

Dreams of an (Un)Certain Future

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Technology is whatever is new since you were born.

Bruce Sterling

In between the invention of a technology and its quotidian disappearance are the manifestos, declaimed and implicit. From Richard Wagner's *gesamtkunstwerk* to Marinetti's Futurist Manifesto to Nam June Paik's "electronic highway" to Jaron Lanier's VR universe and Roy Ascott's "vegetal reality", the history of the intersection of art and technology is one of prognostications of an irrefutable, inevitable, even immanent future that never comes to pass – at least not exactly as we thought it might.

The ultimate demo may have been Douglas Engelbart's mouse – a spellbinding vision of a future few others could even imagine at the time – but it is Perry Hoberman's *Cathartic User Interface* that is the most compelling, or at least cathartic, statement of where that future has dumped us.¹

Janet Murray, author of *Hamlet on the Holodeck* has suggested the notion of "incunabular" media, for this stage in which we can imagine the outlines of a Shakespeare – of the very idea of a written literature – in the magical, mechanical reproductions of the early printing press; in which we can imagine something beyond the incunabular RPG and shooter video games that grab out imagination like videodromes.

These dreams of a certain future have such compelling vitality that we must admire them, even as we quibble about their navel gazing mediumness, complain about how simplistic – and complex – they are, acknowledge their inability to change humankind in the likeness of their vision and bemoan the obviousness of their shortcomings with perfect hindsight.

Here, in no particular order, are some dreams of technology that have a future, even if we do not yet know what it is, despite the certainty with which it is predicted.

DREAM

The Dream of Symbiosis

"The hope is that, in not too many years, human brains and computing machines will be coupled together very tightly, and that the resulting partnership will think as no human brain has ever thought and process data in a way not approached by the information-handling machines we know today" (J.C.R. Licklider 1960).²

Norbert Wiener is credited with coining the term cybernetics from the Greek *kybernetes* ("steersman"). His research into controlled feedback loops – interaction – between humans and machines postulated that by allowing each to learn from the interaction with the other, both could evolve to higher levels of functioning. Many artists have dreamed the dream that Wiener's younger contemporary, J.C.R. Licklider referred to as man-machine symbiosis, from Joseph Weizenbaum's *Eliza* (1966) to David Rokeby's *Giver of Names* (1990-present).³

At the same time, as Rokeby suggests: "interaction is banal... We talk to each other on the street. We breathe in air, modify it chemically, then breathe it back out to be breathed in by others. We drive cars. We make love. We walk through a forest and scare a squirrel. I am looking forward to a time when interaction in art becomes as banal and unremarkable... merely another tool in the artistic palette, to be used when appropriate".⁴

We are already coupled tightly, and it is not entirely clear we can distinguish appropriate use. We are symbionts who mould ourselves into carpal tunnels repetitively caressing Engelbart's dream of the future. We heed the siren cell phone and crash our four-wheel exoskeletons on the asphalt highway. Are we sheep who dream of becoming androids?

DREAM

The Dream of Mastery

Einstein's relativity and Heisenberg's uncertainty have become our own. Even if we do not understand the science, we experience the reality.

Artists have long tried to capture the dynamic nature of the universe, from Cubist fracturing to Rashomantic indeterminacy. Computational media can begin to model it, yet such faithfulness, like Borges' fable of a 1:1 map,⁵ runs the risk of becoming a cartography of uselessness. And Borges' ultimate knowledge map, *The Library of Babel*, only postulated one thing. Precisely the knowledge that all knowledge was at hand, neatly and precisely laid out, made it contingent, always open to review. Even, presumably, for a man-machine symbiont.

With a project like Knowbotic Research's *10_dencies* (1996-98) however, there is no such dream of mastery. As Yukiko Shikata put it, "Regarding the *10_dencies* project, it was very important that no one could have an overview of what was happening, as the totality of the information flow was happening only invisibly at info-level – on the server. Each participant had a different experience. No one could share the same reality".⁶

Modelling, mapping, mirroring can be appropriate tools for abstracting a level of information too broad or too deep or too dispersed or too dynamic for the human sensorium alone to comprehend; but the dream of mastery is masturbatory.

DREAM

The Dream of World Peace

"An ocean cable is... a living fleshy bond between severed portions of the human family, along which pulses of love and tenderness will run backward and forward forever. By such strong ties does it tend to bind the human race in unity, peace and concord" (Henry Fielding).⁷

As Fielding rhapsodised about the transatlantic cable, there has been no communication technology that does not assure world peace. The ability to communicate quickly and easily, the rhetoric goes, leads to greater understanding, which leads to tolerance and the certainty of harmony. Demonstrably, this is not true; and arguably, whether it is the goal of prosecuting war without casualties by remote communication with munitions, or networks of terrorist 'sleeper cells' also remotely activated, the communication networks and technologies have not led to any calculable diminution of humanity's penchant for destruction.

Nevertheless, the dream remains powerful. Community activation pioneers Kit Galloway and Sherrie Rabinowitz write, "we must create at the same scale as we can destroy... [The] counterforce to the scale of destruction is the scale of communication, and... our legacy or epitaph will be determined in many ways by our ability to creatively employ informal, multi-media, multi-cultural, conversational, telecommunications and information technologies".⁸

Perhaps, however, it is not so much about scale as intimacy; not so much about the ability to broadcast anywhere as to connect somewhere, to converse. Is creating a system open to the network enough?

Warren Sack, creator of *Conversation Map* and, with Sawad Brooks, the forthcoming *Translation Map*, recently wrote in an e-mail that "From an analytic perspective one can assume that accountability is something that exists in a conversation. However, from a design/synthetic point of view (i.e. from the point of view of someone designing a new conversational system) I think it is an open question as to whether or not the new system is actually a facilitator of conversation or whether it is just a sort of two-way transmission system in which conversations might happen by accident or great effort, but cannot be assumed to take place".¹⁰

As the poet John Berryman said so aptly, "in dreams begin responsibility".

DREAM

Hacking the Dream

Artists were among the earliest and most active participants to recognise the potential of the Internet – certainly long before most institutions and corporations. One result was to hack its capabilities for alternative purposes. From Rachel Baker's *Sainsbury TM* to Electronic Disturbance Theatre's *Floodnet*, there is a long history and active contingent hacking the dreams of e-commerce and universal surveillance.

For instance, Mongrel's *Natural Selection* was set up as an alternative search engine. Most of its queries, it simply passed to a commercial search engine such as Google or Alta Vista, and then presented the results as its own. For certain keywords however – generally to do with race – *Natural Selection* would create a result set that linked to artist web sites

about that keyword. Often, a casual browser might not realise that a site presented a very different worldview than s/he had been looking at for some time.

There is a disturbing trend, however, for such efforts to be shut down by "legal bugs", a term coined by Knowbotic Research when its *Minds of Concern* project was shut down because a museum's upstream ISP had the equivalent of a shrink-wrap licence stating that port scanning, even if non-invasive and otherwise legal, was not allowed contractually. More recently, *The Thing*, a New York based host to various artists and organisations, was shut down because of the actions of a single site under its domain. It was easier for Dow Chemical Co. to bully *The Thing's* ISP Verio into shutting down *The Thing* than to pursue its true antagonist.¹¹

In an earlier version of this article, I ended with the suggestion that the open protocols of the network were a kind of ultimate defence against such legal bugs, but now this does not seem so clear. The dream of the possible is only that: a dream; unless there is a concerted, ongoing, tough-minded effort on the part of a wide range of the translocally concerned to create and sustain a commons, a public domain, that is responsible and human.

NOTES

1. Regarding Douglas Engelbart and the first mouse with button and tracking wheels see http://www.artmuseum.net/w2vr/archives/Engelbart/02_Mouse.html and Hoberman, Perry *Cathartic User Interface* (<http://www.hoberman.com/perry>, 1995).
2. Licklider, J.C.R. "Man-Computer Symbiosis" (originally published in *IRE Transaction on Human Factors in Electronics* Vol. HFE-1, <http://memex.org/licklider.pdf>, March 1960) p. 4-11.
3. Weizenbaum, Joseph *Eliza* (<http://web.mit.edu/STS001/www/Team7/eliza.html> and <http://www.ai.ijs.si/eliza/eliza.html>, 1966) and Rokeby, David *Giver of Names* (<http://www.interlog.com/~drokeby/gon.html>, 1990-present).
4. Rokeby, David *Lecture for 'Info Art'* (Kwangju Biennale, <http://www.interlog.com/~drokeby/install.html> 1996).
5. Borges, Jorge Luis "Of exactitude in Science" (in *A Universal History of Infamy*).
6. "Translocations: A Conversation with Steve Dietz, Guna Nadarajan, Raqs Media Collective and Yukiko Shikata" (in *How Latitudes Become Forms: Art in a Global Age* DAP/Walker Art Center, 2003, New York).
7. Quoted in Standage, Tom *The Victorian Internet* (Berkeley Books, 1998, New York) p. 104.
8. Galloway, Kit and Sherrie Rabinowitz *Ecafé Manifesto* (<http://www.ecafe.com>).
9. Correspondence with the author, 4 January 2003 (see <http://www.sims.berkeley.edu/~sack/CM/> for *Conversation Map* and <http://translocations.walkerart.org> for *Translation Map*).
10. See <http://unitedwehack.ath.cx>