sought to have a limited system that didn't contain content, this time I developed the basic summary and framework of concurrency, versioning and systems in order for multiple people to plug in their own interests into the book. Rather than allow the book to develop into a homogenized noise-state, a light structure outlined the initial project's intent, a more extensive project description and roadmap of deadlines. Overall, this iteration of CVS works because of application of Open Source technologies and enculturation of Open Source practices learned from the nine months I have spent as an Open Source developer on Inkscape, a scalable vector graphics drawing tool. My question, as I presented at Berkeley's 040404 symposium and UCLA Hammer's Digital Storytelling conference (along with Patrick Deegan) in April of 2004, asks if CVS can be used for creative content development beyond its normal use on software code? The answer is a confident yes.

Publishing, Publishing Models, and Scale

Beyond the Gutenberg years till the Penny Press of the 1830's to artist Samuel Morse's telegraph and eventual recycling by mass media and now Internet, each new media has brought its own features to publishing. Also, multiple media have brought multiple publishing models. **Publishing** is the activity of putting information in the public arena. Although this can mean something as simple as making an announcement in a pub or market square, for some centuries it has usually referred to the business of producing books, magazines, newspapers and other printed material. A modern book **publishing company** (or **publisher**) is usually involved in buying or commissioning content, editing it, and preparing it for printing. And, it usually also controls the advertising and other marketing tasks. However, it is usually not directly involved in the retail sale of the product.³¹ Thus a **publishing model** is a structure within which publishing occurs – a framework for functionality. A generic publication model implies dealing with some form of writing, as in a book or magazine in high circulation to mass audiences.

The particular media-centric debate between publishing models locates CVS book in a discussion of the periodicity of media, which connects with the earlier debate about the scales of time: real time vs. render time. The more frequent the periodicity of a media, the more aptly it can be used to connect conversation, or permit the possibility of immediacy. The lengthening of the period between development and publishing, time between issues, and the one-time only printing of a book, all engender features (and limits) to the actual content of the media. While this collection does not espouse a McLuhan-esque media determinism, it is important to be able to map the media battleground in order to control what will be effected by each media's limits. On the subject, McLuhan states: "The railway did not introduce movement or transportation or wheel or road into human society, but it accelerated and enlarged the scale of previous human functions, creating totally new kinds of cities and new kinds of work and leisure."³² Similarly, the choice of publishing a monthly magazine compared to a 500 page book, will require different organizational schemes in order to assemble the released version. These complex qualities, also

³⁰ Please see Manovich's Soft Cinema project: <http://manovich.net/softcinema/index.html>

³¹ <http://en.wikipedia.org/wiki/Publishing> is a fairly general community-generated definition of definition of publishing.

³² Marshall McLuhan, *Understanding Media: The Extensions of Man*. (Cambridge: The MIT Press, 1964), 8.

called limits, presented by each media are not so much located in the object or the content of the media, but are contributed to by social practice and context, rather than an object having a rather Marxist embedded production value. Is a 100 page weekly magazine like Newsweek the place for a 40 page academic discussion relating the American Revolution to terrorist cells? And vice versa, is a 500 page book the proper place to collect weekly unanalyzed news and sports statistics? Rather, each human-made media is a form for certain types of content – always shifting and remediating newer media and their contents in the process of actualization.

Therefore the random short periodicity of on-line media (websites and blogs) and regularity of mainstream print media (magazines and newspapers) are polarized against the slower developing media such as the book and the scholarly journal. While the magazine as a format is released monthly and many times weekly, as in Newsweek or Star Magazine, scholarly journals are known for incredibly lethargic development cycles measured in years (approximately one to two). Further still, books with any sort of research take just as long if not longer to develop and publish. During these long development cycles, on-line publishers churn out daily content which is instantly gratifying to an author (or group). While magazines have a more developed consumer model of sustenance and editors in place that filter the mis-use of words, facts, quotes and grammar rules, the personal web publishing model has a local network that understands the nuances of a one's particular language and that catches what an editor would normally accomplish. Also, local on-line publishing is further adapted by blog engines through the implementation of a commenting engine as part of publishing on-line; comments are entered by peers, creating feedback and further comments. There are limits to this system, as the instant (real time determinism again) presents certain possibilities and limits others. How will this type of system be distributed? Also, how thorough is the local content of a blog? Does it connect with various histories, or resources outside of the local community of bloggers (and readers)? Therefore, CVS book is created with the longer development and release period media's (books) surrounding wont of scholarship, but developed at speeds that are closer to the rapid-fire release schedule of the magazines, journals, and on-line informal publishing.

Prior to CVS book, the gradual rise of the journal Scale became the first foray into this fast and slow media approach. There had been an urban myth of many a Southern California new media journals but very few results. No advanced on-line or print journal existed as of January of 2004. Tim Jaeger and I placed the first brick in Scale's development when we started a mailing list connecting together like-minded digital practitioners; he came up with the name and I engineered the web site's code. The initial Scale mailing list consisted of fifteen people all within the same local conversation circle, all too busy to set-up a weekly meeting at a stable location to discuss relevant topics. This development then ran as a background process until Scale the journal rose to prominence and I consolidated both into the Scale community. The creation of a successful community that exists in both physical and virtual space must come from consistent connections between members of that group. A mailing list provides the social glue for various activities and is simple enough that most user's understand the technology.

The brilliance of not being too connected, not atrophied in thought, and not traveling too much, allowed myself, Patrick Deegan and Neil Stuber to initiate Scale, originally titled "Journal," in a matter of 5 minutes over some pints of Stella at our favorite La Jolla spot, the Shack. So much scholarship already exists dormant and unpublished; plus, the rhetoric of developing a publication had underwhelmed us. We realized that between Deegan's interest in scholarly writing, Stuber's graphic design chops, and my technical skills, we could build a website (<http://scale.ucsd.edu/>), send out press announcements (from the mailing list), solicit for content (personal e-mails), design, and print an entire journal in the matter of hours. A day later, with much copying and printing of articles, emerged "The Journal." It had a fresh color cover with an icon of an open book, ads for events, longer essays, and a lo-fi staple bind connecting multiple contributions together. This Journal ran out within hours of its initial release announcement – the participants had picked up shovels and helped fill a need.

For the second issue The Journal community decided to change its name because as Scale-list member (and later editor) Temenuga Trifonova pointed out: it seemed like a one-time joke and the mailing list and journal communities coincided.³³ The barriers for participation were lowered from the beginning so that all that a would be required of a contributor would be to submit a PDF file under 10 megabytes at <http://scale.ucsd.edu>. The user could adhere to these soft barriers of style and file guidelines if they wanted to, but they still are not technically enforced. Rather, a contributor would hopefully feel motivated to follow the guidelines in support of their own social reputation in the community. The key to seeking broad participation is to employ an easy submission process; this

³³ Plus, we must learn from media conglomerates and consolidate energy and resources (joking!).

then allows for a high quality monthly journal that represents the interests of the contributors. In effect, Scale's motto has become the “local going global” in effort to maximize getting friend-of-a-friend (FOAF) contributions in particularization rather than globalization and in feasibility of actually pulling together immediate material that is relevant to the participants who are also the readers (rather than having to be a scavenger for people's media).

Still, Scale did not lend itself to the more focused collaboration of longer scholarly texts – it is still too much of a scavenging of people's wares already completed. Also, Scale only allowed for the submission of PDFs where the guest editor each month is more of a DJ where the submissions selected each month are for inclusion in the print version.³⁴ The submissions are mixed according to their content and the editor's own biases as the criteria for a month's issue. Thus, Scale's shortcoming is the lack of collaboration on texts and graphics submitted, or rather, the scale with which edits occur is not in-line with the traditional role of an editor, but more zoomed out to the role of a DJ track selector – now a media selector.

CVS book is a furthering of scholarship that allows for multiple authors to work on texts together. Editors of CVS book are more like producers or engineers working in a studio rather than the real time editing of a DJ. This system permits texts to exist on-line and operates distributively in closer approximation to Open Source Software development moreso than the traditional extended time and resources that a single authored book consumes. Whereas an equivalent book written by a so-called author would take a year or more, CVS book has taken approximately 1-2 months for development. Furthermore, where the current model of authorship allows for edits of texts on the scale of years, CVS allows for the versioning of texts on the real time scale (now). With the proliferation of on-demand printing and free PDF readers, CVS' model of publication is ready for when e-Reader's (Doctorow 2004) and inexpensive electronic devices will augment and stand alongside the persistent book. Book's as objects are not disappearing anytime soon, as Eco³⁵ and others have commented on, because people want something to read when they go to the bathroom, or if they want to focus on reading alone. A laptop or electronic device allows too much almost. I can't read more thorough texts on my laptop because of the constant flow of e-mail and instant messages from my student's popping up. (Yes, I should just shut these devices off, but I need them on as they support my working style, and provide counterpoint for this argument).

The remediation of new technology onto old media is of utmost importance in the renewed interest in scholarly texts. It is obvious in reading some media determined magazine like *Wired* that the desire for hypermediacy of the modern information society citizen demands similar windows on the world as provided by web browsing on multiple devices. These popular magazines are very much a remediation like CNN's *Headline News*' multi-mediated multi-windowed interface.³⁶ Similarly, CVS book is a remediated book, where the newer real time social softwares and modern technological systems enabling software development have augmented the standard published media (publication) and the publication model itself.

System of Building the Book: Automation and Autonomy

The texts in this book were originally all written on a basic WIKI system. The roadmap of deadlines were placed on-line along with a project description that detailed what the authors were working on, both posting their texts and and also editing others simultaneously. This simple system of production employs the standard network of social software used in Open Source development, as well as the CVS group-oriented project development framework.³⁷ Eventually this system transferred to actually using the technology CVS in order to synchronize the style formatted OpenOffice.org document writings between all authors. I then custom wrote a series of BASH and PERL scripts as a way to use the CVS system to compile the entire book into nightly builds – as a collected PDF file.³⁸ The CVS repository contains all text files, the table of contents, frontmatter, and graphics necessary for the

³⁴ Please note that all submissions remain on-line even after the final decision for the resource-limited final version is a choice selection of the monthly collections.

³⁵ Eco, 299.

³⁶ Bolter, 189-192.

³⁷ Both of these concepts, the network of social software and CVS framework are discussed in the upcoming essay, “CVS: Concurrency, Versioning, and Systems.

³⁸ The main website for the project is here: <http://cvsbook.ucsd.edu>. The CVS file tree is here: <http://cvsbook.ucsd.edu/cvsbook/src/>. The nightly PDF builds of the collected book are available here:

final book. First, I had to write a simple script which converted each text file into a PDF. Then, I built a script which reads a makeshift table of contents to combine, in order, the final PDF. The final touch though, and something that I am now using for Scale development, is a page number generator which plugs the page number sequentially to each page. I will eventually adapt this last system to print the CVS book info, chapter name and authorial credit for each section. This system is therefore automated to do the heavy repetitive lifting so that viewers (what are called end-users, or readers) can observe the growth of the project over time without having to learn how to use CVS. In many respects, the final CVS book build is a compiled text from all author's ingredients.

The importance of using the technology CVS as a creative tool and the Open Source development model, including social software, all place the importance of communication onto the actual user's of the system. The autonomy (individuality) of a user is privileged. Whereas monolithic groupware projects and digital whiteboard systems seem like they should be the category-killer for group projects, as they represent a centralized space for people to project their ideas onto, they are actually failed experiments in interface design. People cherish diversity, as is represented by skinning and customization of users' desktops. The network of social software (chat, CVS, mailing lists, etc) is a cluster bomb-like approach where the stable ingredients in a developer's toolbox are the standard communications protocols (HTML, Jabber protocol, TCP/IP). This is unlike the Microsoft-style imposition of dominant uber-ware in favor of a user's preferred choice of software. For social practice maps onto virtual practice; cultural software maps onto software; and thus, any technology that is used, must catalyze social action rather than provide a highly tailored mouthpiece – a high-barrier filter – that disables usability and limits multiple ways of accessing the same content.

Scope and Organization of this Book

While CVS is the main essay in this book, the major concern is to gather contributions from other people to bolster the claims pronounced by concurrency, versioning and systems. After this book is complete, this section of the writing will be completed to further connect the ideas together. As this project currently stands, the introduction and initial essay function like the Linux Kernel: they are modular components which can be added to and substracted in collaboration with you.

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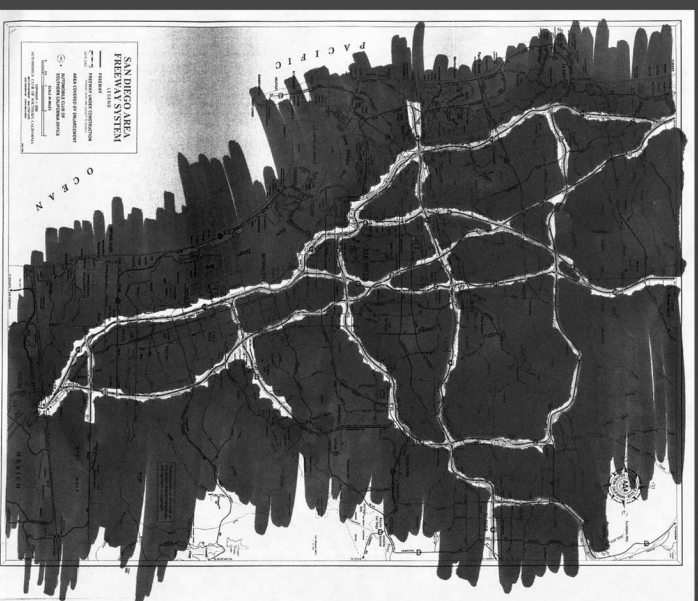
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"From now on, like the nobility and the bourgeoisie, you too will have the privilege of driving faster than everybody else. In a motorcar society the privilege of the elite is made available to you... For when everyone claims the right to drive at the privileged speed of the bourgeoisie, everything comes to a halt... Nothing helps. All the solutions have been tried. They all end up making things worse. No matter if they increase the number of city expressways, beltways, elevated crossways, 16-lane highways, and toll roads, the result is always the same. The more roads there are in service, the more cars clog them, and city traffic becomes more paralyzingly congested. As long as there are cities, the problem will remain unsolved. No matter how wide and fast a superhighway is, the speed at which vehicles can come off it to enter the city cannot be greater than the average speed on the city streets... If the car is to prevail, there's still one solution: get rid of the cities." - Gorki Andrej, "The Social Ideology of the Motorcar" in *Dear Motorist*. Paris : Le Sauvage, 1973.



<http://ericdeis.com>



Against Technological Determinism

Joseph Goguen

This text comes from a course I teach, Social Aspects of Technology and Science, at the University of California, San Diego¹. Links to the class website, where applicable, have been placed as footnotes.

A very basic question for this course is: *What counts as an explanation or a justification for an assertion* (for issues in the relationship between society and technology)? In the absence of precise and explicitly articulated theories, so called **folk theories**, or cultural **mythologies** or **myths**, or **entrenched metaphors**, will come to dominate our thought; these are widely shared, implicit, unarticulated, and superficially plausible beliefs, which generally fall under the rubric of "common sense." Every culture, including our own, has such theories, which embody and help to transmit its values. The following are two examples of such folk theories (although they have also been stated more formally):

Technological determinism is the theory that technology is an autonomous force that changes society. This provides explanations for many changes that can be observed in society, and it has a very simple cause/effect form. However, this theory is *false*: if you think you have an instance, it means you are looking at just one part of a much more complex situation, and ignoring the complex social network that supports the technology.

Social determinism is the theory that society is an autonomous force that changes technology. This provides explanations for many changes that can be observed in technology, and it also has a very simple cause/effect form. It is the converse of technological determinism, and it is also *false*: if you think you have an instance, it probably means you are looking at just one part of a much more complex situation, and ignoring some of its significant technical aspects.

Here **society** does *not* refer just to individuals, but rather to collections of individuals that share values, and are communicating and having effects as a group. So an effect of technology on an individual, or even on a set of individuals could not be technological determinism, even if we could argue that that effect was inevitable and without any social context (which I believe is anyway impossible). Similarly, social determinism cannot refer to the effects of individuals as mere individuals on technology.

It is important to notice how often, and how effectively, technological determinism is used in advertising and other **texts** (in this course, we will use the word "text" in the very general sense of any communicative object in any medium - e.g., it could refer to TV commercials, cartoons, or stop signs) the primary purpose of which is persuasion. This is easily observed in technology advertisements in newspapers, magazines, and TV. It is interesting to ask *why* this invalid form of argument is so common and so effective. We will address this below, especially in Section 3.1² of the CSE 275 class notes. Of course, the fact that a false theory is commonly used for persuasion is a significant moral issue.

Both technological and social determinism come in **hard** and **soft** forms, where the soft form only claims that this is one influence among many, and not an absolute determinant., while the hard form claims that the force is sufficient in itself, i.e., is dominant and irresistible. Let's look at two simple examples:

Cellphones will improve family life.
Cellphones will help to improve family life.

The first of these expresses hard technological determinism, while the second expresses soft technological

¹ Please see: <http://www.cse.ucsd.edu/~goguen/courses/275/s2.html>

² Please see: <http://www.cse.ucsd.edu/~goguen/courses/275/s3.html#narrative>

determinism, because the verb "help" implies that there may be other causal factors.

A myth that is closely related to technological determinism is that technological progress is inevitable, and inevitably leads to social progress. Most of us know that this is not really true, but we still have somehow internalized it. Of course, technology has continued to evolve for a long time, but whether its results can always be called *progress* is open to debate, in several different ways. One problem is defining progress. But if we look at specific cases, most of us can probably agree about the outcomes. It is all too easy to think of examples where technology has had positive outcomes, so let's consider some cases where the outcome is (most likely agreed to be) negative.

Weapons have certainly evolved enormously over the last few centuries. But are their effects on human society positive? For an extreme case, imagine that each adult human has a hydrogen bomb, with detonator built into their hand (or mouth or whatever); most of us probably get mad enough occasionally that we might actually use such a weapon to get rid of someone who really annoys us, even though it also gets rid of us and a few million others at the same time. Are the availability of handguns, laser sights, silencers, assault rifles, Uzzi's, AK-47's, the ease of making chemical and biological weapons, etc., really contributing to the general health and happiness of humanity? (I recently read that the ongoing development of lighter weight automatic weapons has made it possible for younger and younger children to participate in warfare, so that there is now a higher than ever death rate for children in war, especially in Africa.)

Or how about the recent rapid progress in highly addictive drugs (e.g., crack cocaine)? Also cars have been a mixed blessing, with one negative side effect being the impoverishment of many city centers, due to a migration of the middle class to the suburbs. It is also debatable (and in fact much debated) whether progress in IT will necessarily translate into progress in the delivery of education. We will see several other examples later in the course.

The general form of a hard technologically deterministic statement is

$$T \Rightarrow S,$$

where **T** is some technological phenomenon, **S** is some social phenomenon, and \Rightarrow indicates implication. Similarly, the general form of a hard socially deterministic statement is

$$S \Rightarrow T,$$

which is exactly the converse of that for technological determinism. Each of these two kinds of hard determinism is false, and it is very easy to find counter examples. For technological determinism, these would be technologies that have been integrated with different social environments in quite different ways. (Just to be specific, we could mention nuclear energy in the Ukraine, Japan and North Korea; or television in China, the UK, and the US.) Some counter examples to social determinism are given below.

However, most people, even social scientists, often make statements having these forms, and in fact, it is reasonable to do so when the statement only serves as a "headline," a title, or an abbreviation for a more detailed and qualified statement; it would perhaps be more helpful to say that hard deterministic statements are highly oversimplified and misleading, than to say that they are false (though the latter is true when they are taken literally). Also, we should note that such false statements can be partially true, and can point towards interesting directions for further thought; they can also be made more nearly true by limiting their scope.

In the same style, we can give a precise form for soft technological deterministic statements, as follows

$$S1 \text{ and } T1 \Rightarrow S2,$$

where **S1**, **S2** social phenomenon, and where **T1** is some technological phenomenon.

One general deficiency of all these forms of theory is that they do not take account of time, and in particular, of the important fact that both society and technology change over time. It is very easy to give an improved form to (for example) soft technological determinism, simply by letting the indices above refer to time, with **S2** at a later time than **S1** and **T1**.

There is of course an analogous formulation for soft social determinism,

$$S1 \text{ and } T1 \Rightarrow S2,$$

and of course this also has a temporal interpretation.

Although these soft forms are certainly an improvement over the hard forms, they are still oversimplified, misleading, and in fact false, but for the more subtle reason that they fail to take into account that there is really a cycle, or better, feedback loop, in which both social and technological phenomena are both causes and results. Even if we "unwind" above formulae, to get what we may call **dynamic determinism**, of the form

$S1 \text{ and } T1 \rightarrow S2 \text{ and } T2 \rightarrow S3 \text{ and } T3 \rightarrow \dots$

where we have replaced the logical implication symbol by a temporal succession symbol, the result is still overly simple and potentially misleading, and in particular, fails to take account of the facts that there are multiple social factors and multiple technical factors, that different phenomena evolve at different rates, that there are many complex relationships among both the social and the technical factors, and that all these relationships are also evolving, as well as highly context sensitive. Moreover, in some cases it is not easy, or even possible, to distinguish between social and technical factors. These points should become clearer when we study actor-network theory in Section 6.1 of the CSE 275 classnotes³.

Now let's consider some examples of social determinist theories. Politicians often seem to believe that if they want something, and throw enough money at it, then they will get it; such beliefs are socially determinist. One counter example is the congressional push for the so-called Star Wars program, which most responsible scientists have declared impossible to build effectively. But Congress says we need defense from rogue state missiles, and allocates huge sums, apparently in the belief that this will somehow produce the technology that they want. Another example is fusion-based energy research, such as the Lawrence Livermore Labs laser fusion project, which is far over its cost estimates, far behind its delivery schedule, and of doubtful value. Yes, we need alternative energy sources, but we cannot get them from science and technology that do not yet exist.

Both technological and social determinism are forms of **reductionism**. A reductionist theory reduces some class of phenomena to some (allegedly) simpler phenomena. One of the best known examples of this is the reduction of chemistry to physics. At one time, alchemists mixed substances together just to see what would happen, often with the hope of eventually manufacturing gold. Later, it became known that matter is composed of a number of chemicals, and later still, it became known that all chemicals are molecules composed from atoms, which are the domain of atomic physics. Although this reduction is true in theory, it unfortunately has little practical value, because it is not possible to do the quantum mechanical calculations needed to predict the behavior of molecules, except in a few trivial cases such as the hydrogen molecule, let alone of complex combinations of molecules, such as cells. So even in the hard sciences, even a reduction that has enormous theoretical significance may have very little practical value; now just think what must be the case for reductions in the social sciences.

A good example of a practically successful reduction is Descartes's reduction of plane geometry to numbers, through the introduction of so called Cartesian coordinates, which are pairs of numbers. In many cases, it is possible to prove difficult theorems in plane geometry with fairly routine calculations. This reduction also takes us from a qualitative theory to a quantitative theory. However, it can be argued that there has also been a loss, namely of the *qualitative* character of Euclidean axiomatic geometry. Moreover, certain new complexities have been introduced, such as the need for many new hypotheses to eliminate special cases, as rather dramatically demonstrated by computer theorem proving algorithms for geometry, like Wu's method.

It is worth mentioning that Descartes also wrote what are perhaps the most influential arguments ever given for reductionism, in his famous *Discourse on Method*.

The direct opposite to reductionism is **holism**, where a holistic theory says that some process or phenomenon cannot be broken into parts, and can only be understood as a whole; it follows that such phenomena can never be explained by reduction. In general, holism is probably true of all complex phenomena, but since holism does not actually explain anything, it is not useful as a theory. For this reason, scientists are much more attracted to reductionist theories, even if they are only partially successful. Moreover, holism has been abused, for example, by some New Age thinkers.

Today social scientists almost universally reject determinist and reductionist explanations of complex social phenomena, despite their popular appeal. They also reject empty holism. Social theories of science and technology do not in general attempt to be predictive, like physical theories; they play a different kind of role. For example, one important role of recent social science theories of technology, such as Actor-Network Theory, is to serve as an antidote, or vaccine, against naive theories such as technological determinism; if you achieve a better understanding of the social aspects of technical work, then you are less vulnerable to confusion, deception and

³ Please see: <http://www.cse.ucsd.edu/~goguen/courses/275/s6.html#ANT>

manipulation.

Marshall McLuhan introduced a special kind of determinism called **media determinism**; it tries to explain various social phenomena through properties of the media that are employed. McLuhan's most famous slogan is "The medium is the message." Claims that writing, and later on printing, changed society have been around for a long time, and are still popular. McLuhan applied this idea to the newspaper, radio, and television media, with a certain flair and precision. The media love this kind of theory. The recent slogan that "The computer is the network" can be seen as related to McLuhan's slogan. Of course, media determinism is a form of technological determinism, and hence a form of reductionism; it can be hard or soft; and it is oversimplified, misleading, and in fact is wrong.

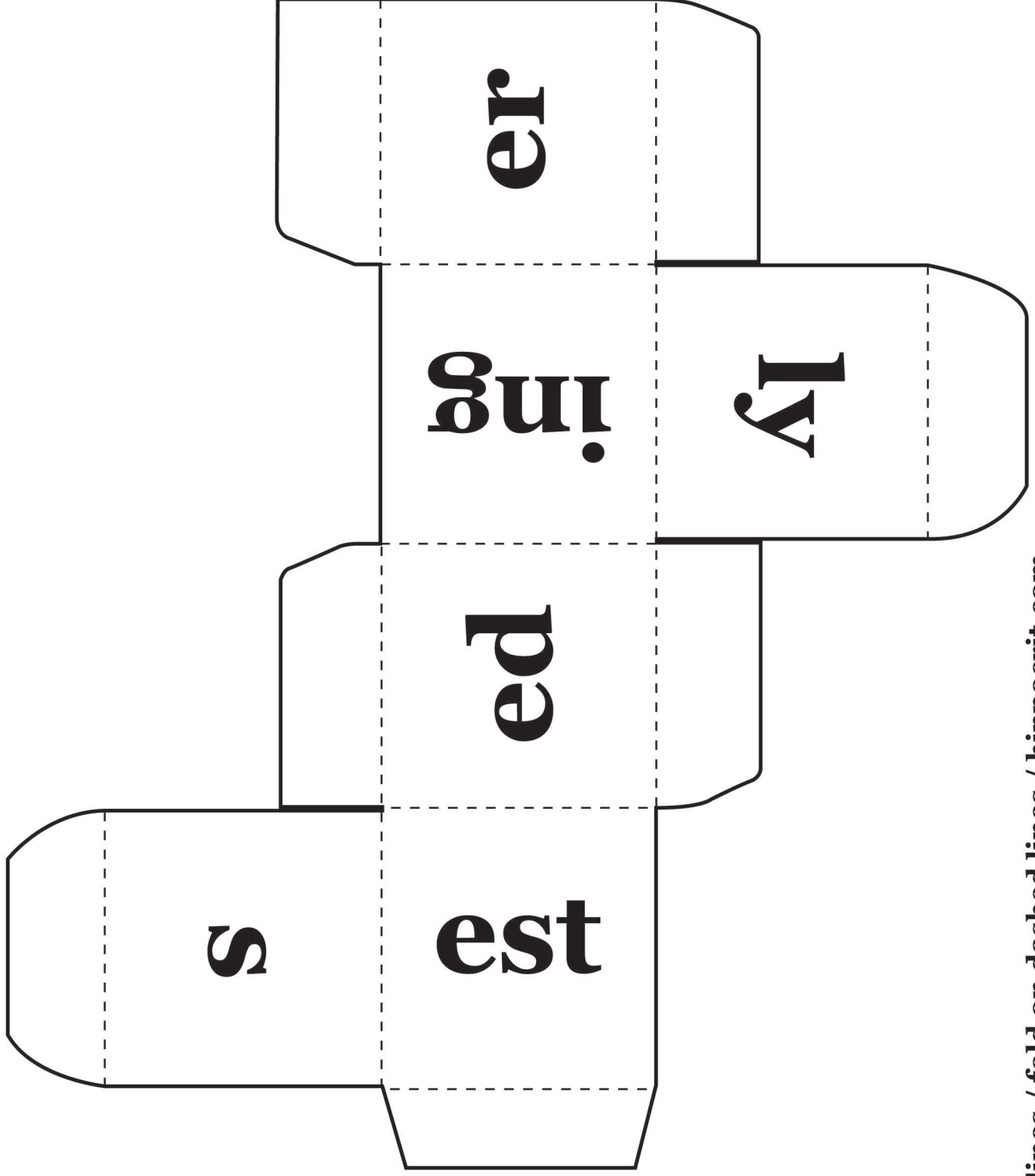
An interesting counter example to media determinism is the BBC radio and television network in the United Kingdom, which provides extremely high quality non-commercial programming paid for by British citizens through a system of taxation. The social input, which includes state sponsorship and a special tax, leads to very different content than in the American system; the BBC also has a different technical form, since its programs are broadcast on standard frequencies throughout the entire country. (BBC radio programs are also available over the internet; BBC Radio 3 is perhaps the best classical music station in the world, and BBC Radio 1 is perhaps the best pop music station, especially John Peel's program.) So media determinism is false. American radio and TV could have been completely different if there had been different laws, different norms, etc.; technology is not the only factor.

Summary

Technological determinism is completely false as an empirical theory; it exists as a folk theory or social myth. There are no real world examples of technological determinism and there never can be any: technology is always a product of society, and therefore technology is never autonomous; moreover, technology and society are always mutually interacting, always mutually co-arising. Any alleged example of technology "having an effect on society" can actually become a *counter-example* to technological determinism, because with a little thought you can always find ways in which society also influenced the technology. (That technology has social effects is obviously true, but an instance of this is *not* an instance of technological determinism, because there will always effects in the other direction as well. Technology does not come from nowhere, it does not drop from the sky, or grow from the earth, it is created by complex human social organizations.) Nevertheless, examples of *assertions* that have the form of technological determinism are very common, especially in advertising and mass media journalism. Sometimes such assertions are merely shorthand for what the author and audience know is a more complex phenomenon, but often such assertions are deliberately misleading and manipulative, exploiting our unconscious implicit folk theory belief in technological determinism, in order to promote some product, ideology, organization, etc.

In case you doubt that appeals to technological determinism can be a problem, here are some further examples. An article in the local paper contained the sentence "Cloning is inevitable once it is possible" and a call for papers for a conference IT: Education Technology, Curriculum and Assessment⁴ contains the sentence "Emerging information technologies revolutionize education and improve it dramatically." These texts are written as if the phenomena involved had nothing to do with their contexts of people and other things, but had a unstoppable momentum of their own. A simple example of an assertion that probably we've all heard, and that embodies technological determinism, is the aphorism "If you build a better mousetrap, the world will beat a path to your door." It is very easy to find counter examples to (the generalized meaning of) this assertion, but it still can sound plausible. I hope that this little essay will help to reduce its evil potency.

⁴ Please see: <http://www.cse.ucsd.edu/~goguen/courses/275/ITCC.html>



*cut on solid lines / fold on dashed lines / hippocrit.com

MESH.FM

Nathaniel Clark

This writing seeks to present a meditation on several key aspects of the MESH.FM collaborative event series, which in many ways served as a precursor to the present volume of writings. A brief history and theoretical implication of the 'webcam' will be presented as a metaphor for the performance concept of "real-time"; the Jamaican Dancehall Soundsystem will be discussed as a rich conflation of human and machine, representing also a flux of identity that persists despite a shifting substrate; the concept of social noise will be introduced and its use-value will be explored; finally, the idea of modularity will be unearthed in the conceptual archaeology of the party. In summation, the MESH.FM series will be situated as an attempt to resist and critique more prevalent methods of art-making and assembly.

Introduction

MESH.FM is a very difficult thing to describe. It began as a radio station, and ended as a monstrous pile of trash in front of my studio. Its soul, and lifeblood, was noise: a grating sound generated by multiple frictions; with its surroundings, with the art world, with itself. An irruption of boundary-straddling ideas, MESH.FM was consuming and transgressive, but feverishly productive and prophetic of current new media events. Like the Scythian nomads, terrors of the early steppes and dire comparison of Critical Art Ensemble, MESH.FM was a highly aggressive nomadic art-war machine. It ranged over vast conceptual territories, and lived a precarious balance between art and life, between production and destruction, and, ultimately, between its own existence and extinguishment. However, unlike the Scythians (and quite unlike CAE's comparative trans-national corporations), MESH.FM's life span was rather short- lasting from the summer of 2002 until late winter, 2003- quickly consuming its own resources until no longer able to sustain itself. It lived the proverbial ratio of intensity: twice as bright (or, as Jon Phillips quipped, twice as Uopic) but half as long.

In the most general of terms, MESH.FM was an event-series initiated by the collaborations of myself, Jon Phillips, and Matt Hope; it was a mutant array of technologies and concepts in a perpetual state of imbalance. It expanded to include many others, most notably Neil Stuber, though for brief fluctuations Patrick Deegan, Corrie Colbert, Tucker Dulin, Mark Oliver, Jenny Donovan, Peter Segerstrom, Brian Crabtree, Eric Cho, Sky Frostenson, were counted as members. It moved through several arcs of identity, its earliest being, as mentioned, an internet radio station with both an archive of sound art and music played in the fashion of a typical shoutcast server; later the concentration shifted to the "live event", incorporating various strategies of engagement to blur the 'audience' into 'participants'. It was this later phase of ontogeny that earned the dubbings "digital happening" and "emergent event"; the latter most probably due to the apparent chaos we engendered and our constant hope for the emergence of some order of aesthetic significance from the cauldron of stimuli.

MESH.FM continued certain impulses — those of questioning ideas of authorship — which grew directly from Jon and Nathaniel's programming collaborations for Generative pieces — where authorship was both contested and then obscured by programmed systems into a collaborative environment that pushed overlap into overrun; meaning, we went from merely crossing-over each others' artistic output in collaborative events to formulating an unspoken treatise on "plug-pulling." This is where one could harmonize with, grow dissonant with, move orthogonal to, or totally shut off ("pull the plug") another participant.

With such ideological background, the three core individuals — Jon Phillips, Nathaniel Clark, and Matt Hope — came together to form a somewhat prescient set of events predicting, in embryonic form, methods currently employed by acknowledged centers of New Media (e.g. SHARE; the Kitchen; and the most recent Cybersonica Festival)¹. MESH.FM also predicted or prefigured many of the projects present in this work, from

¹ SHARE, etc Several Aspects, for example: from SHARE website: "A weekly assemblage of portable computing...coming up on its 1.75 year anniversary, which is providing an open forum, in real life, for data exchange and digital performance. Patrons are encouraged to show and exchange ideas freely, giving each other feedback, catalyzing development of

distributed writing to soundsystems to the CVS Book itself. The word mesh, itself, is multi-layered and resonant: it can mean the cords or threads that form the structure of a net or network; it can also refer to the open spaced between threads- the interstice; it can refer to being snared or entrapped or, conversely, being- like the teeth of gears- fitted and engaged. MESH.FM was all this: a definite structure, or organization, where sometimes the most interesting things occurred in the spaces between its own parameters; it sought to gather together participants and weave them into the fabric of MESH.FM itself, but was equally capable of trapping itself, and stumbling; and lastly, it was, for the duration of its active existence, an agency of engagement, creating and transforming and even distorting relationships on its every periphery. But as permeable as its meshwork was, several major aspects did emerge in semi-stable relation to one another, like strange attractors in mutual feedback. Each of these may be examined through an attendant metaphor: first, the webcam, as a metaphor for real time; second, the Soundsystem, as a human-machine fluxus of identity that still persists despite its apparent fluidity; third, babble as a polyvocal noise, or rather social noise; and last, the modular party, as the most apparent feature of a complex, rather chimerical, social entity.

RealTime?

From the very outset, the immediacy of MESH.FM's "over-run" style of collaboration seemed to necessitate a focus on Real Time², an elusive concept of performing for the moment that was, in fairly equal parts, culled from two provinces. First, it drew from an aesthetic-outsider stance, critiquing the 'isolationism' in our immediate environment of art-making practices and seeking to overcome the comparatively neutered studio with what amounted to a media-based, art-making brawl. Second, I believe "real-time" was fostered by an impatience, stimulated by the accelerations of the computing world, viewed in perhaps a utopian way as the modern generation's birthright³. (Check out Schiller's concept of Fragmentation from 5 myths of media) Both ideas fed into a mandate

techniques and philosophies in new media." SHARE, "Digital Community", <http://share.dj>, 16 May 2004.

The Kitchen, in collaboration with SHARE, hosted the anyware event: April 15 (Thu). Curated by Christopher McIntyre? and Share: "This is New York's venue for public performance of the online "anyware" event. It is just one portal into associated events going on in 14 cities around the world; available for viewing on-line starting at 3pm and ending 11pm; Tonights program at the Kitchen begins at 8pm (EST). Artists are collaborating from remote locations to generate an enveloping audio visual experience for your entertainment. Around the room are headphone stations with displays from which we invite you to take a look at different contributions streaming in from 3 continents. Over The Kitchen's house PA and on multiple projection surfaces around the room, you may witness the collaborations from our perspective here as we tune in and create fresh media locally to stream back out into the ether." SHARE, "anyware- presented by share @ the Kitchen", <http://share.dj/anyware>, 16 May 2004

The Kitchen's website is <http://www.thekitchen.org>.

Cyberonica 2002 featured a COLLABORATIVE PERFORMANCE by SOCKET: "At Deluxe, Socket will expand the framework of their standard performance by introducing a bespoke Cyberonica Jungulator, and an evolving array of DIY technologies which seek to broaden the scope of real-time collaborative electronica.Socket invite you to contribute material in the form of audio samples which must be aiff files that are no longer than 8 seconds as a rule, although approximately 10% can be up to 20 seconds long. Bring you audio samples on CD-ROM to Deluxe and be a part of the performance." --"Cyberonica", <http://cyberonica.org/2002/home.html>, 16 May 2004.

<http://freecooperation.org/>

In a high-energy context this conference will bring together artists, designers, musicians, activists, art historians and engineers in formats such as workshops, open mic, parties, performances, interviews, and brain storming sessions — all aiming at ongoing collaborations, genuine dialogue, and the exchange of knowledge. The aim of the conference is to get a deeper understanding of the dynamics of collaboration, models of critical web-based art, and the role media technologies play in the making of social networks. Laugh, learn, argue, dance, discuss, eat, celebrate dissent, make new friends, and meet future collaborators. --16 May 2004

² Please see: <http://realtime.ucsd.edu>

³ real time : 1. [techspeak] adj. Describes an application which requires a program to respond to stimuli within some small

for collaborative, performed events.

The initial gestures of MESH.FM were performed for the web-cam, streamed as "real time" as possible where the gaze of the web-cam accompanied MESH.FM throughout its entire existence.

The webcam itself is a telling imbroglio of immediacy and fame. Its history is informative: the very first webcam was used to monitor the contents of a coffee pot in a computer lab dubbed the Trojan Room of Cambridge University in 1991⁴. Running on an internal network predating the Internet, Paul Jardetzky wrote a server, Xcoffee, and Quentin Stafford-Fraser wrote a client program to be downloaded and run on remote computers. Members of their "coffee club" could view the life of the brewed coffee, updated three times a minute, and gauge whether or not to make the sometimes arduous journey up or down the stairs. This way they could avoid both wasted energy and the disappointment of an empty pot. Later, when the 'World Wide Web' caught up with the needs of the all-night-hackers, the Trojan Room Coffee Pot went worldwide, making the coffee pot "undoubtedly the most famous in the world," or rather the net-world.

Here in its nascent form, the webcam was ostensibly involved with the practical issues of communication, but it carried within it some remarkably unprecedented aspects. While the camera itself was a continuous, passive eye, the server-client structure of Xcoffee allowed multiple clients to access the coffee sentinel near-anonymously; this unwittingly helped foster what has since been shown to be an overwhelming aspect of the online world: voyeurism.

Perhaps the best known example of the webcam in this sense is the Jenny Cam, formerly at <http://www.jennycam.org>⁵. From 1996 to 2003, Jennifer Ringley had mounted several cameras in her home and had these views updated continuously on her website, where one could go and be privy to the details of her life- at least, those details associated with her domestic space. This concept was speedily adopted by the online pornographic industry, spawning numerous clones and variations: spycams, toiletcams, showercams, etc. There were, and are, even "amateur houses", sporting cameras in every room, including kitchens and living rooms.

Fame wasn't really embodied in the technology, but it should have been a predicted effect. Jenny Cam offered a unique, anonymous voyeurism; a gaze unreflected, unwitnessed, and therefore without any apparent culpability. That gaze was focused on the inner sanctum of a young female's private domestic space with all its attendant excitement.

The webcam's visual immediacy, which of course informs the strange connections of voyeurism, bolsters utility (e.g. traffic cams and the like) and engenders a specific kinship. One that is a sharing of "present" that manages to touch across otherwise impossible distances; an electric thrill that corresponds with the belief that this is happening right now! Or, at least as near to right now as we've gotten.

And a webcam's "real time" implies "real-life"; that is, not subject to the typical laws of aesthetics and performance (truncated and distilled to rarified moments), but rather the laws of physics and sociology. This can create a unique mentality within a virtual "audience" where people will wait, or check in periodically, hoping to be there when the serendipitous moment arrives of something happening. To rise to this occasion, we made a concerted attempt to be an ever-present, constant experiment; unscripted, at many times hedonistic, a mobile night-club. It is interesting that this performance aspect grew mostly out of ideas circulating within the world of computer culture — the potential of the webcam, the real time ideal of near-instant processing (with MESH.FM, that meant aesthetic processing as well as computer processing), mp3-mixing and laptop DJing. Often, MESH.FM members would speak of "computer metaphors as social practice", attempting to inscribe into our social environment behaviors modeled on machine interactions (e.g. distributed processing, "hacking" each other, open-sourcing and versioning our creative research). Undoubtedly, the accent on the immediacy in "real time" moved MESH.FM into a realm that bore some striking resemblances to earlier performance-art practices, most notably the Happenings. While MESH.FM did not overtly avoid the "themes, materials, actions..." of the arts, per se (as prescribed by Allan

upper limit of response time (typically milli- or microseconds). Process control at a chemical plant is the canonical example. Such applications often require special operating systems (because everything else must take a back seat to response time) and speed-tuned hardware. 2. adv. In jargon, refers to doing something while people are watching or waiting. "I asked her how to find the calling procedure's program counter on the stack and she came up with an algorithm in real time." -- Source: Jargon File 4.2.0

⁴ Quentin Stafford-Fraser, "Trojan Room Coffee Pot Biography", <http://www.cl.cam.ac.uk/coffee/qsf/coffee.html>, 17 May 2004.

⁵ The site was reputedly shut down as PayPal?- owned by eBay- would no longer support Ringley's membership services as it was found that the Jenny Cam site conflicted with the company's "no nudity" rule.

Kaprow in his 1966 essay "The Happenings Are Dead: Long Live the Happenings!"), it certainly embodied other Happening rules: "The Happening should be dispersed over several widely spaced, sometimes moving and changing, locales."⁶

But by Kaprow's own scripture, MESH.FM was not a Happening. But its interplay between structure and chaos (that is, between the technical obedience to the hardware and the rather unhinged participatory-improvisation) retreated from the theatrical and musical teleology, just as the Happenings did. Like the more current generative art schemes, or free-festivals and bazaars, it was a concentration on systems of engagement, modules of opportunity, and open-ended structures; coming and going, tuning in or dropping out, ending only when the last stragglers taxied each other home or the police pulled a very literal plug.

The Sound System

Just as the webcam, a hardware that required as much as it liberated, was an island of order in a more liquid realm of performace-flux. MESH.FM's technology of sound reproduction emerged as a stable point of centrality, simultaneously focusing the MESH.FM events to an anchor of equipment (and its radius of sound projection) while extending influence through sheer sonic power and by existing as the backbone to many a convivial gathering. This arose from a line of evolution originating in the Jamaican Soundsystem. The Soundsystem arose primarily as a response to the insurgency of American music and technology into Jamaica. Originally, forward-thinking entrepreneurs began playing American R&B records to Jamaican audiences through powerful sound reproduction equipment [#]. (also cf. SoundSystem History, by Matt Hope). As it evolved, the Jamaican Dance Hall Soundsystem began to occupy a fairly unique musicological space, being at-once a collection of equipment, the timbre, or signature of sound produced through said equipment, and a social entity not only encompassing the "crew," technicians, record spinners, and Mic Chatters (MCs) but also an audience who professed allegiance and represented the soundsystem at shows and "clashes".

The ethos of the soundsystem is twofold: it simultaneously proposes a visible identity, constructed through an amalgamation of factors both indigenous and borrowed and serves as a conduit of expression far more flexible than a band or interpretive musician. For example, often soundsystems are "borrowed" or co-joined with other systems for large events, reducing the soundsystem to the mere configuration of mechanical elements and the qualitative fingerprint left by the signature system. But then this is not an erasure of identity, merely a diminution of some of the more traditional aspects of the idea of identity.

The power of this is its ontological fluidity, the mutability of purpose that never fully evades its own profile. This is a beguiling Kantian apperception: the awareness of a persistence of character while the substrate of that character constantly shifts [#]. This borders the territory of computer programming's encapsulated object, where the methods persist while the variables shift, and the output is the instantaneous, and impermanent character of the process [#].

The Soundsystem embodies and disseminates many things. It can be a beguiling composite, as it was for MESH.FM: a heterogenous unifier; a strange loadstone that brought the disparate factors of a human (and machine) collective under a single flag. In this way, it becomes a collaborative identity; though one that could also be broadcast at high volume or borrowed and merged symbiotically with other systems, people, equipment, identities. In turn this broadcast could bring people in, buoy them and sustain them; as such, the Soundsystem was the sonic centerpiece to a convivial gathering.

This was a profound influence. It had a material impact (as monies were gathered from grants and credit cards and the scoops and bass bins were built) that brought the public address in league with the laptop, bolstering portability with volume. Also, as the intended epicenter of sonic and convivial earthquakes, it had an effect on MESH.FM's sociology- one of bombastic acceleration, towards a penultimate unity but then, irrevocably, towards splinter and demise. (And thus, again, living the old adage of twice as hot, twice as fast, though it is probably more of an exponential curve than a linear acceleration).

But, in retrospect, the Soundsystem was the most unifying idea in all of MESH.FM's initial scripture of ideals (of the co-creators). It conflated Matt's interest and expertise in speakers and sound systems (from his earlier involvement in the rave scene and England's Free Festivals) with Jon's theoretical and computational attraction to

⁶ Kaprow, Allan, "The Happenings Are Dead: Long Live the Happenings!", *Essays on the Blurring of Life And Art*, ed. Jeff Kelley, (Berkeley: University of California Press, 1993) 62.

the modularity (as well as his interest in "real-time" as an acceleration of the process from idea to product, manifested in the improvisational "event"); and both these with my own philosophical and aesthetic interests, particularly as a powerful deployment of noise, which I love. And regardless of anything else, MESH.FM and its attendant "rig" were capable of making some big noise.

Noise

An early definition of "noise", appearing in the 1886 edition of Ganot's *Physics*, says, "Noise is either a sound of too short a duration to be determined, like the report of a cannon; or else it is a confused mixture of many discordant sounds, like the rolling of thunder or the noise of the waves" [#]. This latter definition still persists, in ways- the word still bears the notion of commotion- "the noise of the mob" [#]. If the Soundsystem, above, can be imagined as a surface, or skin, of identity, beneath which the constituent details continually shift and change, so too might our convivial pastiche of sounds, or voices, or rhythms, be an identifiable thing, a conglomerate identity that, at quick glance, belies the complex tectonics beneath its surface.

This isn't particularly novel: the most cherished monisms are often revealed as Ialdoboath and his misbegotten, divisive creations [#]. What else might one call the revelation of a priori fragmentation of one of the bedrocks of Western Culture? The Documentary Hypothesis tore the dream of the Hebrew Bible's unity asunder: what was once ascribed singly to Moses became 2, 3, then 4 separate and identifiable authors [#]. While the research and recognition of this crept up from the mid-1700s into the latter half of the 20th century, the widespread acceptance comes commensurate with our comfort and acceptance of post-modernism's celebration of fragmentation and polyvocality. Now we live with not just fragments, but the continuous collision of the dream of unity with an underlying persistence of discordant polyphony; the Bible is still The Bible, though when you open it to read, those conceptual bolts so carefully constructed no longer seem capable of holding the engine of spiritual history and prophecy together. This is not, however, a difficulty. Quite to the contrary: its polyvocality is meet, right, and now our bounden duty. But positive or negative, this is our inheritance, and MESH.FM was a celebratory, explicit enactment of the synergy of that babble; and each project since involving these community members has risen like a phoenix from these ashes.

Concomitant with a technological acceleration (even to the point of Vernor Vinge's instantaneity [#]) that was MESH.FM's inheritance (as manifested in the operative philosophy of "real-time"), so too was there a pre-occupation [#] with heterogeneity. Within us as outside of us: as Deleuze and Guattari said, "each of us was several, there was already quite a crowd" [#]. As the Soundsystem semi-materially stands as a cyborgian heterogeneous matrix of identity, the MESH.FM event series actively courted a poly-valent babble — a cacophony of voices, computers, ideologies, strategies, and internal contradictions that could be described as a "social noise."

"Actual participation courts anarchy," says Jeff Kelley in his introduction to Allan Kaprow's *Essays on the Blurring of Life and Art* [#], and our anarchy was personified by a "plug and play" call, inviting would-be participants to bring their laptops, plug in, and join the fray; a strategy that of course tempted chaos, in its old vernacular meaning of confusion. To facilitate this, MESH.FM employed a series of tools that at one level made little in the way of filter for the "content" (while also realizing that certain physical structures demanded only certain inputs) but provided forum and amplification for input: "rigs" or sound-systems, clusters, brainstorm, and dance parties (complete with scanning dance queries and an on-the-spot playlist harvest for a dance-server-player). Kaprow's "anarchy" was Cage's "multiplicity of centers"; both of these informed the cultivation of MESH.FM's noisy, and fertile, garden of voices, babble, noise.

So what exactly is "social noise"? It is not merely the pandemonium unleashed by the loose confederacy of the art-party. It is also the frictive byproduct of conflicting ideologies or philosophies. As Doug Kahn says, "the grating sound when the abstract meets the empirical" [#]. For example, MESH.FM one time constructed in "Real-Time" a 10 foot in height and diameter dome out of approximately 2 foot conduit segments, at CRCA, that utterly confused CRCA's typical audience of proscenium-respecters and collected the efforts of many individuals whom all thought they had the plans for how to construct the dome. However, there was no instructions on how to create the dome, and thus a power structure was self-organized in both social cohesion and frustration. It was a revelatory moment, realizing that our ideal of noise was maturing past the simple 'noise = freedom', and into a type of 'question-mark' that one's consciousness is left with in-between the edges of conflict. That conflict and that social dissonance- that noise- is the sound inside oneself as the relation to the accepted symbolic order is disrupted [#].

The accepted symbolic order, in the case of MESH.FM, was the social rubric of "Gallery Show" or even "Art, or Art-Music, Event," party or dance party, etc.

There is a liberation in noise: "[n]oise is the forest of everything. The existence of noise implies a mutable world through an unruly intrusion of an other, an other that attracts difference, heterogeneity, and productive confusion" [#]. The freedom is in the "productive confusion", in which every perceiver might find their own tailored perception. As Antonin Artaud saw tortured bodies in the twists and jumbles of rocks in Mexico, and Max Ernst culled images from floor rubbings with his frottage technique, so too did Leonardo Da Vinci see images in old, spotted walls and hear voices in bells, "...in whose pealing you can find every name and word you can imagine" [#]. Ellen Band's more contemporary work with white noise "ghosts" explores this idea simply and directly, allowing an audience to interpolate discrete auditory phenomena out of differing densities of random noise [#]. But there are other, culturally rich, examples, such as those appearing in Cornelia Fales' brilliant dissertation. Fales explores how musicians from Rwanda and Burundi (in Central Africa) manipulate the musical perception of their whispers-basically noisy, unpitched utterances- with the melodic imprint of the plectrumed, pitched tones of the Inanga stringed instrument. Fales demonstrates how the same, wide-band utterances of the whisper (recorded independent of instrumental accompaniment) can be perceived as utterly different melodic sequences when played in concert with with different plucked melodies [#].

Noise is generous, and generously mutable: it may be shaped, sculpted, or imprinted. It is in this sense that MESH.FM's participants were, to borrow Doug Kahn's term, noisicians. Environments were crafted for heterogeneity and conflict; for multiplicity. Like Rilke's search for a state of "simultaneous and equal contributions from all five senses" [#], our emergent events were an active combination of sense-stimuli, although they sought to, rather than cohere (as perhaps Rilke intended, or imagined through his example of Arabic poetry), confound. That is, productively interfused, allowing for individual interpolation and the imprint of the self on the mutable environment itself.

This "genesis of mutability" [#] did not have to be loud (though the amplified power of MESH.FM's sonic onslaught quite often was), nor even an apocalyptic trumpet-blast. It was equally, if not more, effective in its acoustically quiet, unplugged moments. Csaba Toth (whose name is a perfect sci-fi villain's), in his lecture at the Beyond Noise Conference of 2002, quoted Philip Samartzis' definition of noise as the "perception of process" [#]. An odd, but compelling, thought in relation to the host of definitions that hover in an appropriately confusing aureole around the unstable term of noise itself; one that ultimately resonates with certain aspects of MESH.FM's event series. The Brainstorm series is just this quiet noise, this process of art-creation laid bare.

Again, Kaprow can be revisited for resonant and predictive ideas: in 1961, he was saying that the "organic connection between art and its environment is so meaningful and necessary that removing one from the other results in an abortion" [#]; further, placing works in galleries and homes "dessicate and prettify modern paintings and sculptures that had looked so natural in thier studio birthplace" [#]. It was this that was the Brainstorm Series (and, really, an idea that is fundamental to an understanding of MESH.FM events): events that concentrate on the exposition of the manner in which works were made, but with a twist. The work "made", by MESH.FM, was the exposition of the manner in which work is made. A slippery, recursive formulation, admittedly, but the essence, like Krishna instructed Arjuna in the Bhagavad-Gita, was to discard the "fruits", or the product, of the labor and put the "art-lens" on the shifting structures and interpersonal engagements that engendered art-products normally [#]. It is of course another variation on the concerted desire to not filter out the "noise", here manifested as a reticence to deal with art-objects neutered of their moments of creation.

This is a tetchy and transgressive attitude, for to this present day the culture of art is occupied with end-products, still deifying authorship and artwork as the chain of genius, unique and creatively isolated. Within this mystifying persistence, MESH.FM situated itself in the gaps; in the only gaps between categories it could find-forcing cracks (even minor ones) in categories and expectations. It didn't really matter that these categories had been cracked before. Somehow they didn't stay cracked. How it was patched and who the patchers were, we have only vague ideas and suspicions. But they needed some cracking again. And somewhere in Masami Akita's vast discography lies a definition of noise as "in-between-ness"; for MESH.FM, this aspect was the complex wave-form produced by tracking the motion, over time, of our constant displacement between these categories of order. This would render a certain satisfying connection with the see-saw, oceanic queasiness of nausea, literally "seasickness"- one possible etymology of noise, the word. Or perhaps finding oneself outside the structures, or between the boundaries of a locative aesthetic world, one serves to create, or at least render in high profile, the categories themselves. Akita's own work with noise (as the solo band, Merzbow), here the sonic material eschewed by both

musician and listener alike, has internal consistencies and logic that would indicate itself as a certain 'whole'; but, its presence circumstantial to the domains of music, and music production, elucidates a rupture and instigates an awareness of locative ambiguities — "a nomadic producer of differences" [#].

The Modular Party

Truly, many of the MESH.FM configurations- events, schemes, displacements, "actions" were intentionally oppositional, or explorations of multiplicity, dissonance, dis-cohesion, incoherence. It was from this, undoubtedly, that MESH.FM began to attract its "digital happenings" label, as well as its perhaps less honorable epithets- due to the troubling degree of the community friction surrounding many of the events and structures (cf. Bore; the Pile) [#]. Momentary emergence of order was sought and elicited, but it was the methodology that was troublesome. Many, even of those "engaged", were hastily dismissive due to the party-vener of the events.

MESH.FM did have a party-vener. In fact, it always allied itself with the methods of engagement used in parties- thought preferable in all ways to the theatrical in performance atmospheres that normally accompanies art events. It was a recognition, and celebration, of the truism that the opening is often better than the exhibit.

A difficult line to walk, of course: for many, these events endorsed far too much revelry and hooliganism to be taken seriously. For others, the lack of focus on a "product", in the more traditional art sense, prompted dismissal as a mere "experiment", or simply a "media-rich social scene". Not that they were totally wrong as MESH.FM was a party. But it was a convivial gathering that did not limit, but wasn't exclusive to, artistic interchange. What's more, the interchange cultivated was not unidirectional. Like the Happenings and like a party it was a shifting network of participants, coming and going, feeding into the mild turbulence, finding themselves in momentary pockets of ordered couplings, temporarily stable but far from the traditional equilibrium that dominated and dampened most art events.

And, to be just, a party is no mean thing. It is misunderstood, perhaps like the Western, foreign perceptions of the Persian bazaar as merely a primitive and haphazard shopping market (evidenced by the old saying, "what a bazaar!" indicating, as it were, confusion). But as Marcel Bazin says, "nothing is more organized than a traditional oriental bazaar" [#]. So, too, goes the party: most of the organization is either unconscious, or so prosaic as to slip beneath the radar. Not to mention, a party- like the bazaar- is an unpredictable consortium of elements. If you look at it from the wrong direction, it's easy to disregard its fundamental systems in favor of a superficial reading of interactive cacophony.

It's really a case of "zoom": that is, one's degree of conceptual magnification. After all, though much has been made of the Zen, spiritual, open-ended, and counter-cultural aspects of the Happenings, there also existed a quite "programmable" structure Kaprow inscribed specifically in print. He supplied a veritable recipe, or formula, for the production of Happenings [#]. Interestingly, presented a merger of two scales of operation: on the overt level was the aesthetic call for actions embodying the ideology of its core practitioners (one of above-mentioned zen awareness, novel open-endedness, and counter-structures). There was a subtext, though, that was more memetic and modular. It was the planting of seeds, complete with instructions and parameters, for the replication of Happenings themselves. It was a strange overlap, for while it seemed somewhat antithetical to a more machine-like consciousness of production, it explicitly handed out templates of thought and action [#].

So it depends on just where you're looking: at some vantage or distance, even the highly ordered data-flow becomes incomprehensible, a white noise. (Just remember the bursts of static following the old dial-up modem connection; the sound of information exchange was a wash of noise). John Oswald has explored this perceptual illusion with his Plunderphonic techniques [#]. His maniacal sampling, down to 1/100th of a second clips of popular (and often copyrighted) music, is used to construct frenetic sonic assemblages where "motion becomes an object" and the speed at which essentially heterogeneous moments are sonically manifested inhibits the ability to process things as discrete entities, resulting in a perception of solidity, homogeneity.

Walking into a party, the same perceptions might reign: it's just a party, a media-rich social scene. But what appears as a typical nighttime event is really a clustered, lumpy, unsmooth, unevenly stratified organic thing. And, as mentioned above, this unpredictable, fragmented 'babel' is stretched over a dermal texture woven of discrete systems. There are complex interpersonal social relations; there are the psychological impression of architecture, of room structure and order; there are the technologies of speakers and amplification,; there is the living atmosphere of sound-waves in air, in the masses; just to name a few. There are even plates and forks that bear with them a "tool-

logic" of their manipulation. And of course there are the essential machinery and protocols of alcohol dispensation.

It is the looseness of the couplings of these systems, internal to the "party", that make it fluid and generally unpredictable. It is a fuzzy logic that governs the modular party; and it is absolutely essential to note that any particular manifestation of a "party"- that is, its actual realization- is nowhere scripted in any of those "internal" modules and systems, alone or combined; it is only made possible.

Conclusion

Babble is Babel, an ancient myth of fragmentation and its consequent confusion. For many centuries, it has been the parable of communication barriers and cultural conflict. But recent years have seen a reformation- since Douglas Adams' mythical and comical babelfish, which allowed- through the slight discomfort of having a fish in your ear- complete ability for translation and communication. Altavista dubbed its giant translation engine babelfish in honor, and the work for a Universal Translator goes on. This is elucidating: for now, counter to the myth, there are methods that propose the possibility of convergence from disparate lines of communication.

Really, our inheritance has been a convergence of so many voices- but most times, the polyvocal origins are obscured behind the masquerade of single authorship; univocality; unicity. Projects like MESH.FM endorsed the productive possibilities of this 'babel', this aesthetic and performative polyphony. And while the event-series is over, those involved have moved on to projects that cultivate, and blossom, the conceptual seeds planted in the fecund strata of MESH.FM's conceptual humus.

Imbricated with the ending gestures of MESH.FM was Jon, Patrick, and Nathaniel's work on the DWZ- a Distributed Writing Zone. Among many things, the DWZ sought to extend the "productive confusion" of synchronous spoken or written output utilizing existing softwares and tools, most notably the ubiquitous AOL Instant Messenger and a fledgeling Network Text Editor. It was a real time celebration of polyvocality; it was an intellectual brouhaha. The DWZ was the direct precursor to the SCALE journal as well as this present system of writings, the iteratively tracked and mutually written CVSBook.

Subsequently, Jon helped debut the open-sourced Inkscape project, which appears in an earlier chapter. While Jon was lending his skills to the software bazaar of open source tools, Matt continued to construct tools that served to open- HORNMASSIVE, the semi-portable, non-electric amplification system, carrying the herald of MESH.FM's Soundsystem onward, and adding one more version to the original dancehall template.

My own work became a condensation of many MESH.FM ideas, most particularly in the co-creation (with Tucker Dulin) of the Skald Sound War: a Linux cluster, based of course on the free, open-source operating system, simultaneously performing functions as a networked, distributed entity while fighting a noise-generating, internal battle.

And that, just to name a few. It goes on.

Footnotes

The footnotes prior are in the text. The following need to be placed into the text for the next release of the book.

[7] Andrew C. Campbell (aka Prince TuFFiE?) "Reggae Sound Systems" <http://www.jamworldreggae.com/sounds/sounds.htm>. Also refer to Matt Hope's chapter in this present volume.

[8] Immanuel Kant, Critique of Pure Reason, trans. J.M.D. Meiklejohn (Amherst: Prometheus Books, 1990) p. 92

[9] "What is an Object?" Java Tutorial, Sun Microsystems, <http://java.sun.com/docs/books/tutorial/java/concepts/object.html>, 17 May 2004.

[10] Definition originally extracted from the ARTFL Project: 1913 Webster's Revised Unabridged Dictionary, on the University of Chicago website, 12 May 2004. <http://machaut.uchicago.edu/cgi-bin/WEBSTER.sh?WORD=noise>

[#] "Dictionary.com/noise", <http://dictionary.reference.com/search?q=noise>, 17 May 2004.

[##] Gnostic Reference...

[11] Richard Elliott Friedman. *Who Wrote the Bible?* (New York : Summit Books, 1987), 31

[12] "The mathematician and science fiction writer Vernor Vinge has proposed that technological innovation is racing towards a singularity. Scientific discovery appears as an exponentially growing process with a doubling period of about 15 years. However, the doubling period is diminishing because of increasingly efficient communication and processing of the newly derived knowledge. The rate of growth is itself growing. This makes the process super-exponential, and possibly hyperbolic. Vinge would argue that at some point in the near future the doubling period would reach zero, which means that an infinite amount of knowledge would be generated in a finite time. At that point, every extrapolation that we could make based on our present understanding would become meaningless. The world will have entered a new stage, where wholly different rules apply. Whatever remains of humanity as we know it will have changed beyond recognition," taken from "The Socio-technological Singularity", Principia Cybernetica Web, <http://pespmc1.vub.ac.be/SINGULAR.html>, 15 May 2004.

[13] or, one could say, a realization of

[14] Gilles Deleuze and Felix Guattari. *A Thousand Plateaus: Capitalism and Schizophrenia Part II*. trans. Brian Massumi, (Minneapolis: University of Minnesota Press, 1987) 3.

[15] Kelley, Jeff. *Introduction, Essays on the Blurring of Life and Art* by Allan Kaprow, (Berkeley: University of California Press, 1993) 18.

[16] Kahn, Douglas. *Noise Water Meat: A History of Sound in the Arts*. (Cambridge, MA: The MIT Press, 1999) 25.

[17] Csaba Toth, "Sonic Rim: Performing Noise Around Asia-Pacific", *Beyond Noise: Acoustic, Technical, and Metaphorical Aspects of Noise in Audio and Visual Arts*, 2 Aug. 2002.

[18] Kahn, 22.

[19] *Ibid.*, 35

[20] Ellen Band's website is: <http://www.ellenband.com>, while a short description of this idea is as follows: "Although white noise can be used to mask other noise, it can also cause aural hallucinations. Similar to the brain's response to sensory deprivation, the listener's mind will eventually grow tired of the monotonous drone of static and attempt to detect patterns in the noise. Artist, Ellen Band, who discovered this effect for herself, has produced several successful concerts and participatory art installations which present various noise sources which are perceived by her audiences as music, voices, birds or other acoustic mirages" J.W. Mooney, *Practical Architectural Acoustics Notebook*, 1998. <http://www.jwmooney.com/wcpub/page57.html> 15 May 2004.

[21] Fales, Cornelia. *Auditory Illusion and Cognitive Patterns in Whispered Inanga*. Unpublished Ph.D. dissertation, (Bloomington: Indiana University Press, 1992).

[22] Ranier Maria Rilke, "Primal Sound" in *The Book of Music and Nature*. ed. David Rothenberg and Marta Ulvaeus, (Middletown, CT: Wesleyan University Press, 2001) 23.

[23] Kahn, 22.

[24] Csaba Toth, "Sonic Rim: Performing Noise Around Asia-Pacific", *Beyond Noise: Acoustic, Technical, and Metaphorical Aspects of Noise in Audio and Visual Arts*, 2 Aug. 2002. The work of Philip Samartzis may be accessed at <http://www.philipsamartzis.com>

[25] <http://realtime.ucsd.edu/projects/brainstorm/index.html>

[26] Kaprow, Allan, "Happenings in the New York Art Scene" in *Essays on the Blurring of Life And Art*, ed. Jeff Kelley, (Berkeley: University of California Press, 1993) 18.

[27] Ibid.

[28] *Bhagavad Gita: Krishna's Council in Time of War*, trans. Barbara Stoler Miller, (New York: Bantam Books, 1986) 36.

[29] Masami Akita

[30] the quote comes from Csaba Toth's lecture, cited above; the idea seems to be a succinct, bastard child of Deleuze, Guattari, and Batailles...

[31] The Pile: <http://cabbage.ucsd.edu/~nsc>

[32] Marcel Bazin, "Bazaars: At the Heart of Iranian Towns" in *Introduction to The Persian Bazaar: Veiled Space of Desire*, by Mehndi Khansari and Minouch Yavari, (Washington: Mage Publishers, 1993) 13.

[33] Kaprow, Allan, "The Happenings Are Dead: Long Live the Happenings!" in *Essays on the Blurring of Life And Art*, ed. Jeff Kelley, (Berkeley: University of California Press, 1993) 62-65.

[34] The idea of a Happening as a modular meme was originally explored in relation to contemporaneous computer programming practices in my unpublished essays, "Modularity, or a Short Tutorial Oriented Towards Objects" and "Clusters and Cognition", as well as my paper, presented at the Reality Zone Conference in 2003 ([url](#)), "Clusters and Human-Computer Convolution". It is also of interest to extend the bazaar comparison with a quote: "...among the striking features of Iranian (and other) bazaars are, nearly everywhere, the vastness, the expansiveness, of the spaces they occupy and the consistency of their arrangements, as though a basic, even if flexible, prototype had been invented or developed at some unknown time and then carried through the centuries" -Oleg Brabar, "Trade, Shopping, and Architecture", Foreword to *The Persian Bazaar: Veiled Space of Desire*, by Mehndi Khansari and Minouch Yavari, (Washington: Mage Publishers, 1993) 7.

[35] <http://www.plunderphonics.com>



Look out b-ko
Pappa Jon is dead
how
of Donald

From: Jon Phillips <jon@rejon.org>
To: scale list <scale@cabbage.ucsd.edu>
Subject: [Fwd: [Inkscape-devel] Linux "DCO"]
Date: Mon, 24 May 2004 11:56:55 -0700

Significant development today in the Open Source world.

Linux has implemented a system for the Kernel to track submissions. With current patent problems in the US and various entities suggesting that code is being put into Open Source that is copyrighted, the emphasis on being able to trace where submissions come from is of the utmost importance.

Jon

-----Forwarded Message-----
> From: Bryce Harrington <bryce@bryceharrington.com>
> To: inkscape-devel@lists.sourceforge.net
> Subject: [Inkscape-devel] Linux "DCO"
> Date: Mon, 24 May 2004 11:50:39 -0700

> At work we just had an informal presentation about the new "Developer's Certificate of Origin (DCO)" that Linux is adopting for Linux (see http://osdl.org/newsroom/press_releases/2004/2004_05_24_beaverton.html).

> Basically, what I took from this was that the reason for this is because the Linux development process includes integration of patches submitted by various developers that are integrated by "lieutenants". In this process, the identity of the contributor can be lost if the lieutenant just takes the code into their own patchset. Interestingly, this wasn't driven by the SCO lawsuit - apparently it's been on Linus' todo list for the past year but hadn't bubbled up to the top until now. I had wondered if it had something to do with OSDL, but it turns out it doesn't; Linus just wanted OSDL to 'lightening rod' questions from reporters, and OSDL has offered to help with some kind of bk tool for databasing the contributor info, but that's still in the abstract at this point.

> This process may be useful for other projects if they have a similar development model to Linux. Being able to trace the origin of all code contributions can be critical if the project ever runs into legal questions at some point.

> For Inkscape, though, I think our processes are already sufficient. Because we use the patch tracker for externally contributed patches, we have a Sourceforge ID associated with each patch; we have cvs history for all direct contributors. Up 'til now we've allowed non-logged in patch submissions, however for traceability purposes I've disabled this. Our processes for updating Changelog, AUTHORS, and the release notes, also ensure that pretty much all non-trivial changes get documented. I know we sometimes get patches to the mailing list or to individuals; it would probably be wise to adopt the practice of encouraging these individuals to submit it to the patch tracker -- otherwise make doubly sure to record their name and email in the patch tracker and/or Changelog.

> Page 1 of 2

> Disabling the anonymous patch submission will also ensure we always have the ability to re-contact the patch submitter for questions or whatever, which I think is a benefit in and of itself, but if anyone has concerns about this, lemme know. Most of the anonymous submissions so far have been translations (mainly the Catalan and Japanese translations.)

> Bryce

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Page 2 of 2

John Richey.
untitled. (running away) 2004
1.57 hand-drawn animation projection
www.johrlichey.org



Raposa Vermelha and the 7 Griot Machines

D. Fox Harrell

Dear Rejon,

My plan was to contribute a dialogue about the tendency for critics of computational narrative works to focus on the unfortunate issue of "who is the author, the machine or the human system designer?" I thought I might include some words regarding how the goals of automated storytelling and literary Turing test competence have influenced the development of computational narrative systems, and critical writing such systems. In this vein, Dr. Joseph Goguen wrote an apt note to me about this:

Computer generated poetry raises many questions, some interesting, many not. Among the latter is "Who wrote it?" Just because a computer outputs a poem, doesn't mean it is a writer or that it made aesthetic judgments in any human-like sense. It means that a programmer wrote a poem generator (perhaps we could call it computer assisted poetry), and so it is that the system should be judged, taking full account of its cultural context, in essentially the usual way as for any other art project. Alternatively, it could be judged on technical merits. Or both. But the two should not be confused, any more than they should be for traditional art forms.

My feeling is that all such systems amount to some set of pre-composed textual templates (boilerplate) and rules for combining and instantiating them. The theoretical foundations upon which these elements rest, the generalizability and soundness of those foundations, and the success of the experiences generated for/with the user/audience/collaborator differ greatly, however.

The fourth word of this letter ("plan") is the key -- all of this dialogue was what I planned to write. That was before I found the following account of many systems that are out there (in the idiomatic sense of Eric Dolphy's 1961 release) which summarizes my take much more sensitively (though perhaps less systematically) than I would have anyhow. It is a series of thoughts entitled by some hacker calling himself or herself "Raposa Vermelha." Perhaps you can use this pale letter (in the tradition of Charles Kinbote) itself as a cumbersome introduction to her/his fiery commentary. All the best with your CVSBOOK, I hope this is useful.

Sincerely,

Fox Harrell

I have seven fantasy narrative machines to fulfill seven desires. In what follows I talk to, and about, these fantasies.

1) Computer, tell me a story ...

"Lady Chitterling was filled with despair at the prospect of becoming an old maid. She decided to make a last desperate attempt at love. The old, financially endowed, Mr. Green should be a willing lover at least, a benefactor, unfortunately not so willingly, but still all too easily, and husband with some more subtle tangle of wooing. In her mind she recited her man-snaring phrases as she hitched up her skirt and slid up her stockings. She had legs like a whipped cream chicken, sticklike and tough on the bottom half, but a frothy, dimpled mass floating at the top. She alone needed to know that though, she perfumed herself, stained her eyelids with blue, flicked out her eyelashes

with black, and kissed her own lips with red. While she completed her preparations Mr. Green took no such trouble. His Gentleman's Gentleman, Mack Gruyere, handed him his pressed brown double-breasted suit while he revised the latest figures in his mind. It was a habit, he was in no trouble of exhausting his funds, and frankly wouldn't live long enough to properly enjoy the dust coated balance in his coffers. He was destined to only accumulate wealth until the end of his days. A whiff of Lady Chitterling's perfume that day would alter that plan, though in a way that even she could not have anticipated, she certainly would not have imagined the lion still left in the heart of Mr. Green, that only a decorated groom hunter would draw out from his usual habitat..."

So it told me a story. It continued to a neat end. I am not sure why it mixed soul food into the mix (did Fuzzy Zoeller's computer science cousin write a face-recognition system that fed my profile into the story generator?), but setting that detail aside for a moment, I was ho-hum impressed. The story was set up well, it was resolved craftily. I would say that the system did no more than satisfy expectations, like a common novel in the "new literature" section of a bookstore, or an adequate story in a little known literary journal, it was adequate. Better than adequate. Staid, but accomplished. Well, that is what I would have said about the system, except for one thing:

"legs like a whipped cream chicken"

Computer's a genius.

2) Just tell me a story about X...

INFICTION-2, let me start with the name of the system. Cool as a slide ruler. Now that that is out of the way...the substance.

I provided the vocal input "I'm bored, tell me a story." Instead of just beginning, as I commanded it to do, the impertinent machine asked me a question in response.

"About what?"

About a fine lady, what else? I wanted to kick the computer.

The story kept me rapt for about 10 minutes...it produced some textual output and began an audio recitation in a voice that sounded like a parody of Chris Tucker (who already sounds like parody of a parody -- but is earnestly trying to make me laugh, which makes me want to break down and bawl the fuck out).

"Now," it screeched, "Her glance at her wrist seemed a bit disconcerted, like she really needed to know the time. With my watch large as a clock on my wrist I had what she needed, or so I thought. The next month, penniless, dusted, eating a rotten apple core, I would have told my past self (who got her number by rescuing her with the words "Excuse me, just in case you need to know it's 1:17...In a rush?") that what she needed was a swift kick in that big ass and a balled up toe-jam sock to ram in that chitterbox nag mouth. The story of how I got from that point, to this wasted and all-knowing situation now is what I am trying to escape. I hope that in telling you this I can pass it on and be done with it (I feel like a madman, sick of the world, a player passing on HIV knowingly, out of spite)..."

It went on in that pseudo-slang wise-ass tone. The story was archetypical. A woman ruining a man (who wasn't that great to begin with). The system was adequate in narration, the story sounded better than it read on paper, but it was the paper version that got me wondering. It never practiced to hone its craft and become sensitive to its audience, it had no means of responding or adjusting when I got bored. If it really were to write like a human author would it produce some failures along with its tepid successes? And why didn't it take a year or more to produce output like a human would? Certainly knowing that it slaved over the process of writing would affect how I read its work. Work that comes out instantaneously just leaves me dubious. I was entertained, amused, but INFICTION-2, in FACT I was unimpressed with your emulation.

3) Here is the content, now make me a story out of it...

I thought of the rectangular divisions in a dragonfly wing. The interface had many boxes. Kind of sat there shimmering, waiting to take off.

This is not fun, but it is not supposed to be. "Screen Scripts" is a tool, meant to allow me to enable the machine to concoct a tale in which I'll marvel at my own conception of plot and sub-plot, my stylish feel for motivating characters. So in the Female Protagonist Motivation rectangle I entered "revenge, lust, sentimental attachment, and altruism," the last just to spice things up, see what happens if you toss a fig in the stew. I pulled down the Location menu: U.S.A., California, Coast, Oceanside. I pulled down the Date, 1986. I checked the box for...

You don't need the details. 30 minutes later I skimmed the screenplay. I had a few chuckles, a few "what's gonna happen next moments," and one sit-the-pages-down-and-gasp-then-look-around-to-make-sure-nobody-saw-me. It was pretty good. I impressed myself. Not great, but good, amusing. Not "Raiders of the Lost Ark," but "Indiana Jones and the Last Crusade." 30 minutes of work, nice output, and I had only been using the system for a couple of weeks. Trained professionals could work out some entertaining pop stories with this. Hollywood's been doing it for years, only difference is that using Screen Scripts is like just setting font parameters instead of typesetting by hand. It may have been an old formula when Jonathan Dapper drove his car up the tow truck and jumped onto the big rig before fighting the villain atop the truck, got knocked down bloody-lipped, and grimly mugged "this fight is rigged, big rigged" right as the truck driver blew the horn, but what exquisite, exciting formula.

4) Here is the content, formalized and written in code, now produce an interesting story...

Ok, so I know it's like a Hell's Angel sliding down the boardwalk pedaling a 1-speed beach cruiser.

(I'll break it down in case you didn't get it -- hacker's too cool for school.)

I was checking out a university research lab, some AI group that had put together a pretty compelling system called "Storytime." It told stories of failed love. Not just any failed love, failed underdog love. Love between the retarded [should be developmentally disabled -- F.H.], nerd love, Pantera-listening metal love (that one's hilarious, the most sappy almost-lovers of the bunch), wannabe vapid socialite love, three-legged dog love, ... And they all work. Maybe the stories are a little formulaic, but the contrasts within the similarities are all the more striking for it. When the bespectacled nerd Bertrudy brutalizes her hopeful boyfriend, Simon, it is believable and poignant. When Veronica's \$500 high heel snaps off as she saunters over to Alan, the semi-professional athlete and aspiring (though unskilled) womanizer, it's funny, but real. This is the only story generation system that really had a sense of freshness about it, a real flair for writing style. A surprising fact, it was designed to satisfy a scientific research agenda first, and a finicky wise-ass commentator not at all.

The project leader claimed that all of her project's success was due to its basis in formal logic. They represented what ended up to be their sense of what was necessary to generate a compelling story. Their logical system allowed for idiosyncratic plots and unorthodox characters. There are no cliches that are not reinvigorated in the output stories. Every tale had some surprise in it, even when the surprise itself was no surprise it was exciting to discover what the surprise would be. I have read the press release about their system, "The best computer griot in existence...", the system's authors disappeared into their system's shadows when the review mentioned who composed the texts. The so-clever writer of another review of the system had the insight to question who really authored the stories, the researchers or the system (he ended with almost those exact pithy words)? All of that silly chatter misses the point, the "Storytime" itself is an amazing creative artifact, the authors of the system managed to write a program that told the stories they wanted to tell, while it still was able to surprise even them with the specific tales it spit out. Sure, Storytime's designers probably had their own nerd love lives that fed the system all of its

substance, but that's exactly the beautiful thing about it.

5) You make sure that my story gets told no matter what the player does...

I tried to break it. Did some corny shit. Fired an arrow from my bow, cast the "timefreeze" spell, ran around so that the arrow shot me (Archerhawk Jonespeare) in the avatar ass. I spoke jive to the palace guards. I shed my green armor and took a dip in the moat.

A game within a game. "Darkstar Sword: Realm of Vungar" countered my every move. When the arrow hit me I muttered, against my will, "well, I won't do that again!" or "That wasn't a good idea, good thing I wasn't hurt!" The palace guard just kind of smirked. I got so cold I was forced out of the moat and back into my clothes. Sir Gerard's squire summoned me and would not take no for an answer. He had a quest for me. Now, I didn't have to take it right away, but when I didn't I ended up being captured by bandits and rescued by Sir Gerard later anyway. In the end "Darkstar Sword" was better than I was, it told its story. I grew bored of my impertinence and went with the narrative flow. I won't lie, I exclaimed aloud when I found the darkstar blade. It was fun. I could say whatever I wanted to the non-player characters and they said something reasonable back. I just did as I wanted and somehow I became immersed in an epic fantasy tale. I could try to walk off into the wrong forest, but still something intense would occur to push the story further along. I must admit, I am not sure how they implemented some of it.

At some points I wished I could have just walked off across an endless desert and nothing more would happen than that I walked across an endless desert and got thirsty. I wouldn't have enjoyed it, but I wanted to try it. I wanted to rip the curtains off the window and wear them like "The Sound of Music." It's silly, I shouldn't want it. I don't really. But the freedom in the game impregnated me with possibility. Knocked up, I ended up playing the game within game (testing the system's limits) more than the game.

6) Forget about the story, just let the users play in some game world I've created, make sure interesting events occur as they try to achieve the goal of the game...

I don't know what they eat in real life, but in virtual life I was munching vanilla beans as a red panda. "World Animal!" player id 6794592, I am called "Auburncoon." Let me tell you right now, the happy animal thing kind of freaked me out after meeting some of the characters roaming around in there, but overall I was glad for the wholesome theme. "Fastautumn" season began suddenly and the leaves floated down from the trees, the spiraled to the ground and blanketed the dirt. Quickrabbit, James (a turtle), and Alexblack, a shovelnose guitarfish all helped me to rake the leaves into piles. Then Hoppy (wallaby) sent the leaves back into the air with a diving leap. We all joined in, joking, laughing. Then we made Hoppy clean it up by himself!

A few days later James had his shell stolen. I suppose it was a random event, we all had to go on an adventure to go get it back. An owl-bot named Prince Bomm had taken it for "research purposes." It took us a few hours and we saw some parts of the game world none of us had ever seen before. The lake was crystal coated and gorgeous. The owl-bot was witty and zany -- good AI. The avatars were expressive, we could intuitively contort our faces as we desired, we could type in full text or build phrases from pre-made templates. I made a good set of friends.

A week later I got busy with some real work though and I didn't make time to go back. I felt bad, I should have said goodbye to my friends, but on the other hand it's just a game. There was no end, there would always be more adventures, some better than others. There would always be friends and fools with abundance. I know those I spurned by not returning (ok, I admit I told them I would see them tomorrow) would still consider me to be the former if I apologized. Even though I had a good time with it I somehow always felt more like the latter afterwards. Maybe it is because I don't have the intellect to allow me to figure out how to make enough money so that I can spend as much time as I want in World Animal without having to worry about getting work done, paying rent, and eating.

7) Let users create their own worlds to explore...

Computer, river please.

Populate with archer fish and non-biting insects for them to eat.

Surrounding mountains please. Evergreen trees. Ducks. Soft grass.

Getting out of the chair felt nice. The haptic effects were few, but the wind and mist was a nice touch. The coconut juice I had to bring in myself. Sipping it, I created more.

I hear something behind a tree. Introduce a mystery, not fantasy, not love. Instantiate world now. Begin execution.

My eyes are cottony and heavy. I'm sleepy as I write this. I like it when I don't make sense, but since you may not just blame it on late "Holoticon" sessions.

And no, it isn't because I adventured instead of sleeping enough (though I did), no, I am not spent on holosex.

It's just that it wears you out. It's as tiring as a hard day outside of the machine. Exploration takes effort. In the beginning my life in the Holoticon was an exciting break from hectic reality. Now it's also a break from those breaks.

Should've guessed I didn't start with archer fish and rivers. I surfed through blue suns, romanced dragon-aliens, consoled ghosts, wept at deaths, teased the weak.

I worked my way out of tight situations, and talked my way into fortunes before I spent my way out of them.

I walked across deserts until I got thirsty and had to take a water break, or until I had to break water.

Finally I had to take a knee. Then a nap.

I did so in the system, still.

My dream relaxation setting (quiet, enough with your new age mocking cynicism -- I'll still unplug long enough to kick your ass before my crystal falls siesta).

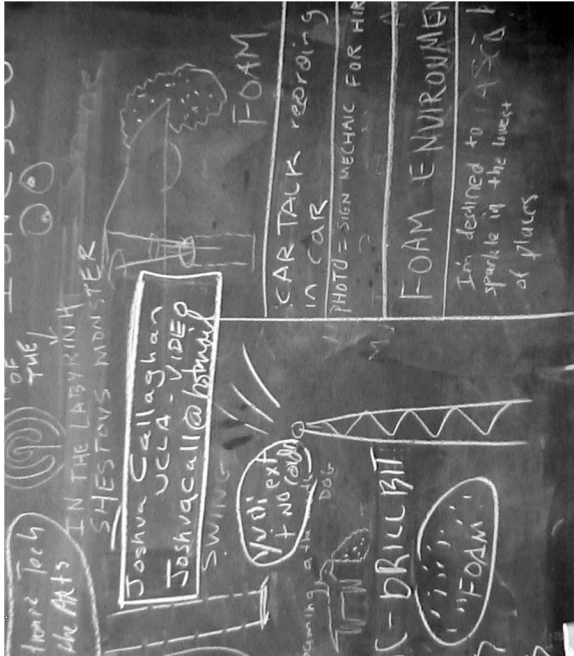
Slow the river please, less breeze, increase fish jump frequency.

Stop ducks, replace with eagles. Dim sun.

Stop river flow, keep river sound.

– Rapsa Vermelha, May 2004

Mark Oliver



BJ



Betty

LAST EXIT CAKE

2 lbs. combustibles
4 cups motion sickness
1 gallon sweat
3 mix tapes (1983-1987, Journey, etc)

Before Hurricane Catherine touched down, you and your flame were driving down the coast of Florida. You pretended you were on the run, escaping, but really, it was a routine drive, coming back from the small market. It was muggy, you were muggy, heavy, you were sweating and you must have looked terrible, but you looked terrible together. There was sweat dripping from all your hair, all over your clothes, from the roof of the car, threatening to drown you both. You would have rolled down the windows, except that they were stuck shut from the time the car was parked next to the fire behind the burger joint, melting the insulation to the glass, cracking the paint, but sparing the car. He was driving, you were "navigating" but really you were spacing out, ignoring things, counting telephone poles, missing signs, and the hitchhiker you didn't pick up. You wanted to grab the wheel, jerk it somewhere, somehow change the course. I know it's hard to turn the oven on when its this hot, but I love that cake smell.

3 cups sugar (for the gas tank)
4 egg whites
1 switchblade

Grease up that pan. You don't want any sticking. Remember when she slashed his tires? He came crying to your door at four in the morning, like he couldn't believe it happened and was hoping you could explain it away. That night, the rodeo came to town and most people went to watch the rides. At one point, a steer crashed through a fence into crowd. Instead of scaring people off, the accident made them close in, raising the stakes of watching. The crowd cheered their favorite riders, but as soon as the rider was thrown, the crowd would switch sides, now rooting for the animal. She couldn't work the razor herself and was so anxious and had to get someone else to take the safety off. She did it because he was out of her hands. I can't say I agree with what she did, but she did have her reasons.

Over a double boiler, take a beater to the egg whites. They say you should beat until peaks begin to form. Why not see how far you could go with it?

92.9 FM EASY LISTENING TREAT

1 swipe Lady Speed Stick, Powder fresh variety
1 valu-pack wintermint gum
1 6 pack lite beer
1 Chris De Burgh song "Lady In Red"

Wasn't that the night that you wore that red dress? Every song on the radio made you two want to pull off the road, cut the engine, turn up the music, leave that car, dance close. That night the slow dances could have lasted forever. You were wearing new red high-heeled shoes, but kicked them off, half because of the moment and half because they had blistered and rubbed away the skin on your heels and little toes. Each step hurt but your mind wasn't on your feet. Dancing with you "cheek to cheek", he said that the highlights in your hair caught his eye. Just like in the song! The car stereo piped out one hit after another and the two of you stayed in the headlights until they were useless.

1 pair panties, red
1 pair heels, red

You tasted so minty fresh, it was like you planned it. Chewing one piece of gum after another, working your way through all 32 sticks, it was less about fresh breath and more about covering tasteless choices. Like that time you ran away and when they caught up with you, you said you had been kidnapped. You made up a story about a man with dark glasses and patchy hair and brown clothes and lots of scars. Signs were posted in store windows and post offices and schools. Search committees were formed and took the streets. A month later someone matching that description came through town and he was run out as soon as he got out of his car. Seven years later, you are still acting in similar ways, not accepting responsibility for taking off, finding someone to lay it on.

1 bottle Robitussin
1 package frosting, white

Mix in a cast iron skillet, let simmer over night until the sun rises. You should really take better care of yourself, staying up all hours of the night. That cough doesn't sound so good, you should get it checked out. You are light headed. Come lay down that heavy head.



BIRTHDAY AMAZING

1 wad cash, ones and fives, crumpled
1 getaway car, automatic transmission
4 surprises
2 sticks butter

Let's do this one from scratch, no more of the store bought business. The last time you were around you made a grand exit, it was someone's birthday, and you stole the show, you stole the cake, threw it on the ground, and made a point of stomping on it as you exited. You thought you ruined the night, but no one cared, not after the trouble that came later that evening.

1 tank regular unleaded gas
5 lung fulls of carbon monoxide
1 tube lip gloss

You tracked chocolate out of the house, getting it smeared into the carpet and the lawn. I wanted to follow you and the cake, but knew it would get messy. I couldn't even think of cleaning it up, giving more attention to the matter would only make it worse. Someone ripped the wallpaper down in every room that night and people started carving things into the walls. Someone got into a car and started smashing into everything, like a demolition derby in the front yard. People started kissing all over the place, some even fell in love. I don't know what happened that night, but suddenly, people were eating everything, the cake was everywhere.

The oven is surely hot enough by now. Throw it all in, cook it, melting everything on the outside, but keep the inside soft, tasty. I can tell you it will be a treat to decorate this thing. Remove from oven. Let settle. Cool.

- Kelly Sears



Kim Manchester

Zucchini Brownies

- 4 eggs
- 1 1/2 c oil
- 2 c sugar
- 2 c flour
- 2 tsp baking soda
- 2 tsp cinnamon
- 1 pinch salt
- 4 tbsps cocoa
- 1 tsp vanilla
- 3 c grated zucchini
- 1 c chopped nuts

Beat together eggs, oil, and sugar.
Mix together remaining ingredients until smooth.
Spread into greased pan.
Bake @ 350 for 25-30 minutes.

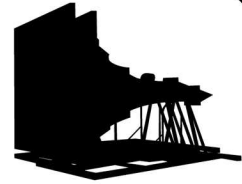
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Rachel Beth



HORN MASSIVE Specifications

Where and what rating is the electrical supply?
 What are the primary parts of this device, Input and Output?



The HORN MASSIVE 2009 Art Installation (5000 Lbs), 3.5 M by 3.1 M by 4 M tall, 2000 watt steel and aluminum sound system, all powered from a commercial 12" speaker driver. In addition to this primary function, it also serves as an audio input station whereby people can plug-in via the multitude of audio inputs in order to project whatever content they see fit.

Its intent is to activate its peripheral environment by transforming it into an experimental hub-like zone of temporal sonic activity.

One stipulation is that performers and their audio devices must be able to be housed on the physical platform installed. This limit is the perimeter diameter in which everything must fit and be contained. It was designed to be the ultimate monophonic sound projector and to catalyze resultant activities in multiple settings.

It is 18 months of work by Matt Hope (<http://www.matthope.org>) involving many industrial design skills such as welding, machining, construction, organization and manipulation of large amounts of highly specialized parts ordered from an array of industrial outlets. There is only one of each part and only one HORN MASSIVE in the urban utopia.

It supplemented the physical project also utilized a virtual tool box of contemporary 3D visualization and electro acoustic computing tools and practices. Software applications including AutoCAD, 3D studio Max, Rhino 3D, Bass Box Pro, Horn Controller and Horn Response.

Along with the assistance of countless individuals, the project received technical input from departments at University of California San Diego including Scripps Institute of Oceanography, Physics Machine Shop, Structural Engineering, Seismic Analysis and Engineering, Electrical Engineering and Media Service technicians.

Power output	600 watts (continuous) / 1200 watts (program)
Top speed	road going speed 3 mph / 5 Km
Dimensions	3.5m x 3.1m x 4m
Construction materials	Mild steel (superstructure) 6061 Aluminium (equipment)
Surface materials	Polymer vibration depressant (Noise Killer 118)

THE MYSTERY OF HUMAN LIFE

Have you ever wondered why you are living in this world and what the purpose of your life is? There are six keys that unlock this mystery.

1. God's Plan
God desires to express Himself through man (Rom. 8:29). For this purpose, He created man in His own image (Gen. 1:26). Just as a glove is made in the image of a hand to contain a hand, so also man is made in the image of God to contain God. By receiving God as his content, man can express God (2 Cor. 4:7).



2. Man
To fulfill His plan, God made man as a vessel (Rom. 9:21-24). This vessel has three parts: body, soul, and spirit (1 Thes. 5:23). The body contains and receives the things of the physical realm. The soul, the mental faculty, contains and receives the things of the psychological realm. And the human spirit, the innermost part of man, was made to contain and receive God Himself (John 4:24). Man was created not merely to contain God in his stomach, or to contain knowledge in his mind, but to contain God in his spirit (Eph. 3:18).

3. Man's Fall

But before man could receive God as life into his spirit, sin entered into him (Rom. 5:12). Sin deadened his spirit (Eph. 2:1), made him an enemy of God in his mind (Col. 1:21), and transmuted his body into sinful flesh (Gen. 6:3; Rom. 6:12). Thus, sin damaged all three parts of man, alienating him from God. In this condition, man could not receive God.



4. Christ's Redemption for God's Dispensing



Nevertheless, man's fall did not deter God from fulfilling His original plan. In order to accomplish His plan, God first became a man called Jesus Christ (John 1:1, 14). Then Christ died on the cross to redeem man (Eph. 1:7), thus taking away his sin (John 1:29) and bringing him back to God (Eph. 2:13). Finally, in resurrection, He became the life-giving Spirit (1 Cor. 15:45b) so that He could dispense His unsearchably rich life into man's spirit (John 20:22; 3:6).

5. Man's Regeneration



Since Christ has become the life-giving Spirit, man can now receive God's life into his spirit. The Bible calls this regeneration (1 Pet. 1:3; John 3:3). To receive this life, man needs to repent to God and believe in the Lord Jesus Christ (Acts 20:21; 16:31).

To be regenerated, simply come to the Lord with an open and honest heart and say to Him:

Lord Jesus, I am a sinner. I need You. Thank You for dying for me. Lord Jesus, forgive me. Cleanse me from all my sins. I believe You raise from the dead. I receive You right now as my Savior and Life. Come into me! Fill me with Your Life! Lord Jesus, I give myself to You for Your purpose.

6. God's Full Salvation

After regeneration, a believer needs to be baptized (Mark 16:16). Then God begins the lifelong process of gradually spreading Himself as life from the believer's spirit into his soul (Eph. 3:17). This process, called transformation (Rom. 12:2), requires human cooperation (Phil. 2:12). The believer cooperates by allowing the Lord to spread into his soul until all his desires, thoughts, and decisions become one with those of Christ. Finally, at Christ's return, God will fully saturate the believer's body with His life. This is called glorification (Phil. 3:21). Thus, instead of being empty and damaged in each part, this man is filled and saturated with the life of God. This is God's full salvation! Such a man now expresses God, fulfilling God's plan!



MASCAR Please read this instruction leaflet carefully. HOW TO USE A CONDOM.

Handle with care. Condom can be torn by fingernails and sharp objects such as jewelry, zip and buttons.

1. Use attentivement le mode d'emploi.
COMMENT UTILISER UN PRÉSERVATIF (CONDOM).

Manipuler le préservatif (condom) avec précaution. Faire attention aux ongles et aux objets tranchants tels que bijoux, boutons, fermetures à glissement, boutons de pantalons, qui pourraient endommager le préservatif (condom).

2. Lire les instructions attentivement avant de retirer le préservatif (condom).
INSTRUCCIONES DE USO.

Manipular con cuidado. El preservativo puede dañarse con los uñas y objetos cortantes como anillos, botones, botellas de plástico, etc.

3. Leer las instrucciones antes de retirar el preservativo (condom).
INSTRUCCIONES DE USO.

Manipular con cuidado. El preservativo puede dañarse con las uñas y objetos cortantes como anillos, botones, botellas de plástico, etc.

4. Put the condom on when the penis is erect, before there is any contact between the penis and your partner's body. Hold released from the top during the early stage of an erection can contain sperm and organisms that can cause STDs.

5. Place the preservatif (condom) on phallus quand le pénis est suffisamment en érection et avant que contact avec le pénis et le corps de partenaire. Le liquide émis pendant les premières secousses peut contenir des spermatozoïdes et des germes contagieux.

6. Coloque el preservativo sobre el pene erecto, antes de que haya cualquier tipo de contacto entre el pene y el cuerpo de su pareja. Los fluidos producidos durante las primeras fases de la erección pueden contener espermia y

microorganismos causantes de ETS.

7. Coloque a preservativo sobre o pénis erecto e antes de qualquer contacto com a sua parceira. Os fluidos pré-erectórios nos primeiros estágios de uma ereção podem conter espermia e microorganismos causadores de DST.

8. Use the condom on one side of the foil being sure to fit the condom inside. Carefully remove the condom.

9. Retirer délicatement l'emballage en le dépliant sur un côté. S'assurer que le préservatif (condom) à l'intérieur se soit bien enroulé.

10. Abra el envase por un lado, teniendo especial cuidado de no dalar el preservativo. Siquiera cuidadosamente del envase.

11. Abra a embalagem por um dos lados, tendo especial cuidado para não danificar o preservativo. Retire-o cuidadosamente do invólucro.

12. Use the preservatif (condom) inside a condom coil cause it to break. In avoid this, separate the closed end of the condom between your forefinger and thumb and place the condom over the erect penis. Be sure that the roll is on the outside.

13. Utiliser le préservatif (condom) à l'intérieur du préservatif (condom) pour empêcher qu'il se rompe. Évitez de le faire en séparant entre les doigts le bout du préservatif (condom) à l'intérieur de la feuille d'air. Fixer le préservatif (condom) sur le bout du pene en érection. S'assurer que la partie à déplier est à l'extérieur.

14. El aire atrapado dentro del preservativo puede causar su rotura. Para evitarlo, separe el extremo cerrado del preservativo entre los dedos índice y pulgar y coloque el condón sobre el pene erecto. Asegure de que la parte enrollada

se encuentre en el lado exterior.

15. Il se evita romper el preservativo puede causar a sua rotura. Para o evitar, separe o preservativo pelo depleto, entre o dedo polegar e o indicador e coloque o preservativo sobre o pénis erecto. Asegure de que o lado lizo do lado exterior.

16. Make sure the condom stays in place during sex, if it rolls up, roll it back into place immediately. If the condom comes off, withdraw the penis and put on a new condom before intercourse continues.

17. Assurez-vous que le préservatif (condom) reste en place pendant la relation sexuelle. S'il s'enroule sur lui-même pendant l'acte, le replacer immédiatement en le déroulant à nouveau. Si le préservatif (condom) s'enlève accidentellement, ne recommencez pas de continuer la relation sexuelle.

18. Mantenga siempre el preservativo entre los dedos, utilizar la parte para continuar a desenrollar completamente el preservativo (condom) le lado do pénis.

19. Evite que o preservativo (condom) deslize ou se desenrole durante a relação sexual. Se o preservativo (condom) se deslizar ou se desenrolar imediatamente, retire-o imediatamente e coloque um preservativo novo antes de continuar a relação sexual.

20. Evitar que o preservativo (condom) deslize ou se desenrole durante a relação sexual. Se o preservativo (condom) se deslizar ou se desenrolar imediatamente, retire-o imediatamente e coloque um preservativo novo antes de continuar a relação sexual.

21. Evitar que o preservativo (condom) deslize ou se desenrole durante a relação sexual. Se o preservativo (condom) se deslizar ou se desenrolar imediatamente, retire-o imediatamente e coloque um preservativo novo antes de continuar a relação sexual.

22. Evitar que o preservativo (condom) deslize ou se desenrole durante a relação sexual. Se o preservativo (condom) se deslizar ou se desenrolar imediatamente, retire-o imediatamente e coloque um preservativo novo antes de continuar a relação sexual.

23. Evitar que o preservativo (condom) deslize ou se desenrole durante a relação sexual. Se o preservativo (condom) se deslizar ou se desenrolar imediatamente, retire-o imediatamente e coloque um preservativo novo antes de continuar a relação sexual.

24. Evitar que o preservativo (condom) deslize ou se desenrole durante a relação sexual. Se o preservativo (condom) se deslizar ou se desenrolar imediatamente, retire-o imediatamente e coloque um preservativo novo antes de continuar a relação sexual.

Asegure de que o preservativo se mantenha no sítio durante a relação sexual: se não se enroscar durante a relação, coloque-o de novo no seu sítio imediatamente. Caso o preservativo se desdobre, retire o pénis e coloque a preservativo novo antes de continuar a relação sexual.

25. Assurez-vous de que le préservatif (condom) reste en place pendant la relation sexuelle. Si le préservatif (condom) se déroule pendant l'acte, le replacer immédiatement en le déroulant à nouveau. Si le préservatif (condom) se déroule accidentellement, ne recommencez pas de continuer la relation sexuelle.

26. Mantenga siempre el preservativo entre los dedos, utilizar la parte para continuar a desenrollar completamente el preservativo (condom) le lado do pénis.

27. Evite que o preservativo (condom) deslize ou se desenrole durante a relação sexual. Se o preservativo (condom) se deslizar ou se desenrolar imediatamente, retire-o imediatamente e coloque um preservativo novo antes de continuar a relação sexual.

28. Evitar que o preservativo (condom) deslize ou se desenrole durante a relação sexual. Se o preservativo (condom) se deslizar ou se desenrolar imediatamente, retire-o imediatamente e coloque um preservativo novo antes de continuar a relação sexual.

29. Evitar que o preservativo (condom) deslize ou se desenrole durante a relação sexual. Se o preservativo (condom) se deslizar ou se desenrolar imediatamente, retire-o imediatamente e coloque um preservativo novo antes de continuar a relação sexual.

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6

MASCAR Please read this instruction leaflet carefully. HOW TO USE A CONDOM MORE THAN ONCE.

Manipuler le préservatif (condom) de façon hygiénique. Retirer le préservatif (condom) en le tenant par le bord et le remettre à la place possible. Ne pas le réutiliser.

1. Retirer le préservatif (condom) en le tenant par le bord et le remettre à la place possible. Ne pas le réutiliser.

2. Evitar que o preservativo (condom) deslize ou se desenrole durante a relação sexual. Se o preservativo (condom) se deslizar ou se desenrolar imediatamente, retire-o imediatamente e coloque um preservativo novo antes de continuar a relação sexual.

3. Evitar que o preservativo (condom) deslize ou se desenrole durante a relação sexual. Se o preservativo (condom) se deslizar ou se desenrolar imediatamente, retire-o imediatamente e coloque um preservativo novo antes de continuar a relação sexual.

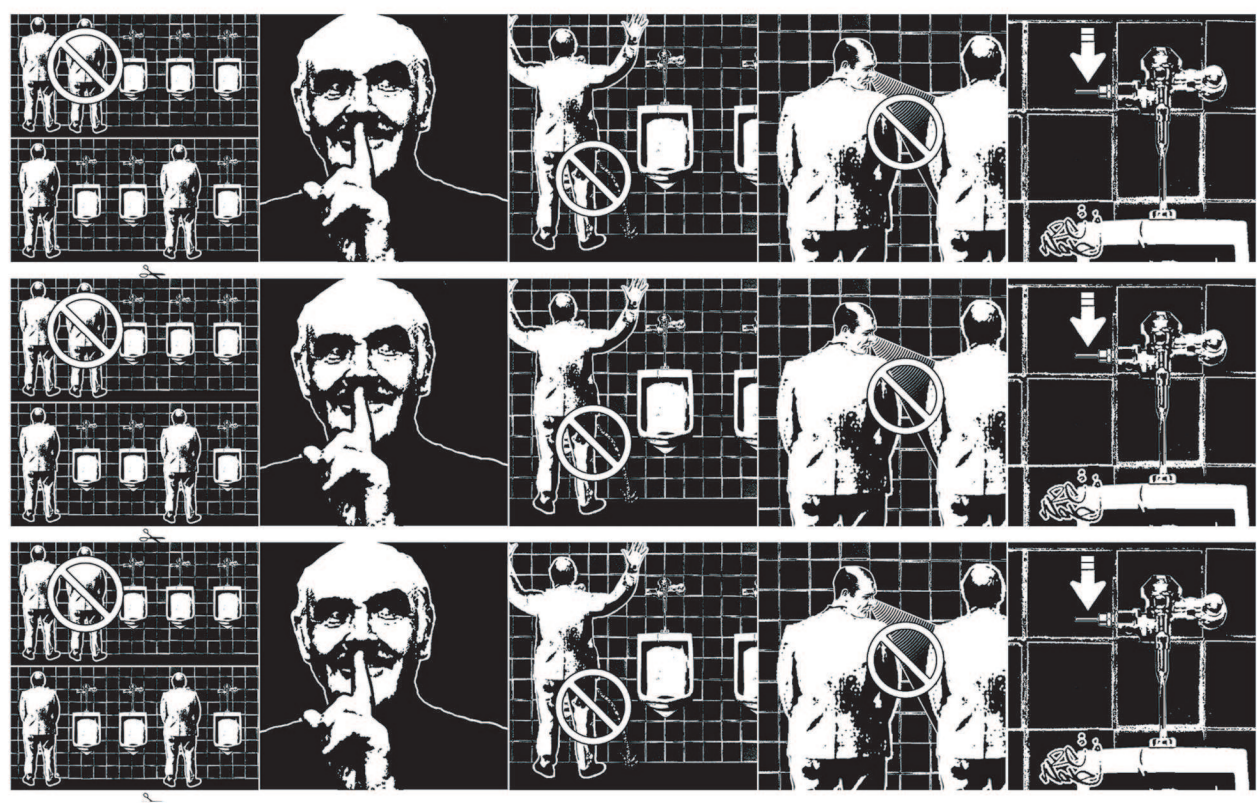
4. Evitar que o preservativo (condom) deslize ou se desenrole durante a relação sexual. Se o preservativo (condom) se deslizar ou se desenrolar imediatamente, retire-o imediatamente e coloque um preservativo novo antes de continuar a relação sexual.

5. Evitar que o preservativo (condom) deslize ou se desenrole durante a relação sexual. Se o preservativo (condom) se deslizar ou se desenrolar imediatamente, retire-o imediatamente e coloque um preservativo novo antes de continuar a relação sexual.

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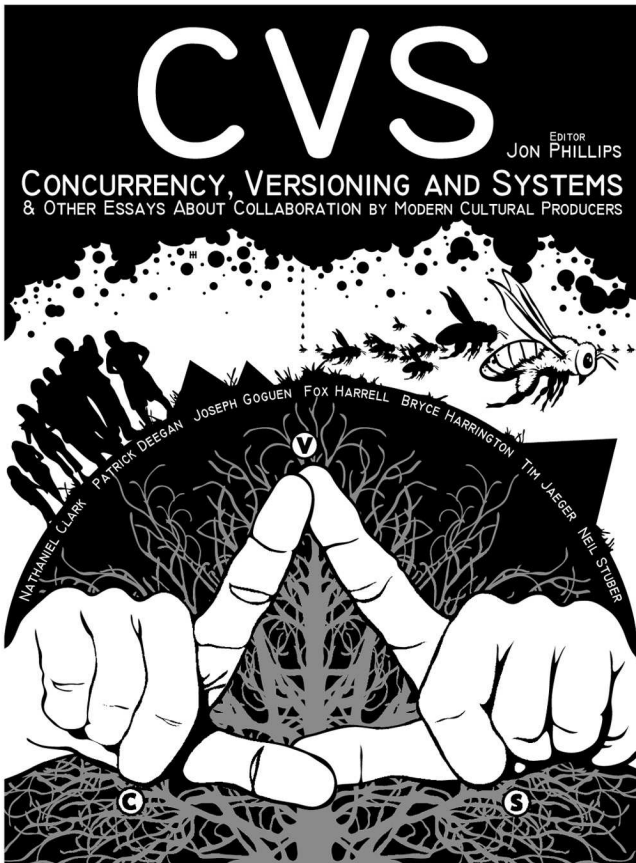
7. Evitar que o preservativo (condom) deslize ou se desenrole durante a relação sexual. Se o preservativo (condom) se deslizar ou se desenrolar imediatamente, retire-o imediatamente e coloque um preservativo novo antes de continuar a relação sexual.

8. Evitar que o preservativo (condom) deslize ou se desenrole durante a relação sexual. Se o preservativo (condom) se deslizar ou se desenrolar imediatamente, retire-o imediatamente e coloque um preservativo novo antes de continuar a relação sexual.

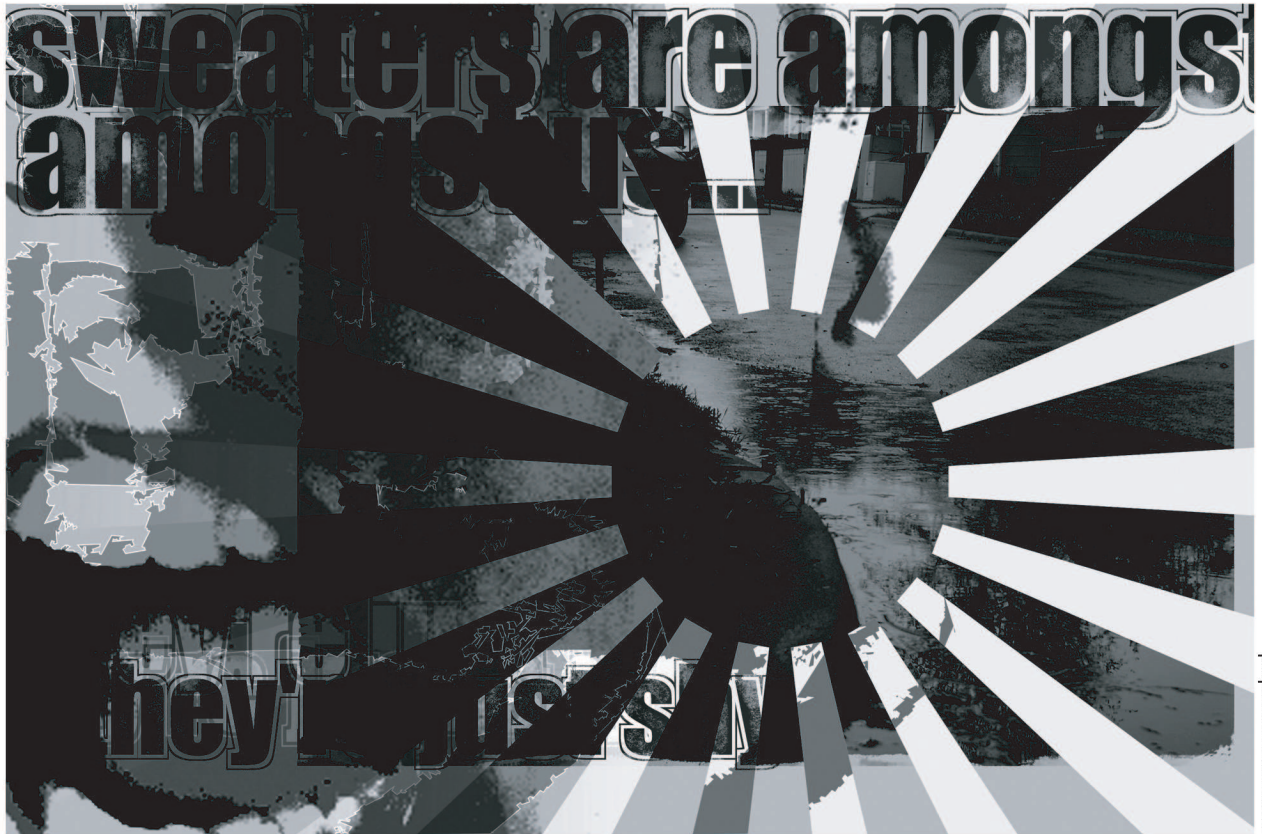




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CVS BOOK COMING SOON.
[HTTP://CVSBOOK.UCSD.EDU](http://CVSBOOK.UCSD.EDU)



Where is the nearest spoon?
The natives are screaming
For their homophobic food...
Feed them quiches or
truffles. May best leeses,
Wander off,
And taste the forbidden fruit...

(from the "Voices in my Headset" series, 2004)

Voices in My Headset is composed of fairly typical scenes of people with mental disorders, or people having "voices in their head." The only difference is that each has a headset equipped and a cell phone clutched tightly in their hands. Together, the pair "Derelict" and "Asylum," are meant to illustrate and discuss the new social oddities and awkward situations introduced by cell phone technology and technology in general.

It has become an increasingly familiar situation wherein you think a person is speaking to you when they are in fact speaking with another party on their cell phone. In a broader sense, it challenges the notion that technology brings us closer. In a way it does. Today, the technology is so prevalent and inexpensive that you can easily speak to your friends and loved ones at a moment's notice. At the same time, however, you isolate yourself from others around you. The cell phone has the tendency to strengthen social cliques but at the cost of excluding outsiders.

<http://www.vancecran.com/content/voices/>

Vance Tran is currently pursuing a degree in the Interdisciplinary Computing and the Arts major (ICAM) at the University of California, San Diego.

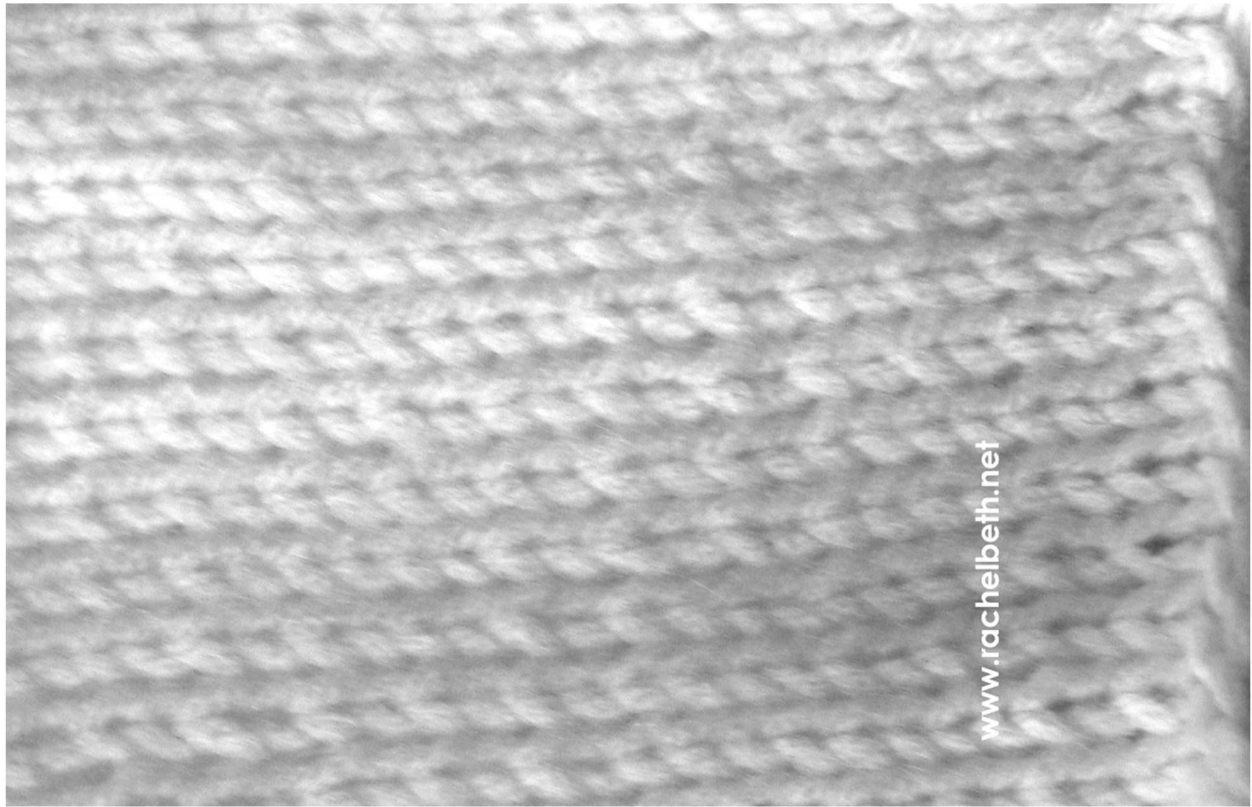
Contact Information: 619-806-6061 / vance@vancecran.com or vancecran@gmail.com

"Derelict"

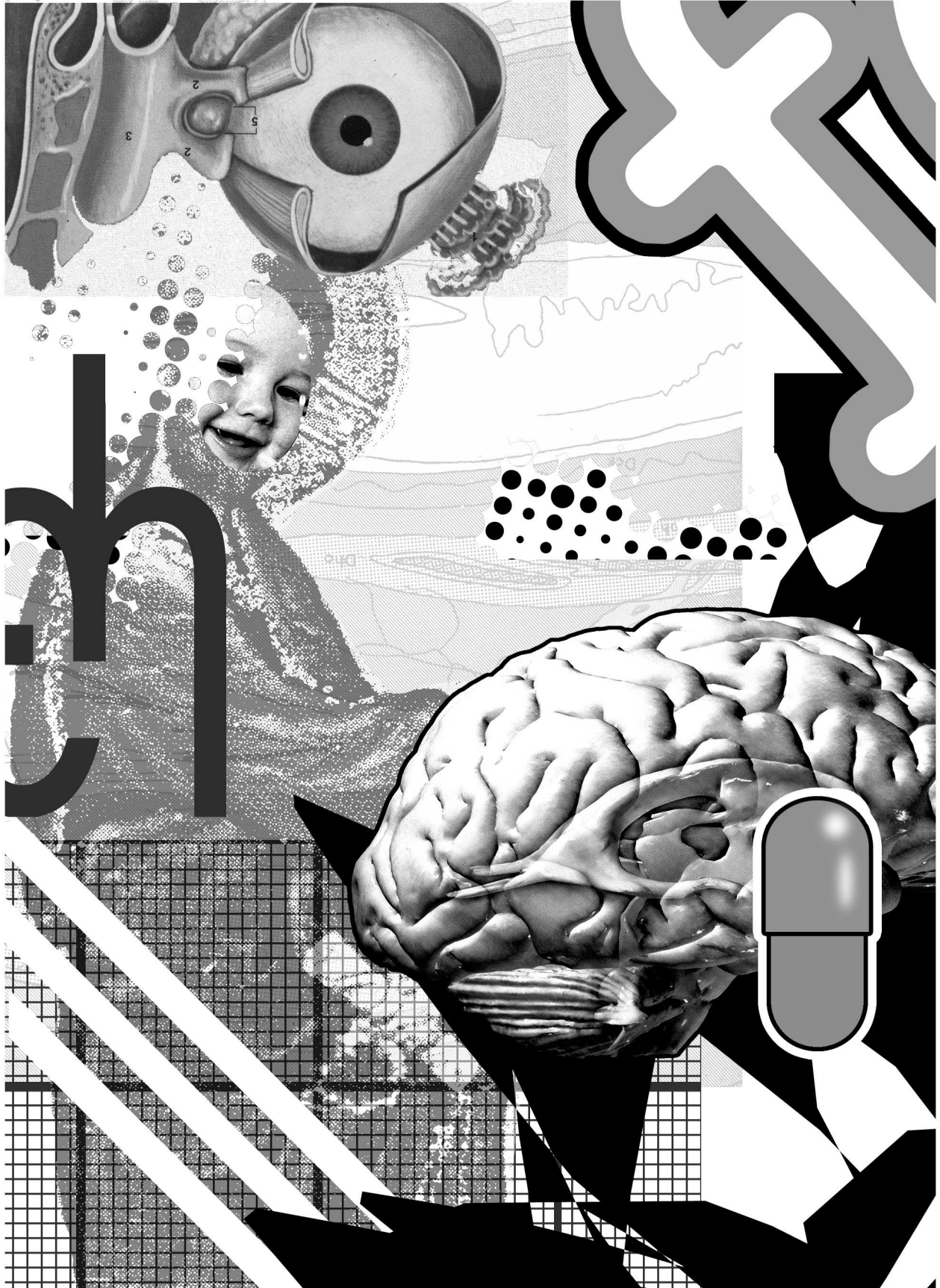


"Asylum"





Mark Oliver



Scale (v 0.1b)

“Scale” refers to a ratio of measurement, generally between two or more variables. Though its use is frequently limited to maps and model kits, it is a useful expression when discussing the relational aspects of certain art practices. The scale of a piece signifies its size, its scope, and its impact, among other variables. A piece may be physically large or small, and its size might also be a function of a relationship to other similar pieces; for instance, the Coronado bridge is tall relative to my height and to the sea level from which it rises, and it is also tall compared to the Brooklyn bridge (which is tall by the first account, but smaller in comparison). A piece might also be for a limited discrete audience, or it might be for global release, it might be enjoyed one person at a time, or by a whole community, e.g., a private collector’s commissioned painting versus a film by Abbas Kiarostami. Finally, a piece might not elicit any kind of response at all, or it might cause a great deal of ruckus. Each of these aspects is not a new feature, but these aspects are brought to the front when considering the scale of human interaction on various levels. In the works of Neil Stuber and Jonathan Phillips this is certainly the case. For each of these artists, scale represents the relationship a person has to the work’s various levels, as well as others who also experience the work. Neil Stuber’s work uses a type of scale to represent itself as well as to propagate itself across mediums and cultures. While Jonathan Phillips’ collaborative practice is concerned with collective interactions between people, technologies, and across spaces – all without necessarily moving from one’s seat, thereby exploring how these processes and events scale between individuals and communities.

The concerns of scale generally address the thirteen images in Neil Stuber’s series *youSA*. However, instead of a physical incommensurability in its engineering, *youSA* uses scale in three different but complementary ways: scalable vector graphics (SVG), proliferation (partly as a result of SVG), and in *youSA*’s social scalability. Each of these scales evoke different aspects of continuums; that is, they scale in or out without qualitative change. However, as aspects of the images, these three

scales also work together to call viewers’ attentions to numerous issues, including the host of satirized cultural icons present as signs within signs. The hyperbolic image-content of the signs confronts the ostentatiousness and conspicuousness that saturates life in much of the conventional U.S. middle class, while the images themselves are designed as signs – printed or distributed, on streets and in the ether, writing for all walls – and as such the doubling of signs confronts the immediate *flatness* of the image. The scalable depth of the signs ironically confronts the flatness of its aesthetic vehicle. This paradox in the composition makes me laugh, and yet like much laughter, I laugh because I feel I have been offered the uneasy space to witness myself; this is how laughter returns to concern: I laugh only as long as I can afford to; every image *is writing on the wall*.

Developing in part from the unlauded and under studied forms of street art, *youSA* returns to the trope of wall writing as a physical and psychical reclamation of space, and as prophetic discourse. There is no accident in the presence of both of these elements: the indication of where something is in space is also an indication of its trajectory. Here, street art marks the space that is affected (the location of the ‘problem’ or ‘symptom’) with the imagery that affects it (the emblem, the appropriated icon), all in an attempt to somehow reciprocally affect that space, in essence, to bring change through awareness. Ivor Miller, reflecting on street-art/aerosol culture’s general themes sets out four tenets: “the centrality of naming; the concept of building language (building language, as well as inventing it), ...[i.e.,] visual and verbal wordsmithing; the idea of constructing an identity in opposition to the state and consumer culture; and the idea that resistance through cultural production is reinforced with a consciousness of ancestral spiritual traditions.”¹ *youSA* develops directly out of these same issues, reinvesting the dimension of social critique and iconographic aggressiveness that marked the art of New York City subway painters from the early seventies onward. In a similar manner, every image in *youSA* bears the aesthetic grammar of the artist, as well as his tag, all of which work to critique and thus oppose culture by directly returning to both the historical foundations of street art, and the social ethos that initiated it. It is in this same way that *youSA*

writes on its walls with its specific language of critique that exposes and prophesizes.

Yet, as I have noted, these walls are very different walls. Similar, but ultimately different from the spray can aesthetics on barrio walls or the painted subways that shoot through the arterial tunnels of New York City, *youSA* confronts a different world with different spaces through its own particular language (*langage*). Here the rules of visual dominance are not even recognized by the majority of people who consume them: the visual structure of the web is controlled in large part by proprietary constitutive languages (*langue*); these languages are communicated through limited *speech pathways*, i.e., the bandwidth that predetermines what content may be transmitted between *speakers*. Imagine if your everyday speech was compressed upon utterance, and the possibility of its transmission to any receiver was determined by the relationship the words you uttered had to themselves and the air they needed to pass through. The problem here is similar: every image on the web undergoes some kind of data translation normally in the form of bitmap (lossy) compression (mostly proprietary), or Bezier inspired vector graphics, known as SVG.² The former needs only simple software algorithms but generally results in bulky files with limited transmission potential (imagine surfing the graphics heavy web today on an old 9600 Baud modem). The latter, of which *youSA* falls into, are more advanced as they are technically not compression-translations but reformulations of graphical interaction, resulting in small easily transmitted files. Ultimately SVG acts like aerosol art for the ether walls of the web and its network tunnels. SVG images transmit quickly, 'leaving their mark' in a matter of moments. The browser completion bar that ticked away time as it transferred translated images is now unencumbered by the native code of mathematical instructions that make up SVG files. As a result of the images' quick transfers, they also share/ communicate/ interact/ intervene more readily; and it is this aspect of *sharing* (via open source) that *youSA* takes advantage of in its scalability. Within the digital terrain, open source SVG projects (e.g. *Inkscape*) remove both bandwidth clutter and proprietary language. Thus, for *youSA*, both image and transmission are decapitalized and reconstituted. The images spread freely through their medium of the open-source SVG, and pass effortlessly between visual consumers as well as ether-aerosol artists.

The intention to use SVG as a medium reduces bottlenecking, facilitating transmission, both of which *youSA* seeks not as ends unto

themselves, but as means of critique. Proliferation as such engages at least two critical/historical aspects: the maintenance of subversive group culture that evokes the legacy of aerosol art, and as a part of the multivalent attacks on commodity and high art initiated at least as early as Duchamp and extending to Warhol and others. Miller points out that aerosol (street) artists frequently exchanged their ideas by incorporating others' visual grammars into their pieces, borrowing from each other, ultimately creating a subterranean network for the transmission of their language. This channel of visual communication enabled 'conversations' as artists looked to one another for ideas, feedback, and edification; here, community ran deep and was no longer isolated; across the city's larger landscape these artists took advantage of their system, creating high-speed messages in (on) a bottle. Similarly, SVG low bandwidth and free availability encourages sharing among web users. These users look to each other, and respond to one another. At the same time, the web is a privileged space, and yet by denying the web's primary medium (the image) a commodity value, *youSA* joins the subculture of open-source, counter-proprietary (and thus counter hegemony) internet resources. Yet these images are still *art*, inasmuch as they participate with native fluency within the art gallery space. In so doing, *youSA* maintains an ironic position with itself vis a vis the gallery: what hangs on the walls as authentic and unique objects, exist freely for any user on the web. To this extent Baudrillard's fear of technology-based simulacra meets its next iteration. The images are "high art" commodities for those who feel this suits their tastes (gallery goers, art-types, conventional critics, etc.) and mass producible images with no commodity value since anyone with an internet connection can *have* them. As a result of this native duality, the critique of the high-art-gallery system, in relation to low-art-proliferation, shifts. No longer is the art merely reproduced (as in Warhol) or de/resublimated (as in Duchamp), but it is both and neither. It calls attention to the projected value of the audience: pay-what-you-will. If you need to satisfy your desires by paying for it, then you can; or if you want it for free, it's also yours to take. Therefore, as a scale *youSA*'s proliferation traverses between original and simulacra, as well as high and low art.

Up to this point I have only discussed particular parts of *youSA*'s technical project. The technical choice to use SVG coincides with the intention to maintain and support subversive and critical channels. Yet these technical choices alone do not develop the range of critique. Even if proliferation is a form of

critique that can transgress spaces (of society and theory), it critiques by blurring our categorical relationship to signs. The image as a sign in the gallery or plastered across the walls of gated communities, or across the web, find an equivocating relationship to one another, and as such form a critique of the medium of the sign (e.g., the poster, the painting, the advertisement, the flash banner). I would like to turn now to the content of these signs, to the doubling of signs I stated earlier, as a way to conclude the final aspect of social scalability.

Among the things that make me laugh are the absurd relationships each sign's icons have to one another. Take for example *Perfect SUV*: what makes it all it claims to be? Here in the land of the Governor's Hummer it is perfectly clear. Mr. Universe's steady climb to the top of the food chain exemplifies nearly twenty years later the lyrics of Peter Gabriel's *Big Time*. Larger than life, and synecdochic to the military leviathan, the Hummer might be big enough for a governor of California, but what SUV could satisfy the obese desires of *corpus U.S.*? Such bloated desire needs an SUV that is more than a mere military machine; it needs an SUV capable of negotiating the topography of desire: the sub/urban machine of consumption. Perhaps the sport-utility-vehicle should now be called synecdochic-urban-victimizer as it consumes/destroys according to its poly-saturated desire. Here the SUV makes its own roads – and by extension its own rules and morality – by bullying straight through an overpass: overpass, undercut, like a rug pulled out from under our feet. The stadium seating is a feeble attempt to justify its production: it can carry an entire family, even an entire country, all giggling tour bus spectators to the spectacle of its own consumption. And yet from the seats the engine below cannot be seen: the machine of the spectacle remains hidden, so that the passengers can continue to blame some unknown, hidden enemy, some clandestine terrorist. From the seats the view ahead is clear, and the view behind is razed; what accounts for this? Here it is an example Cartesian duality in the form of social myopia: in the high seats of the lofty mind the vantage of its feet are obscured by the very platform of its loftiness. As if to remind me that I, too, sit on that platform, a seat has been tagged for my identification. The picture is dark; the future is bleak. And yet the *Perfect SUV* looks a little bit like a cross between a Mars rover and Baba Yaga's hut. This ridiculous (perfect?) contraption is so unwieldy and awkward that it can't help but drive recklessly through things. At the top right, posing as a street lamp, two hazard cones surround a pile of wrecked cars:

destruction itself lights the path; and even so, it's still a ridiculous street lamp. The whole image, as a sum of each of its constituent icons, offers me nothing but an allegoric vision coupled with the absurd. I laugh, but it is a nervous anxious laughter.

The absurd is essential to laughter. Henri Bergson, borrowing from Théophile Gautier, explains that laughter can be found in the “logic of the absurd.”³ Of course, for Gautier, the absurd is indiscernible between the real and the unreal, or dream and reality. Therefore if “there is a special madness that is peculiar to dreams”⁴ then it is a madness in relationship to the perceived sanity of existence; or in the case where the dream is absurdly calm and collected, then it is reality that is mad.

Consider the calm couple in *Swing*. A renewed version of the *American Gothic* trope (a trope familiar both as an emblem and as part of the author's own experience) serenely poses while oil gushes from a spike, oil pumps nod their heads, and jerry cans lie prostrate at the couples' feet. The protestant ethos of Grant Wood has been replaced by an oily pastoral. The sky is now oil, and oil futures signify the economic forecast (not to mention that the sky, the heavens, symbolize potential and the future). The future is literally dark. And yet the two figures on the swing seem composed and relaxed. Perhaps they are resigned to their fate, or perhaps they're content, or perhaps they're merely complacent while oil – as a global event – erupts around them. In any case their faces are unphased, unconcerned, devoid of any distinguishing emotion. In fact, the blank faces allow their reaction to be inscribed; or if untouched, then their facelessness also registers as a *loss* of identity, and thus agency. Powerless, the couple sits, neither resigned nor at peace; they are ironic juxtaposition between inanimate human and animate oil fields. Or if the couple sits proudly before their creation, then perhaps their faces indicate a kind of wish fulfillment: paint your own face into the space of success. Dreams and the absurd meet wish fulfillment in Freud's analysis of the joke as a “descending incongruity.”⁵ Here consciousness goes from *great* things to *small* things, and the resulting imbalance is an expenditure of a feeling or thought, or both, that culminate in laughter. By dissecting the image into parts I find their relation to be absurd: a sky of oil, a gushing earth and a motionless couple, the detail of an oil pump's “face” and the facelessness of the couple (signifying, asubjective)⁶, none of these things make *sense* and so their incongruity (according to Freud) elicits my uneasy laughter.

What provokes laughter, and the type of laughter that comes out are, in my mind, not set, not equivalent. While absurd incongruities may be present as formal elements at my moment of laughter, they are not sufficient for my laughter. As midget and giant, Danny DeVito and Arnold Schwarzenegger in *Twins* weren't funny either. What provokes my laughter is the combination of elements as they form a gestalt of social critique. Here Ron Jenkins' insight into the subversive nature of humor is valuable: "Subversive forms of modern comedy elicit a subtler double take in the minds of the spectators. These mental double takes present the public with the irrationality of social conventions they had assumed to be reasonable, and shock them into taking a fresh look at their cultural assumptions. The nature of the double take matches the specific needs of each society, but in every case it undermines the stereotypes of a culture's mythology by rendering them absurd."⁷ In short, isolating the precise features of my laughter here belies the more important point: I am laughing because I find *congruity* between what I see and something about my experience, even if that congruity is hyperbolic. This is the kind of scale-free scale that enables me to discover some relation between the icons and my self. The capability to zoom in or zoom out without qualitatively affecting my perception is the same social scalability that finds congruity in absurd incongruity. In effect, I am caught laughing at myself.

Self-reflexive mockery is healthy, despite the reams of paper aimed at boosting self-esteem. It provides the possibility for critique, which even alcoholics recognize is the first step towards doing something about anything. *youSA* rhetorically does just that: the unitedness of this country and culture fall squarely on the *you* that views the images. *You* are implicated in the images: your privilege in front of the computer monitor, your privilege of calmly staring at gallery walls, your privilege to passively witness the signs that confront you. It is a dark moment to realize the burden caused by the passivity of existence (like the complacent couple). Yet laughter allows the bitter pills to be more easily swallowed. In this way social scale moves from the general to the very particular. By metathesizing the *United* on a grand social scale to the very finite and incriminating *you*, *youSA* embodies in practice the aesthetic of scalability. As an SVG, at any size, the image is the same (scale-free); likewise, from the anonymous platform of "culture" to the singularity of the "you" the weight of the

message remains intact and scale-free. However, even if the weight of the message is scalable, so, too, is the laughter; and as Jenkins reminds us, laughter is the hope against hope that solutions are possible, limitations can be transcended, and that change can occur.⁸

Jon Phillips' collaborative work, *Scale*, operates in many similar ways to Stuber's strategy of graphic dissemination. The concept underlying both artists' work is accessibility, technically and conceptually. In Phillips' case it is the latter that drives the former: Phillips' active involvement in Open Source Software (OSS) communities is directly translated into his artistic practice. OSS, originally an evolution of practice by software developers, becomes a point of rallying for Phillips and the collaborators/developers that work with him, to the point that concepts of proprietary authorship necessarily dissolve. Indeed, *Scale* rightly belongs to and is the creation of all those who participate in it. *Scale*, then, is a practical model for dissemination, a platform for creation, an exercise in constructive subversion, and a voluntary experiment; more plainly speaking, *Scale* is a monthly journal developed from a rhizomatic community.

Emerging from a historical trajectory marked by collaboration, *Scale* can in many ways be viewed as one of several iterations for a successful collaborative model. Perhaps most central to *Scale*'s implementation was an earlier project conceived in the Fall of 2002 by Clark, Phillips, et alia, called *MESH.FM*. (cf. Phillips 2004[a]; Clark 2004) This project was designed to foster community in the form of a loose organization of fellow artists centered around informal art practice. Not unlike the reinscription of formal art space performed by many others, such as Kaprow's happenings (e.g., *18 Happenings in 6 parts* (1959)), Robert Barry in *Closed Gallery* (1969) or Rikrit Tiravinija's focus on (art) context, *MESH.FM* camped in various gallery spaces, openly consumed art/ideas/comestibles, and attempted to promote a frenetic non-stop interactivity between participants. While generally affiliated with DJ/remix culture, *MESH.FM* was involved in a wide range of events from informal "brainstorming sessions" that looked suspiciously like deep-hangout parties, to architectural constructions in the Joshua Tree desert. Though spontaneity served to make its events vibrant, *MESH.FM* was unable to develop beyond precisely the loose affiliation it sought to create, and as a result ultimately lost focus and disbanded.

This project, along with other related projects, served as one of the catalysts for Phillips' eventual interest in OSS. Phillips became particularly fascinated in the way that OSS communities were able to work together on a general project, but from different locations, different times, and on independent aspects. OSS became a model for social engineering and group dynamics, and a valuable paradigm for collaborative projects. Concurrent with, but different from DJ/remix culture, OSS grew out of hacker culture's Free Software Foundation, and gained a permanent place in mainstream culture with Linus Torvalds' OSS project, *Linux*. Couched within an erroneous dichotomy between Cathedral and Bazaar (cf. Raymond 1999), OSS accomplished what its namesake suggests: it made the source code – that primordial stuff of the so-called Information age – available to the public, effectively opening up specific problems (bugs) to a massive group of potential solvers (i.e., debuggers). While open collaborative models are not new in themselves, as Raymond clearly indicates, OSS was an extremely new and untested model at its inception (and even as it evolves presently). OSS effectively bypassed the conventional, and pretentiously proper (and proprietary) model of closed-source capital-driven software development, by tapping the rather amorphous but talented communities of hackers and other moonlighting programmers. By making source code available to users who could also program, the software grew quickly and organically, and without the bureaucratic overhead plaguing many closed-source developers (e.g., Microsoft). The success of the OSS model was effective in its ability to compete with corporate giants, due in large part to the way it achieved this success: by creating efficient communities of individuals all working toward a common goal (an useable piece of free software) across time and space. Participants in OSS communities did not need to work in the same place, at the same time, in order to see the project completed. As a result, at least two significant features of OSS were noted by Phillips; the first was that everyone benefited from active participation, meaning that participants that did not participate were often dropped by the group, and others that did participate gained trust within the group, enhancing their own reputation through the success of the group.(cf. Glance and Huberman 1994; Shirky 2003) Secondly, it became clear that despite not sharing location or time, OSS participants developed active support communities that led to cooperative project management, successful designs, and collegiality: OSS was taking advantage of an

interface that fostered communities beyond mere software development. In short, OSS participants were part of dynamic communities that differed insignificantly from “real life” communities.(cf. Hine 2000) Thus if OSS communities were socially similar, Phillips believed that there could be a way to implement the OSS model into other areas of life. To this effect, academia, specifically the development of a community in the humanities within the paradigm of OSS, became the early testing grounds for *Scale*.

Other projects also aided in the development of *Scale*, including *DWZ* (Clark and Deegan 2003), and numerous short papers presented at conferences (Phillips 2004;Deegan and Phillips 2004). The combination of these projects all pointed in the same direction: how are communities built, and sustained? How can an OSS model be implemented effectively in the Humanities? To what extent do current disciplines, discourses, and technologies affect the possibility and efficacy of a community? Lastly, and largely as a byproduct of *Scale*'s development, to what extent do statistical models translate into useful social approaches? In order to answer these questions it is important to first define the key constituents, including the various statistical models, and *Scale* its self. By looking at these things it will be possible to construct some answers, or at least some critical observations of *Scale*'s use of the OSS model, various tools (including computing tools), and various theories for successful group dynamics.

Scale also addresses the formation of communities, and indirectly critiques representational strategies of New Media. Because *Scale* depends on a loosely focused group of developers, it actively engages elements of social dynamics, exploring how a community can be formed and remain cohesive in light of recent technologies and conceptual agendas. In doing so, *Scale* questions to what degree representations such as self-organization, scale-free networks, power laws, identity construction, and social practice are present, tenable, or spurious. These issues arise as a result of *Scale*'s “local going global” strategy that emphasizes the creation of a “local” community with a desire to communicate (i.e. disseminate) their ideas beyond their immediate social space. Ultimately, if *Scale*'s tactics prove successful (whether or not *Scale* continues to exist as such), the model should be reproducible, effectively joining disparate people of communities together. In this way *Scale* tests the hypotheses of scale-free self-similarity as a working (social) model, and critically examines internet theories heralding scale-free statistical representation.

As with many ideas, *Scale* was initially conceived during some downtime among colleagues (Deegan, Phillips, Stuber) at a nearby watering hole. Several aspects in their communities seemed lacking and deficient. The most pressing case appeared to be directly related to communication: ideas were being generated (good, bad, and frequently) but there was no established path for entering the ideas into an informal discourse. A person could conceivably go off and write a treatise on the idea and seek publication, but the time-to-completion for this scenario seemed prohibitively cumbersome, especially considering that though there are many ideas, a fair number of them are not good. There was no reason to add to the volumes on mediocre ideas. On the other hand, an age-old filter for ideas, i.e. of which ideas to pursue over others, was precisely the social location that conceived of *Scale*, and aptly dubbed 'beer time'. (cf. Deegan and Phillips 2004) The drawbacks with 'beer time' were apparent: the rapid firing of ideas was excellent for free association, but documentation was historically poor (for obvious reasons); beer time was also needed to destress, and thus often lacked long focus, or focused less on constructive brainstorming and more on rants; lastly, and perhaps most importantly, beer time was almost always a closed group event, thus any dialogue that occurred was amongst peers who were often in automatic agreement. This last factor, while excellent for edification, could also be construed as dangerously close to groupthink, whereby ideas receive little to no deeply critical feedback from group members (cf. Janis 1972, 9; and Janis 1989, 60). A need for a middle ground between published discourse and private conversation was realized. This middle ground could not be overly formal, because there was a strong desire to maintain the 'brutality' of familiarity that does not normally occur in formal middle ground events, e.g., graduate conferences. As a result *Scale* was conceived of an informal platform for a larger community to engage in dialogue; in short, a way for the right hand to know what the left hand was doing.

Agenda was not the sole factor in creating *Scale*. Another important factor was *how* to create *Scale*. If it took too much time to create, then *Scale*'s community might lose focus, interest, or find other ways to satisfy the deficiency. On the other hand, *Scale* would need some kind of organization so that it was different from beer time, different from *MESH.FM*, and yet still able to attract communities with little or no previous interaction and then act as a roundtable between them. It seemed clear that a

successful platform would have enough structure to maintain direction and focus, while at the same time be open enough to allow participants to contribute without feeling they were directly responsible for *Scale*'s upkeep; thus *Scale* as a service and not as strictly as a project. Ultimately, as a service whose patrons directly benefited from their input, *Scale* began to follow the lead of OSS. Users of *Scale* would also be contributors, and except for a core *Scale* community, *Scale*'s makeup would change with every contributor. Part of this flexibility was also designed to allow *Scale* to change according to community needs. The general idea was to focus on content (i.e., submissions from contributors) and then the distribution of that content (i.e., round tabling the content). Phillips, et al. realized that what was true for their beer time – that many ideas existed and needed more diverse evaluation, but with as little resistance as possible between idea generation and dialogue – was probably also true for other groups of people. This simple axiom led to the notion that a good deal of rough content (e.g., content that was present but not yet finished, work-in-progress (WIP)) existed, and all that was necessary was to find a way to tap into this resource of partially finished ideas. *Scale* would be able to accomplish this keeping its threshold – the minimum 'quality' of an submission – low enough so that WIP could really mean just that. In this way *Scale* could benefit from work that had not reached the 'high radar level' of something that had been thoroughly produced and ready for a professional journal, as well as work that was not so low it could not be composed into a submission (although in practice this lower threshold really did, on occasion, go very low).

As an user supported organic platform for community ideas the next step was to establish *Scale* in both a free print format and a free online version (in pdf). The print version was originally published as *Journal*, but true to its later namesake, was re-scaled to its agenda by assuming its present moniker. *Journal* was initially released as a roughly thirty-page hand-copied, hand-stapled publication. The aesthetic of the publication was minimally affected, and the only pages stylized consistently for the publication were the cover and table of contents. In keeping with *Scale*'s low-threshold and primary interest in community dialogue an effort was made to make the publication as unmediated as possible. No changes were made to submissions; only an order was imposed upon them for the print run, but to a large extent even this was arbitrary in its organization. The first issue's editors as such – *Scale*'s core community

– simply assembled the printed submissions, and then copied, collated, and stapled together the first run of fifty issues. These issues were handed out in person or picked up from the department mailroom where their location had been spread by word of mouth. An email announcing the publication was simultaneously sent out to numerous people and lists. The email besides providing a brief synopsis of all the submissions, also listed the url of the concurrent digital version available for download. As *Scale* continued through the months, its published form changed from a rough stapled packet to a tape-bound journal. The website also changed from a skeletal interface, to an interface that promoted greater transparency. The online submission process was semi-automated so that submitters could upload files of up to 10MB from their local computers to the *Scale* site, whereupon submissions could be viewed by all, even before the final publication. This allowed community members, as well as anyone else stumbling across the site, to download and view any work, whereby no idea-as-submission was held up unnecessarily on account of *Scale*'s print cycle. As soon as it was uploaded, a submission became a part of the local dialogue and discourse. Transparency was carried through to the entire online process. Even after a final print version was decided upon, every issue's "builds" could still be located through a clearly marked link at the bottom of the web page. Lastly, the concept of an "editor" also shifted to meet *Scale*'s needs. Since there was no need for a heavy hand in assembling or proofing the submissions beyond a cursory glance, the function of an editor became similar to a DJ: a playlist was created by one person from the samples at hand. Throughout this entire process the focus was to disseminate ideas as quickly and efficiently as possible, but within a forum that could sustain a reader-relationship (that is, was not so ephemeral that its presence was viewed as too temporary to be significant or dwelled upon). This was accomplished primarily by reducing bureaucratic interference to a minimum, automating the submission and viewing procedures, accepting (nearly) everything, and having an editor (normally a person who submitted an interest in being editor) assemble a "playlist" that would constitute the final printed form of *Scale*.

The interest in creating and sustaining a community remains the focus of *Scale* despite its non-rhizomatic publication. Beneath the striated veneer of the online journal and publication lies a ceaselessly fomenting dynamic between various people and communities. To the degree that this veneer acted as a stabilizing snapshot of

the rhizomatic dynamic, it provided a map of the organizational scaling in effect. *Scale* consisted of a core community, itself a kind of representational body of other communities. This core was composed primarily of those in an immediate network who were already familiar with one another. This can be viewed as one order of magnitude removed from the beer time group; thus the beer time group was a sub-group to the core community. Below the beer time group were the individuals who composed it, and for the sake of this paper constitute a zero degree. Thus at the core of *Scale* potentially three orders of scale magnitude may be expressed. The core group controlled the minimal bureaucratic functions of *Scale*, but otherwise was one among other groups involved with *Scale*; and though the core itself was different from other groups – as it was composed of members of these parallel groups – its individual make up prevented it from fully scaling upward to a fourth order magnitude. In this way *Scale* was composed of third-order groups, and also had a weak center that was also a third-order group (perhaps 3.5 orders). Each of these orders possessed some degree of self-similarity, though in reality they should not be confused with mathematical self-similarity (discussed below). What is important to note about these scales are the various levels that activity took place on, such that the final publication only ever reflected a seemingly static view that was intended to re-enter other group settings. If a root system were to be mapped, then *Scale* would constitute a vague central artery that connected numerous slightly smaller arteries, but was itself never truly distinct enough to constitute a proper group; in this way *Scale* may be thought of as a deterritorializing. The varying higher orders of magnitude enabled individuals to shift throughout the orders, joining and leaving different group dynamics, without affecting the overall stability of any group. Individuals could, through a third order meet other individuals and thus descend downward from a different third order group to a second order scenario (individual to individual). Yet instead of forming new or competing second of third orders, these exchanges appeared to simply improve the efficiency of other exchanges to the point that the various scales did not so much change, inasmuch as *Scale*'s deterritorializing effects grew. Thus *Scale* (and not the core community) became a fourth order magnitude, not as a distinct group, but rather as a hub of exchange. As a result *Scale*'s self-similarity tended to morph as the magnitude increased, from the ostensibly discrete bodies of individuals to an indiscrete bodiless organ of transmission.

The key to orders of magnitude and social scalability was Phillips' et al. ability to realize that as a community for their place and time, in order to be successful, *Scale* needed to be adaptable, flexible, and continuously open to reinterpretation. Instead of developing a rigid paradigm for group interaction (e.g., private groups, clubs, and even military-types), Phillips et al. took advantage of the hub metaphor in order to promote *Scale*'s deterritorialization instead of *Scale* de facto. Phillips et al. were also aware that *Scale* could not grow beyond a certain point without undergoing a central change. Even if orders of magnitude in self-similarity appeared to suggest that all levels operated identically, it was clear that at certain levels (perhaps the level of large deterritorialization: the level of *Scale* and other similar 'groups' in self-organization) the model did change considerably. *Scale* had been conceived to fulfill a particular dialogic gap in between levels; to change from its current position would effectively mean changing its relationship and thus its particular ontology. *Scale*'s directive to be scaleable also meant it could not flexibly become rigid, or in other words, it was forced to be rigidly flexible.

Among the features that were important to *Scale*'s implementation is Phillips' translated model of OSS. *Scale*'s groups existed in a combination between "real" space (meat space/b2b) and "digital" space (cyber/netSPACE, from p2p to large group). The interaction between these two spaces appeared seamless, with communication moving from one space to another and then back again. To the degree that this was similar to OSS communities, the range of social software aided *Scale* in supporting both its monthly publication obligations and its casual daily interactions. Mundane meatspace events continued (deterritorialized) in netSPACE through a variety of mediums: from frequent emails (personal and listserve), short or long chats on instant messaging (IM) between two or more users, webspace communities (e.g. Orkut), Wiki, and through shared server space (non-communicative group work spaces, e.g., shared server folders).(cf. Deegan and Phillips 2004) What emerged from this mixture between meatspace and netSPACE was the realization that the two were less distinct than conventionally theorized. This is not to argue that "suddenly biology is entirely digital," and the distinction between meatspace and netSPACE is false.⁹ Rather, I agree with Christine Hine in arguing that "the Internet [is] a product of culture: a technology that was produced by particular people with contextually situated goals and priorities. It is also a technology which is shaped

by the ways in which it is marketed, taught, and used."¹⁰ Thus the digital nightmares feared by Baudrillard, Virilio and others should not be weighed against some primary human-ness that is somehow lost in netSPACE. The two spaces are extensions of one another, culturally and practically. It is natural then to witness the smoothness of transition between meatspace and netSPACE. The relative smoothness enabled the community to focus further on whatever tasks at hand (be they simple socializing to journal editing), but at the same time the community was not dependent on meatspace: it could function efficiently in netSPACE, and thus took advantage of the OSS model for community interaction on several levels. First, community members were asked to voluntarily contribute their talents to the *Scale* workload. Just as in OSS, task completion relied not on managerial whips, but on voluntary efforts by those interested in reaping community benefits (even if for personal gain; a parallel model of charity is present, but will remain undiscussed here). There was no explicit work structure or task assignments; wherever work needed to be done, a member would volunteer herself or ask for volunteers from the community (but normally where a need was discovered, the discoverer took responsibility for it; meaning if someone wanted something fixed or changed, then the capability to do this was assumed to be located in the person initiating the call). Secondly, community members tended to interact in an array of associated projects. Those working on *Scale* might also be working on other community members' projects (e.g., Phillips' CVS). As project sharing occurred, ideas generated in one project naturally dispersed to other projects. This did not result in a homogenization of projects, but rather returned greater awareness and feedback from group members. Diversity between projects was maintained simply because each project was its own distinct idea; in short, there seemed to be a need for diversity, even if communication between the group members entered an equilibrium. Thirdly, the ability to operate with a minimum degree of centralization enabled *Scale* to succeed in similar ways to OSS's subversive capitalism. That is, OSS is a capitalist model despite its façade of communism, but in step with Castells' research, it is a model that profits not in meatspace products, but in epistemological interconnections.(cf. Castells 2000, 77-162) This meant that previous models required a rigid system that could take advantage of the capitalist model by plugging directly into it (perhaps like a small business in relation to an urban economy). On the other hand, *Scale* did not need to satisfy a

capital market; there was no need to create subscriber rates for later expansion. If expansion were to happen, just like contraction, it would occur organically. *Scale's* Achilles' heel then was exactly its purpose: if community interest faltered, then so would *Scale*. Keeping community interaction high meant that *Scale*, in whatever form, would also continue; because *Scale's* community was conceived to scale upward or back according to involvement, there seemed to be little imminent fear of its dissolution. Come what may, OSS had given to *Scale* a kind of cockroach survivability.

The various technological innovations central to *Scale* did affect its organization. Though there is no question that community activities were not hindered nor qualitatively changed through the use of social software, there is also no question that social software enabled *Scale* to find success in an otherwise difficult environment. While "social shaping" is surely a feature for netspace and social software, the convoluted reciprocity between a culture and its technologies is difficult to unravel, such that determining the primacy of the chicken or egg is an useless task. (Hine 2000, 33) On the other hand, social software is not a neutral tool. Just as all mediums, it privileges certain aspects of connectivity, as well as certain types of users. If *Scale* was reliant upon these software tools, and furthermore, if *Scale's* presence (perhaps even its existence) was more or less completely dependent on netspace, then to what degree will it reflect in its own organization, the logic of its tools? In another sense, it was apparent that *Scale's* communities were as dynamic and kinetic as *Scale* itself was designed to be. This kind of self-similarity was not accidental. It fit the circumstances it was built for: the groups were semi-autonomous, but still dynamic, and in one sense *Scale* merely facilitated certain kinds of dynamic exchanges. This facilitation could be seen extending from the third order all the way to the first and back again, as individuals took advantage of the new network and groups responded to one another. Taking it a step further, *Scale* as a fourth order of magnitude was mediated by the technologies that fostered it. Thus, it follows that *Scale* would exhibit the same patterns as have been offered from theorists looking into social behavior and netspace such as Barabási and Huberman, among others.

The central theoretical principle in question is self-organized criticality (SOC), which also encompasses self-similarity (scale free; $1/f$ Noise; fractional dimensions, i.e., fractals), complexity theory, chaos theory, small worlds, a multitude of named laws (e.g., Zipf's Law), universality, and the statistical

representation of SOC phenomena, power laws (80/20 law). This paper will not attempt to explain the mathematics involved in SOC, but rather examine how "an emerging field of science aiming to understand how systems made of millions of diverse components behave and how order emerges from chaos and randomness, riding the laws of self-organization."¹¹ The immediate danger is that if one stares at something long enough any pattern might emerge. While this might lead to a Columbus Egg, it might also resemble old teleological arguments for God's existence. (cf. Paley 1836) Even Mark Ward, an enthusiastic apologist of Universality, cautions that "we should be slightly suspicious of the wealth of claims made for Universality. Much of its appeal is due to the fact that it fits in with a popular view of the world that is now starting to emerge."¹² Still, the arguments surrounding SOC are inductively strong, and should not be dismissed lightly if at all.

Barabási argues through numerous cases for small world connectivity and their statistical representation as nodes and hubs in power laws. The small world phenomenon is commonly played as the "Kevin Bacon" game, the Erdos number after mathematician Paul Erdos (often called the Erdos-Bacon number), and came into popular understanding through the earlier work of Stanley Milgram and even earlier short story by Frigyes Karinthy. (cf. Milgram 1967; Barabási 2002, 25) The simple premise is that every person is connected to every other person in the world by no more than five other people (five plus one being the traditional six-degrees). The conclusion being that every person is far more connected to every other person than previously imagined. The conclusion that "we are all linked" demands that we ask in what way are those links established. As Barabási and Huberman argue, social links between humans tend to center themselves in a node-hub like fashion. A node, here a singular person, is connected to other nodes via a hub; in this case the hub is another person who excels at making these links possible. We might think of them as social butterflies, or as Barabási likes to site, the sexual hubs of Stockholm that join everyone at the hip. (cf. Barabási 2002, 136; Barabási and Bonabeau 2003, 53) What Barabási and others also discovered was that these people tended to collect links disproportionately to others around them, such that a few people knew a lot of people, but most people knew only a few other people. Statistically represented, this would show a small percentage at a very high magnitude, and a large percentage at a much lower magnitude; in other

words, a power law. This statistical spread could be found in a wide array of phenomena, from social to biological, and even to technological. Barabási, Pastor-Satorras, and Vespignani's work on weblinks and packet switching demonstrate that a majority of websites link to a select few hub websites; likewise, packets traveling to their destination tend to congregate at certain routers, thus exhibiting a hub-like architectural organization of netspace.(cf. Barabási 2002; Barabási and Bonabeau 2003; Pastor-Satorras and Vespignani 2004) The conclusion that is never stated outright, but is alluded to often enough (one could call it a pattern of innuendo), is that the pervasiveness of power law groupings is symptomatic for a larger system-wide pattern of SOC. Moreover, this system of SOC, while technically not predictive, clearly suggest a weak inevitability of most kinds of phenomena (such as the merging of corporations, or perhaps even a Marxist dialectic). If this is the case, then the social dynamic of *Scale* should also exhibit these same patterns.

In fact, *Scale* does exhibit similar patterns; yet upon closer inspection a more complicated relationship of links emerges. These complications are missing from the generalizations put forward by power law apologists. The SOC theories established by physicists tends to make the generalizations of power laws in social cases more evident. The seminal findings of Bak, Tang and Wiesenfeld, and the later work of Hergarten describe the important foundation of SOC theory. Hergarten defines an SOC system as a system whose "phase space contains a strange attractor with the following scale-invariant properties:

1. The attractor is critical; fluctuations (events) of various sizes occur, and the distribution of the event sizes follows a power law or tends towards a power law in the limit of infinite system size.
2. The temporal signal of the system is pink noise or tends at least towards pink noise in the limit of infinite size.(Hergarten 2002, 100)

The "strange attractor" is the designation for the preferred region in phase space – the organization in SOC, if you will – that "is mainly independent of the initial condition."¹³ As fluctuations affect the system, the magnitude of these fluctuations (at their points of criticality, i.e., threshold) follows the unequal distribution of a power law. In Bak's famous experiment, the grains of rice (or sand) accumulate slowly, piling one atop another, until an avalanche occurs and

the slow accumulation resumes. If this action is recorded over time it tends towards pink noise ($1/f$ noise) where there is a perception of an equal magnitude at all frequencies. In other words, an SOC system will be self-similar in not only event distribution, but in the frequency of events over time. While this type of strict definition is incredibly interesting, if not also extremely powerful, its application in meatspace tends to be more dubious. Ward points out on numerous occasions the original Bak, Tang, and Wiesenfeld experiment that gripped the scientific community was soon found to be inexplicably difficult to reproduce.(Ward 2002, 115-119) Beyond the failure of scientific reproduction, SOC also tends towards something it initially repudiated: the ability for small causes to cause disproportionately large reactions may be undermined if used as a predictive model based on $1/f$ noise; it may lead to the conclusion that the phase sequence for a group of phenomena is known. If that were the case, then it would be possible to conclude that netspace ineluctably formed the way it did because of SOC, and that its next recombination and redistribution can also be predicted; if we can just determine where the grains of sand are falling. Even so, these are logical errors that occur only when SOC is used as a tool for forecasting; hindsight produces historical patterns, foresight is cogent at best and just plain lucky in most cases. Still, *Scale* does follow a similar pattern in the groups relation to the core-group, and through scales as a few individuals were more active than most. Even as these individuals changed, the rough trend of over time suggested that it did follow a weak definition for SOC. However, the SOC that *Scale* may have exhibited ignores certain important features; features that Barabási also glosses over.

The reason for this may lie in the limited complexity of the complex SOC models. While Barabási et al. do provide an astounding number of cases in their inductive/statistical argument, they cannot but fail to explain why this is the case. Furthermore, as in the case of *Scale*, the patterns that emerge belie the complexity of their ontology. While this paper will also stop short of explaining 'why', the addition of some variables may add depth to the 'how', which is we are lucky, could shed light on possible 'whys' for certain scenarios. Hergarten offers discusses three types of causes for fractals: one that I call "mirror-fractals," another called "nesting," and the final one already familiar in this paper called "criticality." The first of these are fractals that exist as a result of other fractals.(Hergarten 2002, 21) Hergarten uses the power-law distributions of lakes and their

relationship to fractal surface topography, which in turn may be the result of “scale-invariant pre-design of zones of weakness in rocks.” Hergarten dismisses this explanation as valid, but ultimately less interesting because it always defers the cause to some still unknown primary origin. Nesting, on the other hand, is the SOC process on varying scales, in a manner not completely dissimilar to mirror fractaling. Criticality, is the threshold point that gave rise to the “strange attractor.” These three causes do not appear necessarily exclusive to each other, and in the case of the internet, may be more closely connected than originally thought. First, if the internet experiences its own point of criticality as a system – and this seems plausible – then as a result of its architectural redundancy it is likely to see both mirror fractaling and nesting. This could occur at any level, from an user at one node, to a change in WAN routers, to a new piece of social software that was itself a product of social shaping. Secondly, because the internet is a product (and also participant) of social shaping, a mirror fractal explanation is not out of order. It would make sense in some ways to ignore the Modernist belief that the creation can be divorced cleanly from the creator; the two are linked and enter into an existential feedback loop. If this is the case then the power law phenomena that Barabási noted are also likely to be either nested or mirror phenomena. Considering the deterritorialization of *Scale*, the number of nested or mirror causes could be very great.

Henrik Jensen offers an SOC model that may more closely arrive at a solution for the problem of Barabási’s ontology of the internet, mentioned above. A slowly-driven, interaction-dominated threshold system (SDIDT) may more clearly explain the convoluted actors present in power law cases such as the internet. (Jensen 1998, 126) Instead of bold patterns that ineluctably lead to massive effects, SDIDT relies on more subtle processes which provide similar results over a much longer $1/f$ noise scale. In the case of Barabási’s model, it is apparent that some links are favored greatly over others in nearly all websites, while most websites themselves tend to have fewer links. Using the various trolling techniques available, this statistic should be understood as more or less accurate. How the statistic fails is far more relevant than it seems: all the power laws in the world do not betray the value of any particular link. Most sites may link to *Yahoo*, but this does not mean that *Yahoo* is necessarily the most useful link. Everyone may have slept with Bjorn and Ingrid, but that does not mean that either of them were the best experiences, the most frequently returned to, or

the final partners in a sequence. The crucial aspect missing in Barabási’s exploration is a tenable epistemology. There are no values assigned to any link except an ontology: a generic frequency that cannot report the dynamic constituents. Jensen’s more careful elaboration suggests it will acknowledge the delicate relationships at stake by factoring in the value of any variable in relation to other variables in a system. In the case of humans it is even more difficult, as the value of a variable may be dependent upon such unquantifiables as intent, short and long range goals, changes in character integrity, etc. For example, Barabási carefully details the presence of hubs and nodes, but cannot give a relative use value to any particular hub or node. In a party, for instance, three people may know the vast majority of other partygoers. However, only one of these three is willing to share that information to strangers, thus the effective usefulness of these hubs is not indicated in the purely ontological model. An epistemological model would need to factor in the likeliness that a link between nodes is useful. Furthermore, in the case of the party and analogous to many social scenarios, hubs and nodes are individuals with different types of quantifiable qualia (e.g., the ability to map degrees of separation between people), thus two issues emerge. The first issue is that in a social scenario the position of a hub or a node is dependent upon the quality of its connections. This means a hub is only a hub if other nodes or hubs link to it. Because nodes are the radical in a social system, links between hubs are not as stable; since a person that simply knows groups (and not individuals within the group) fosters only general, higher order connections (think of it as a chemically strong or weak bond). Thus a hub is more dependent on the groundwork of its nodes for its position than anything else. Not unlike a Hegelian master-slave dialectic, the hub is only a hub if it can convince nodes to link into it. According to Barabási nodes will likely link simply because a strong hub attracts more links, which leads to the second point. If some hubs are more useful than others, then it is possible to distinguish between them. Therefore a “bright” hub is a hub with a great deal of useful activity: it is well linked, and the links it has are useful to its connected nodes. The converse is a “dark” hub: statistically identical to the bright hub, it with less activity; although the hub has many links, they do not usually find the hub useful (a node may eventually begin to reroute packets to faster, more lively hubs). The brightness of a hub returns to the quality of its nodes. Nodes also generate “luminescence,” though not on same the statistical scale of the hub; a hub that

links to that bright node in turn makes itself brighter. Thus the node-hub model topography changes drastically when the quality of its links is taken into consideration. As nodes grow brighter or fade, the hubs are affected. Similarly, as a hub encourages links between nodes, the hub will increase its brightness (possibly as a result of the increasing brightness of its newly connected nodes).

In terms of *Scale* this is precisely the case. The bright node, in this case Phillips, was important as an effective node-linking hub. Still, the effectiveness of his position as a hub was dependent upon fostering the quality of interaction between nodes: other people in various groups. Within the groups were people who excelled at different as yet unquantified tasks: a diplomat, a party whip, a translator, a layout specialist, grant writers, etc. These various nodes increased their overall activity through the new links fostered by Phillips. If *Scale* did follow the pattern detailed by Barabási et al. then it was complicated and diluted by these slower more convoluted agents. While the social software available to *Scale* certainly had an effect on its interaction and organization, each member used the tools available according to her own needs and sense of value. This may have contributed to a Jensen-type SDIDT, but a more general SOC model would probably have missed the subtle but essential dynamic between hub and node, as well as the changing status of hubs and nodes (hubs and nodes shift according to link quantity and link specificity). Lastly, as the specificity of a link changes (i.e., the qualia to be statistically measured), so do the hubs. It is an unproven thesis of this paper that the measurement of varying qualia would offer an even distribution (not a power law) if each type of hub measured for, was superimposed on all of the other measured hubs. In short, this would lead to a second order SDIDT.

A question remains for certain readers of this paper that by now may seem irrelevant. Namely, how does Phillips' *Scale* qualify as an artwork? The answer has been avoided because it was both difficult to provide in detail, and so simple as to nearly obviate explanation. The difficult part to answer has now hopefully been accomplished: *Scale* stands as a critique of social systems in general, and academic and artistic social systems in particular. The particular model of its critique lay in demystifying some of the concepts (like SOC) commonly consumed and projected by artists and academicians alike, but without any deeper understanding of either the complications within these concepts, or the

blinded desire to believe above all else that often drives them along. *Scale* also critiqued the cumbersome apparatus of top-heavy organization by proving that SOC was functional on many levels; although throwing a group of people together does not guarantee any success, throwing them together under the proper circumstances for criticality (a lack in the community discussed over beers) did lead to an efficient and quickly moving model for social organization. Finally, the answer was simple because while the artworks that appeared in *Scale* were certainly often strong enough to stand alone, as a collaborative piece it was a meta-level conceptual art project. It was simply because it took place in a way that only art can foster: neither for monetary gain, nor product development, nor controlled experiment. It took place because there was a pressing need in a much larger, more complex, and perhaps more universal way.

The concepts of scale in this essay have covered a full range of meanings. In both cases the real drive is community. In Stuber's work it is about resisting various commodity communities while in reality forming alternate commodity communities. The aesthetic Stuber uses (street-art stylisms) calls attention to these subversive/alternate communities, and even his distribution (in open-clip art SVG) is subversive and scaleable. The content of the aesthetic alludes satirically to the demographic scale of consumption (as physical and mental reality), and the rhetoric of satire, of course, uses scale (in hyperbole) as one of its central communicative elements. All of these elements for Stuber are aimed at fostering a particular self-other concept of community. For Phillips the concept of community is not nearly as clear in its form as it is in certain use values. Underlying all of the various aspects of community that *Scale* is dependent upon, is a notion that the community is the goal of any self (not as individuals but as singularities), and that this community reciprocates all efforts back to its most active members in the form of organic growth (re-communicating community out of the general scope), and in the facilitation of community transactivity (frictionless communities). *Scale* thus comes to signify the range of choices made here, and elsewhere, that impact our daily lives.

Patrick W. Deegan is a graduate student at UCSD.

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Notes:

¹ Miller, Ivor. *Aerosol Kingdom: subway painters of New York City*. Jackson: University Press of Mississippi, 2002; p.13. Miller goes on to suggest that NYC aerosol culture has since "lost or distorted" its meaning, especially after "middle-class kids in Europe," presumably white for Miller, "dramatically" changed aerosol culture's "primary" meaning. Whatever truth Miller corners in this critique, the central issues seem to remain intact, indicating that some portion of aerosol culture's primary meaning translate well to other race, social, and economic groups.

² Also referred to as object-based. Presently the market is dominated by the major software writers, Adobe, Macromedia, Corel, etc.

³ Bergson, Henri. *Laughter*. Translated by Cloudesely Brereton and Fred Rothwell. Los Angeles: Green Integer, 1999; p.162.

⁴ *ibid.*, 170.

⁵ Freud, Sigmund. *Jokes and Their Relation to the Unconscious*. Translated by James Strachey. New York: Norton, 1963; p.146.

⁶ cf. Deleuze and Guattari, "Year Zero: Faciality."

⁷ Jenkins, Ron. *Subversive Laughter: The Liberating Power of Comedy*. New York: The Free Press, 1994; p.207.

⁸ *ibid.*, 10.

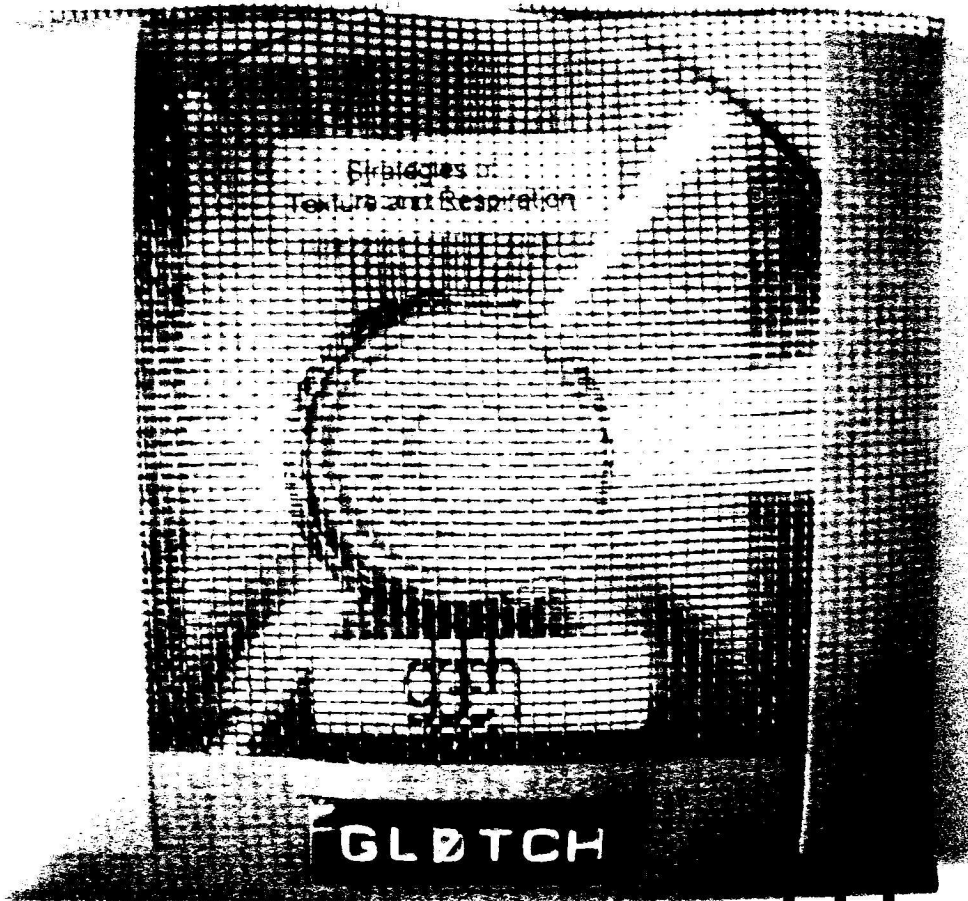
⁹ Bard, Alexander and Söderqvist, Jan. *Netocracy: The New Power Elite and Life After Capitalism*. London: Reuters, 2002, p.145.

¹⁰ Hine, Christine. *Virtual Ethnography*. London: Sage Publications, 2000, p.9.

¹¹ Barabási, Albert-László. *Linked: The New Science of Networks*. Cambridge: Perseus Publishing, 2002, p.231.

¹² Ward, Mark. *Beyond Chaos*. New York: St. Martin's Press, 2001, p.285. Indeed, that Universality follows a cultural unconscious to find itself returns us back to Hine's use of "social shaping." Universality in this sense would be an agent in a *zeitgeist*.

¹³ Hergarten 2002, 78.



<http://www.gl0tch.com/audio/strategies.mp3>

glitch