

INVESTIGATORY ART :

INSTITUTIONAL CRITIQUE, REAL-TIME SYSTEMS, AND NETWORK CULTURE

“... artists are “deviation amplifying” systems, or individuals who, because of psychological makeup, are compelled to reveal psychic truths at the expense of the existing societal homeostasis. With increasing aggressiveness, one of the artist’s functions ... is to specify how technology uses us.”

- Jack Burnham, “Real Time Systems” (1969)

Edward A Shanken
Dorothy Kayser Hohenberg COE Lecture II
University of Memphis

April 2, 2013

www.artexetra.com

The outcomes of 'investigatory art,' like those of investigative journalism, have no legal authority but they can act as an agent for change by creating public awareness that instigates action.

In Part 1:

Hans Haacke – social systems and art patronage

- exemplar of investigatory art/institutional critique of late 1960s

Jack Burnham

- “Systems Esthetics” *Artforum* (Sep 1968)

- “Real Time Systems” *Artforum* (Sep 1969)

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Amplified in recent social formations: open-source development and the gift economy, participatory culture incl. interactive art, social media, and SL, and discourses on the posthuman.

The House That Jack Built:
Jack Burnham's Concept of "Software" as a Metaphor for Art
Edward A. Shanken

Abstract: This paper identifies and analyzes the convergence of computers, experimental art practice, and structuralist theory in Jack Burnham's Software exhibition at the Jewish Museum, in contrast to the numerous art and technology exhibitions which took place between 1966-1972, and which focused on the aesthetic applications of technological apparatus. Software was predicated on the idea of "software" as a metaphor for art. Under this rubric, the curator explored his notion of the mythic structure of art, and its convergence with information technology and the increasing dematerialization of art in the late 1960s. I argued that these components represent the intertwined emergence of postmodernity at its critical art historical moment.

Like the famous cumulative story to which my title refers, this paper explores the complex, interrelated convergence of mythic elements in the exhibition Software, information technology. In New America for Art, Art historian Jack Burnham curated the show in 1970 at the Jewish Museum, that one of the premier venues for experimental art in New York. His research identifies how the "house that Jack built" was constructed, and drew parallels between computer information technology, conceptual art practice, and structuralist art theory, and was predicated on the idea of software as a metaphor for art. Software was designed to function, moreover, as a testing ground for public interaction with "information processing systems and their devices." Many of the displays were robust interactive and based on two-way communication between the viewer and the artist. In the end other research, I interpret much of the work in Software heralding postmodernist strategies for art-making. Finally, as will be discussed below, the architecture for the program installation in the museum was based on the horizontal model of Robert Rauschenberg's Large Glass, which Burnham interpreted as a signpost announcing the demise of art's "sacred floor" of the 70's.

Jack Burnham's first book, Beyond Modernist Dogma: The Effects of Science and Technology on the Structure of Our Time, 1966, established him as the pre-eminent champion of art and technology of his generation. Building on his foundation, his second book, The Structure of Art, 1971, developed one of the first systematic methods for applying structural analysis to the interpretation of individual artworks as well as to the canon of western art history itself. Many of the articles for this magazine from 1969-73, when he was Associate Editor (1972-76) and Reviews from 1971-3, when he was Contributing Editor (1971-73), were submitted to his first book. The clear message that abounds 1973, these essays still remain amongst the most insightful commentaries on conceptual art, already suggesting what he now sees as retrosped as the "great hiatus between standard modernism and postmodernism."¹

In 1970, at the invitation of Jewish Museum director, Karl Katz, Burnham curated Software, the only major show he has curated to date. In contrast to the numerous art and technology exhibitions which took place between 1966-1972, and which focused on the aesthetic applications of technological apparatus, Software was predicated on the idea of "software" and "information technology" as metaphors for art, his conceptual of "software" as parallel to the aesthetic principles, concepts, or programs that underlie the formal articulation of the actual art objects, which in turn parallel "hardware" in this regard, he interpreted "Post-Formalist Art" has been relating experimental art practices including performance, interactive art, and especially conceptual art as predominantly concerned with the software aspect of aesthetic production.

It is significant that Burnham regarded Software while writing The Structure of Art and considered of the show, in part, as a concrete realization of his structuralist art theories. Drawing on Claude Lévi-Strauss's idea that cultural institutions are mythic structures that emerge differently from concrete principles, Burnham theorized that artists had constituted a mythic structure. And he theorized that the primary project of conceptual art was to question and lay bare the mythic structure of art, deconstructing it and revealing it for what it really is.²

Both ideas were already present in Burnham's 1970 article "Alois's head." True to the title, he began the essay, which focused on the work of conceptual artist Joseph Kosuth, Douglas Haider, Robert Barry, Lawrence Weiner, and Lee Levine, with the following quote from Lewis Carroll's Alice in Wonderland: "I said 'I've often seen a cat without a grin, though I know, but a grin without a cat! It's the most curious thing I ever saw in all my life!'"³ By analogy, for his premise Kosuth's language over a structuralist premise, Burnham suggested, "the cat is art without a grin, the grin is a work of art without an art, an art without a relation to anything of art or matter, institutionally associated with art objects. Similarly, he re-evaluated Software as "a relation to produce aesthetic sensations without the intervening subject," in fact, to vacillate the conflict of bases of aesthetic creation by placing works in hardware, non-art formats.⁴

Burnham directly interacted with computer software when he was a fellow at the Center for Advanced Visual Studies under George Poulos at MIT during the 1969-70 academic year. Having received his MFA from Yale in 1961, he was invited, as an artist, "to learn to use the time-sharing computer system at MIT's Lincoln Laboratories" on a paper entitled "The Aesthetics of Intelligent Equipment" sponsored at the Computer Museum in 1969. Burnham discussed this experience of working with

Reprogramming Systems Aesthetics: A Strategic Historiography

Edward A. Shanken
University of Amsterdam
Turkrooygatpad 9
1012 XT Amsterdam, NL
www.artwars.com
rotorelief@gmail.com

ABSTRACT

This paper offers close readings of selected literature pertaining to Burnham's "systems aesthetic," the subject of significant scholarly attention recently. It identifies, compares, and contrasts several attempts to engage Burnham's theories in contemporary art historical discourses, testing strategic and interpretive skills in the applications of post-1970-2009. This research hopes to offer insight into current art historical practices and the processes by which history informs, and is transformed by, the present.

Categories and Subject Descriptors

AS [General Literature]: Conference Proceedings

General Terms

Theory

Keywords

Systems aesthetic, information aesthetic, cybernetic, systems theory, information theory, art, Benson, Ascent, Burnham, Blyden, Potts, Whitaker, Szilowski, Bucklin, Hawks, Knapp, [Cynthia Smith] *Hierarchies for saying that it is impossible to enter the same river twice – for he thought it could not be done even once – Aristotle, Metaphysics*

1. INTRODUCTION

As the call of high modernism sounded from its lofty throne, the scientific theories of Claude Shannon, Norbert Wiener, and Ludwig von Bertalanffy gained substantial purchase in the arts. Radically opposed to the romantic emotionalism of expressionism, Abraham Maslow and Max Bense's systems of "information aesthetics," Ray Assou's cybernetic art theories, and Jack Burnham's "systems aesthetic" (hereafter, systems aesthetic) became influential models for more rational approaches to making and understanding art. Leaving their labor by the mid-1970s, they disappeared from art discourses for nearly two decades, apparently gathering dust, but, as recent efforts suggest, also gathering steam. Historical and critical writing addressing these aesthetic theories began to emerge in the 1990s and accelerated in the 2000s, when a number of exhibitions and symposia were devoted to related themes. These include Open Systems: Rethinking Art c. 1970 (Tate Modern, 2005), Systems Art (Whitechapel Gallery, 2007), Imaging by Numbers (Stock Art

Museum, Northwestern University, 2007), and Pask Present, Anilzer, Farbergang, Vienna, 2006. Specialized scholarly publications also mushroomed in the 2000s, including Ray Assou's *Telelogic Aesthetics: Fluctuating Theories of Art, Technology, and Consciousness* (Bletchley, University of California Press, 2003), *Charlie Gen's Art, Time and Technology* (2004), Francis Halliday's *Systems of Art* (2008), *White House Cold Logic: Anual Computer Art* (2006), Paul Brown, Charlie Gen, Nicholas Lambert and Catherine Mason eds. (Cambridge: MIT Press, 2009), and the forthcoming *The Art of Systems*, Francis Halliday and Chris Smith, eds. Paralleling the surge of this historical reexamination into museum contexts, scholarly writing on the subject has entered into more mainstream academic discourses, as in Pamela M. Lee's *Chromophobia* (MIT Press, 2006), her essay *Art and Electronic Media* (Phaidon, 2009), and in recent work by prominent art historians including Caroline A. Jones at MIT and Claire Pajet at the University of Vienna. To borrow a line from Hans Haacke's proposed 1971 work initially mentioned to Norbert Wiener, "All Systems Go!"¹

This terrain is rich with complexity, because the aesthetic theories mentioned above were what might be called "interceptive synthesis" of ideas originally formulated in scientific domains but that became widely, if not ubiquitously applied (or misapplied) across diverse disciplines.² Although their particular *fit*, the terms *cybernetic* and *systems theory* are often used interchangeably and both rely substantially on information theory. It is difficult, therefore, to differentiate between them, to identify their particular influence on specific aesthetic theories in the 1960s (which typically mixed and matched to suit their needs), or to track how these theories, in turn, influenced the discourses of contemporary art practice and criticism fifty years later. Of the three, Burnham's "systems aesthetic," has gained the most recent scholarly attention. Contemporary discourses surrounding systems aesthetics, however, tend to lack an appreciation of the alternate art histories that emerged around information, cybernetic, and systems approaches to art. Gene identifies early conceptions of systems thinking and computation applied to art in the exhibition catalog for *This Is Tomorrow* (OCA, London, 1956) and notes John McClellan's 1942 pronouncement that "the future of art seems no longer to lie with the creation of enduring masterworks but with defining alternative cultural strategies, through a series of communicative gestures in much media forms."³ Ray Assou wrote about the application of cybernetics to art in 1963, anticipated premise home-machine synthesis as art in 1964, anticipated premise

"The House that Jack Built:
Jack Burnham's Concept
of Software as a Metaphor
for Art," 1998

"Reprogramming Systems
Aesthetics..." 2009

"In Forming Software," 2012

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“*systemic* artworks had emerged with a vengeance [...]. Burnham’s concerns [...] seem tailor-made for the contemporary art world.”

Caroline Jones, ‘Systems Symptoms: Jack Burnham’s “Systems Esthetics”’
Artforum, Sep 2012 (50th anniversary)



“*systemic* artworks had emerged with a vengeance [...]. Burnham’s concerns [...] seem tailor-made for the contemporary art world.”

“Systemic artworks dialectically reject or critically torque the virtual ideologies of the Internet to *materialize* the links that join archival, research-driven, process-oriented, labor-intensive, recursive, informational social, and communicational aspects of art.”

Caroline Jones, ‘Systems Symptoms: Jack Burnham’s “Systems Esthetics”’
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In Part II:

- Current technologies enable users to access and manipulate previously inaccessible data about complex (and often hidden) social relationships.
- Strategic artistic uses of digital 'real-time systems' provide modes of relating to and interacting with information that make it concrete in ways that are particular to network cultures.

PART II: EXAMPLES

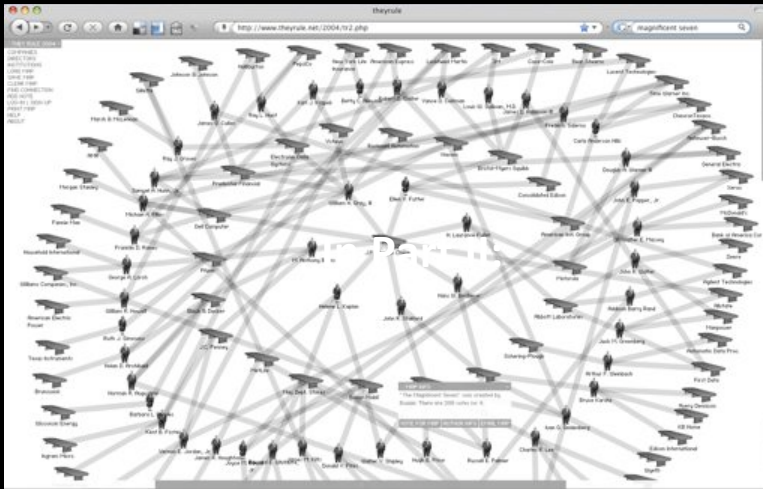
Heath Bunting, *Own, Be Owned or Remain Invisible*, 1998

Josh On, *They Rule*, 2001

Übermorgen, *Google Will Eat Itself*, 2005

Beatrice da Costa, *Pigeon Blog*, 2006

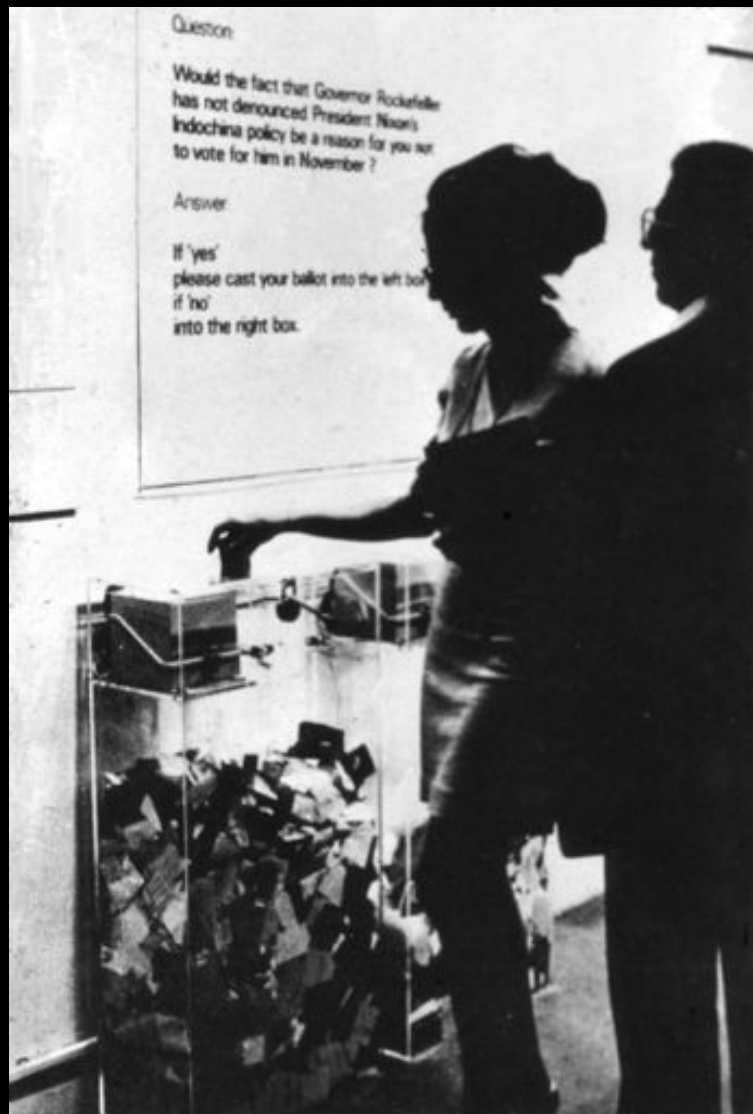
Michael Mandiberg, *Real Costs*, 2007



GOALS:

- 1) To begin to map some of the similarities and differences in critical art-making spanning four decades as a result of technological innovation and emerging forms of sociability and cultural participation.
- 2) Demonstrate parallels and continuities among various streams of practice that typically have been considered as categorically discrete.
- 3) Bridge the so-called 'digital divide' between contemporary art and new media.

Part I: Haacke and Burnham – Real Time Systems



Hans Haacke, Visitors' Profile, 1970
 MOMA, *Information*
 Kynaston McShine, curator

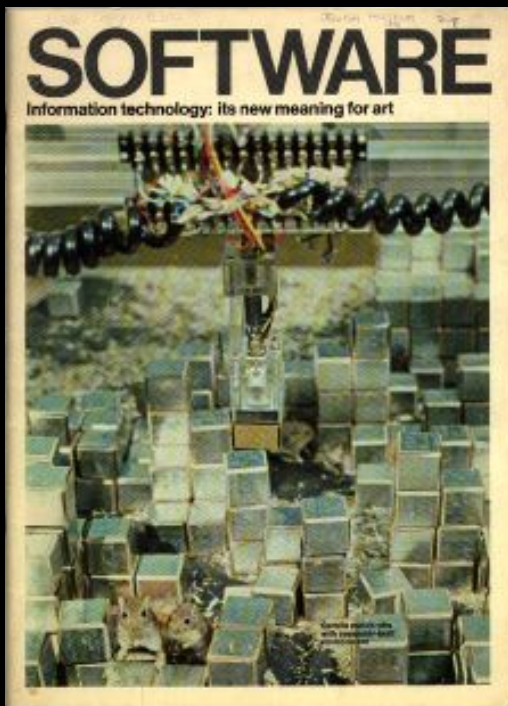
These questions are and your answers will be part of Hans Haacke's VISITORS' PROFILE
 a work in progress during the Haacke exhibition at the Guggenheim Museum.

Please fill out the questionnaire and drop it into the box on the white round table near the windows or the Museum's ground floor. Do not sign your name.

- 1) Do you have a professional interest in art, e.g. artist, student, critic, historian, etc? yes no
- 2) Is the use of the American flag for the expression of political beliefs, e.g. on hard-hats and in dissident art exhibitions a legitimate exercise of free speech? yes no
- 3) How old are you? years _____
- 4) Should the use of marijuana be legalized, lightly or severely punished? legalized tightly severely punished
- 5) What is your marital status? married at risk divorced separated widowed
- 6) Do you sympathize with Women's Lib? yes no
- 7) Are you male, female? male female
- 8) Do you have children? yes no
- 9) Would you mind having your child to integrate schools? yes no
- 10) What is your ethnic background? _____
- 11) Assuming you were Indochinese, would you sympathize with the present Saigon Regime? yes no
- 12) In your opinion is the moral fabric of this country strengthened or weakened by the US involvement in Indochina? strengthened weakened
- 13) What is your religion? _____
- 14) Do you think the interests of profit-oriented business usually are compatible with the common good of the world? yes no
- 15) What is your annual income (before taxes)? \$ _____
- 16) In your opinion are the economic difficulties of the US mainly attributable to the Nixon Administration's policies? yes no
- 17) Where do you live? city _____ county _____ state _____
- 18) Do you think the defeat of the SST was a step in the right direction? yes no
- 19) Are you enrolled in or have you graduated from college? yes no
- 20) In your opinion should the general orientation of the country be more or less conservative? more less

Your answers will be tabulated later today together with the answers of all other visitors of the exhibition. Thank you.

Visitors' Profile (proposed questionnaire, Guggenheim.) Realized at Milwaukee Art Center, 1971. Similar to *Software*, 1970



Jewish Museum, NY, 1970
Jack Burnham, curator

years

4) Should the use of marijuana be legalized, lightly or severely punished? Legalized Tightly severely punished

5) What is your marital status? MARRIED SINGLE DIVORCED SEPARATED

6) Do you sympathize with Women's lib? WIDOWED

7) Are you male, female? yes no

8) Do you have children? MRS TRIPLE

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Hans Haacke, *Visitor's Profile* (detail), c 1970-71

The visitors, in effect, were producing a collective self-portrait in a participatory and self-reflective process.

Hans Haacke, "Lessons Learned" *Tate Papers* (Aut 2009)



Photo photograph, Robert Rauschenberg, Douglas Friedman, Joseph Kosuth and Lawrence Weiner
 on the 2, 1969 Street, New York, 1969

"...using the untapped energy and information network of the day to day environment."

JACK BURNHAM

I read the news today oh boy
 Four thousand holes in Blackburn
 Lancashire
 And though the holes were rather small
 They had to count them all
 Now they know how many holes it takes
 To fill the Albert Hall
 I'd love to turn you on

Presently it will be accepted that art is an archaic information processing system, characteristically Byzantine rather than inefficient. To emphasize this cybernetic analogy, programming the art system involves some of the same features found in human brains and in large computer systems. Its command structure is typically hierarchical.¹ At the basic level artists are similar to programs and subroutines. They prepare new codes and analyze data in making works of art.

These activities are supervised by metaprograms which consist of instructions, descriptions, and the organizational structures of programs. Metaprograms include art movements, significant stylistic trends, and the business, promotional, and archival structures of the art world. At the highest level art contains a self-metaprogram which, on a long-term basis, reorganizes the goals of the art impulse. The self-metaprogram operates as an undetected overseer, establishing strategies on all lower levels in terms of societal needs. Because we have no comprehensive picture of human life, these needs remain rather obscure (Zeitgeist is not sufficiently teleologic to express the anticipatory monitoring function of the self-metaprogram).

Aesthetic values emanate from the self-metaprogram. These are now changing, as evidenced by a number of symptomatic conditions: loss of interest in the gallery scene by the informed public,



**REAL
TIME
SYSTEMS**

Photo photograph, Robert Rauschenberg, Douglas Huebler, Joseph Kosuth and Lawrence Weiner
on W. 13th Street, New York, 1969

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“real-time systems gather and process data from environments, in time to effect future events within those environments.”

Jack Burnham, “Real Time Systems”, *Artforum* VIII:1 (September 1969): 49-55



Black and white photograph, Robert Rauschenberg, Douglas Friedman, Joseph Kosuth and Lawrence Weiner, at the 13th Street, New York, Museum, 1969.

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“real-time systems gather and process data from environments, *in time to effect future events* within those environments.”

By contrast, ‘ideal time’ concerns the contemplation of beauty in isolation from societal and temporal contingencies.

Jack Burnham, “Real Time Systems”, *Artforum* VIII:1 (September 1969): 49-55



Photo photograph, Robert Rauschenberg, Douglas Friedman, Joseph Kosuth and Lawrence Weiner
 on St. John Street, New York, 1969

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“real-time systems gather and process data from environments, *in time to effect future events* within those environments.”

“What a few artists are beginning to give the public is real time information, information with no hardware value, but with software significance for effecting awareness of events in the present.”



Jewish Museum, NY, 1970
Jack Burnham, curator



The processing speed of the computer makes it possible that at any given time the statistical evaluation of all answers is up to date and available. The constantly changing data is projected onto a large screen, so that it is accessible to a great number of people. Based on their own information a statistical profile of the exhibition's visitors emerges.

Hans Haacke, artist's statement in *Software*: 34.

Jewish Museum, NY, 1970
Jack Burnham, curator

“The artist’s business requires his involvement with practically everything ... It would be bypassing the issue to say that the artist’s business is how to work with this and that material ... and that the rest should be left to other professions ... The total scope of information he receives everyday is of concern. An artist is not an isolated system ... he has to continuously interact with the world around him...”

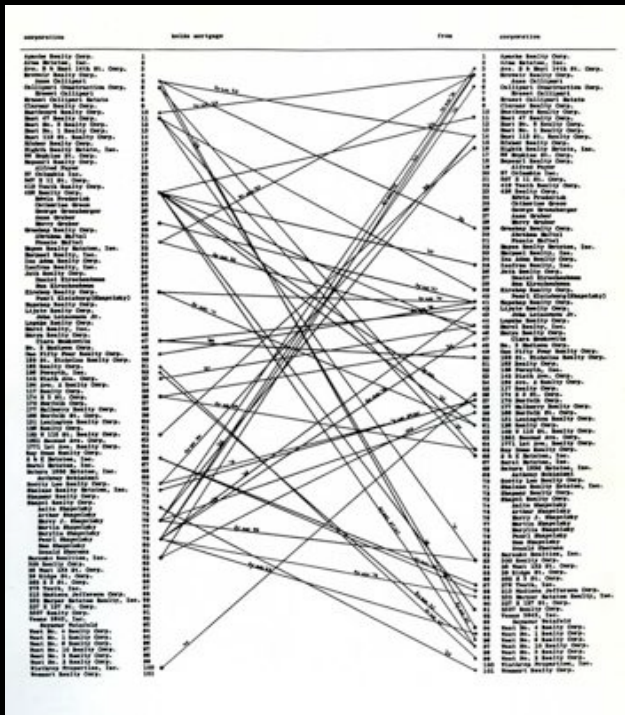


Hans Haacke, *News*, in *Software* exhibition, 1970. Jack Burnham on left.

Hans Haacke, from a talk delivered at the Annual Meeting of the Intersocietal Color Council, April, 1968.



Hans Haacke, Shapolsky et al. Manhattan Real Estate Holdings, a Real-Time System, as of May 1, 1971, 1971



142 photos of New York apt buildings, 2 maps of Lower East Side and Harlem with properties marked, 6 charts outlining business relations within real estate group.

SOLOMON R. GUGGENHEIM MUSEUM

CORPORATE AFFILIATION OF TRUSTEES

Kennecott Copper Corporation

FRANK R. MILLIKEN, President, Chief Exec. Officer & Member Board of Directors

PETER O. LAWSON-JOHNSTON, Member Board of Directors

ALBERT E. THIELE, past Member Board of Directors

Multinational company mining, smelting, refining copper, molybdenum, gold, zinc and coal. Copper based mill products.

Operates in the U.S., Australia, Brazil, Canada, Colombia, Costa Rica, England, Indonesia, Italy, Netherlands, Antilles, Nigeria, Peru, South Africa.

El Salvador: Kennecott's Chilean copper mine was nationalized July, 1971 through Constitutional Reform Law, passed unanimously by Chilean Congress. Chilean Comptroller General ruled profits over 12% a year since 1955 to be considered excess and deducted from compensation. His figures, disputed by Kennecott, in effect, eliminated any payments.

Kennecott tried to have Chilean copper shipments confiscated or customers' payments attached. Although without ultimate success in European courts, legal harassment threatened Chilean economy (copper 70% of export).

President Salvador Allende addressed United Nations December 4, 1972. The New York Times reported:

The Chilean President had still harsher words for two U.S. companies: the International Telephone & Telegraph Corp. and the Kennecott Corp. which he said, had dug their claws into my country and which proposed to manage our political life.

Dr. Allende said that from 1955 to 1970 the Kennecott Copper Corp. had made an average profit of 52.8% on its investments.

He said that huge transnational corporations were waging war against sovereign states and that they were not accountable to or representing the collective interest.

In a statement issued in reply to Dr. Allende's charges, Frank R. Milliken, president of Kennecott, referred to legal actions now being taken by his company in courts overseas to prevent the Chilean Government from selling copper from the nationalized mines.

No amount of rhetoric can alter the fact that Kennecott has been a responsible corporate citizen of Chile for more than 50 years and has made substantial contributions to both the economic and social well-being of the Chilean people.

Chile's expropriation of Kennecott's property without compensation violates established principles of international law. We will continue to pursue any legal remedies that may protect our shareholders' equity.

President Allende died in a military coup Sept. 11, 1973. The Junta committed itself to compensate Kennecott for nationalized property.

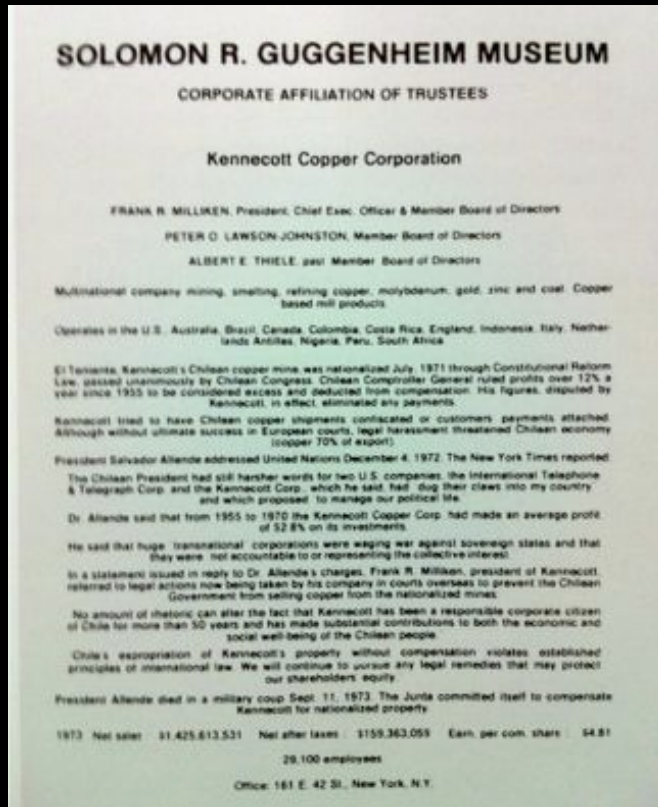
1973 Net sales: \$1,425,613,531 Net after taxes: \$159,363,059 Earn. per com. share: \$4.81

29,100 employees

Office: 161 E. 42 St., New York, N.Y.



Haacke, L: *Solomon R. Guggenheim Museum Board of Trustees* (1974)
R: *Creating Consent* (1981)



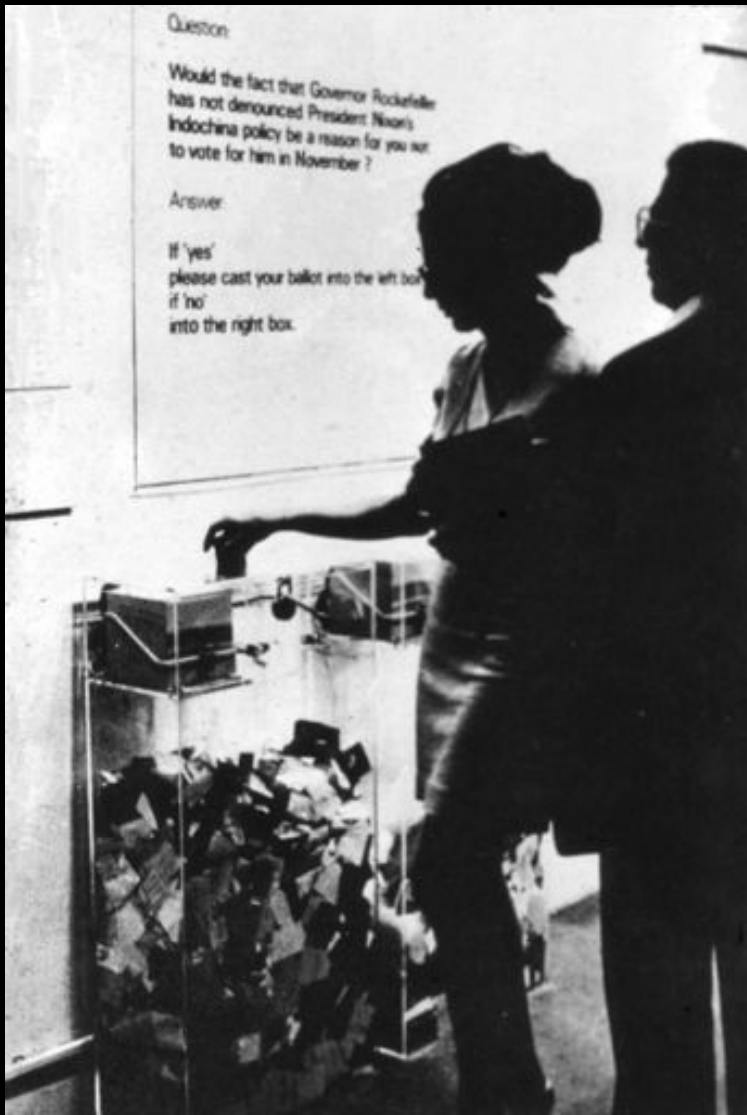
Haacke, L: *Solomon R. Guggenheim Museum Board of Trustees* (1974)
R: *Creating Consent* (1981)

An unexamined exchange of capital: “financial capital on the part of the sponsors and symbolic capital on the part of the sponsored” – Bourdieu & Haacke, 1995

We are not patrons. We want something for the money we spend. And we are getting it.

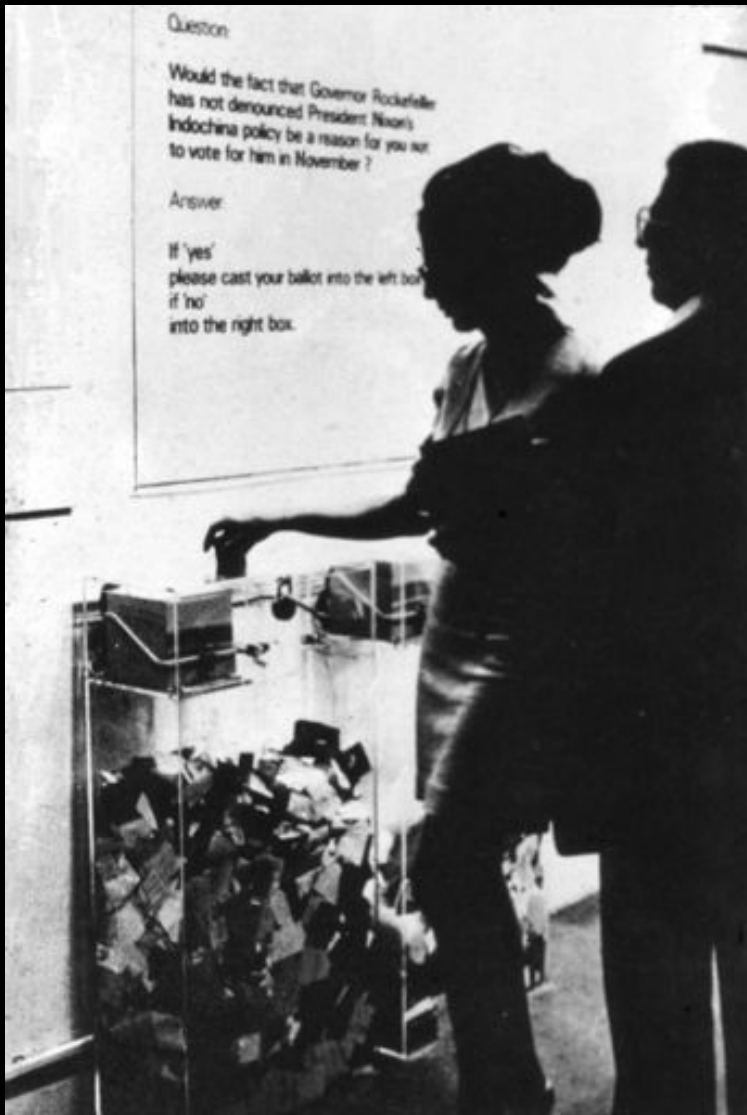
- Peter Littmann,
President, Hugo Boss





Haacke's works challenge the traditional aesthetic notion of ideal time and fit Burnham's conception of real-time in the sense that they undermine idealistic notions of aesthetic autonomy.

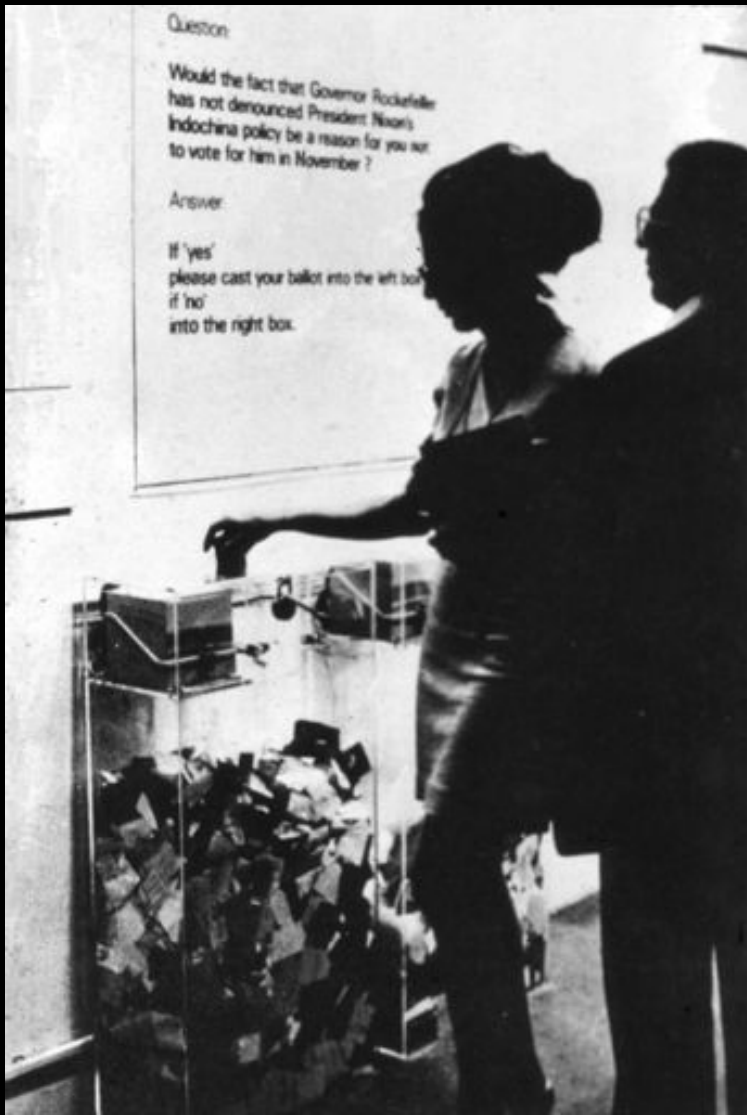
Haacke, Visitors' Profile, 1970



Haacke's works challenge the traditional aesthetic notion of ideal time and fit Burnham's conception of real-time in the sense that they undermine idealistic notions of aesthetic autonomy.

Visitor's Profile "offered the audience an opportunity to recognize that art is not produced, viewed and traded in an awe-inspiring world apart but in a continuous social universe." (Haacke, 2009)

Haacke, *Visitors' Profile*, 1970



Haacke, Visitors' Profile, 1970

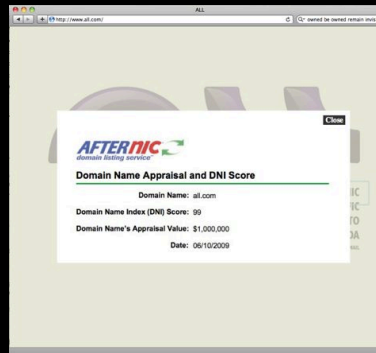
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Visitor's Profile "offered the audience an opportunity to recognize that art is not produced, viewed and traded in an awe-inspiring world apart but in a continuous social universe." (Haacke, 2009)

Immaterial information can make a concrete impact on the future. This applies as much to the critical insights revealed by art as it does to the publicity garnered by the patrons who support it.

**Part II: New Media Art as an Extension of
Real Time Systems and Investigatory Art**

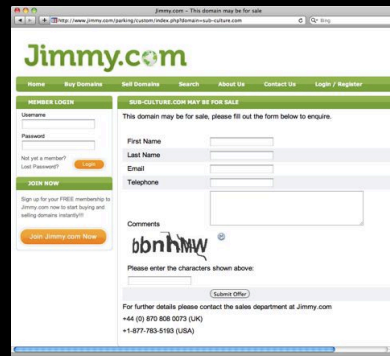
Haacke's explorations of real-time interactive systems, combined with his use of the instantaneous quality of digital computing, can now be interpreted as a harbinger of more recent work by a subsequent generation of artists that explicitly use electronic media as a platform for their work.



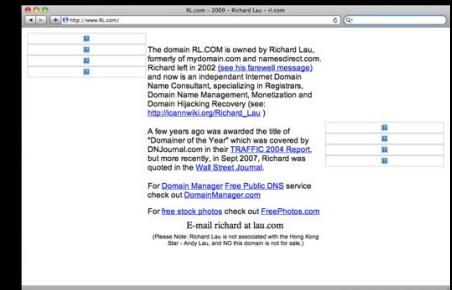
www.all.com - unused appraised \$1 million



www.slot.com redirects to cirsa.es (gambling)



“www.sub-culture.com may be for sale... contact Jimmy.com”



“... RL.com is owned by Richard Lau... “Domainer of the Year” ... not ... the Hong Kong star – Andy Lau, and NO this domain is not for sale”

Heath Bunting, 1998
 Own, Be Owned, or Remain Invisible
www.irational.org/_readme.html



The investigation undertaken in *Own, Be Owned* is not conducted by the artist and delivered as a *fait accompli* to the viewer. Rather, it is performed in real time by the viewer who is explicitly activated as a participant in the investigation.

Heath Bunting, 1998

Own, Be Owned, or Remain Invisible

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“This new ‘metamedium’ is *active* – it can respond to queries and experiments – so that the messages may involve the learner in a two-way conversation.”

- Alan Kay and Adele Goldberg, 1977

Heath Bunting, 1998
Own, Be Owned, or Remain Invisible
www.irational.org/_readme.html



The *form* of *Own, Be Owned* equally constitutes is *message*.

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Own, Be Owned, or Remain Invisible
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The *form* of *Own, Be Owned* equally constitutes is *message*.

It endows one with a sense of agency – if not to impact the future then at least to ride the wave of “changing modes of signification [which] affect the *codes* as well as the subjects of representation.” (Hayles, 1999)

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Heath Bunting, 1998

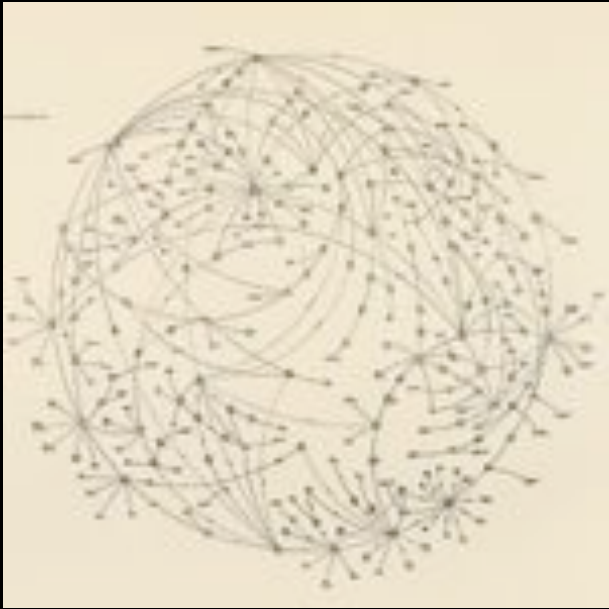
Own, Be Owned, or Remain Invisible

www.irational.org/_readme.html

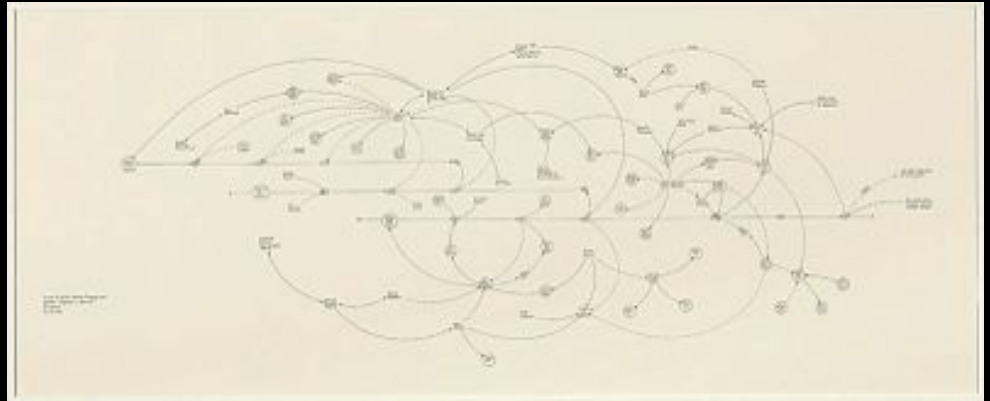
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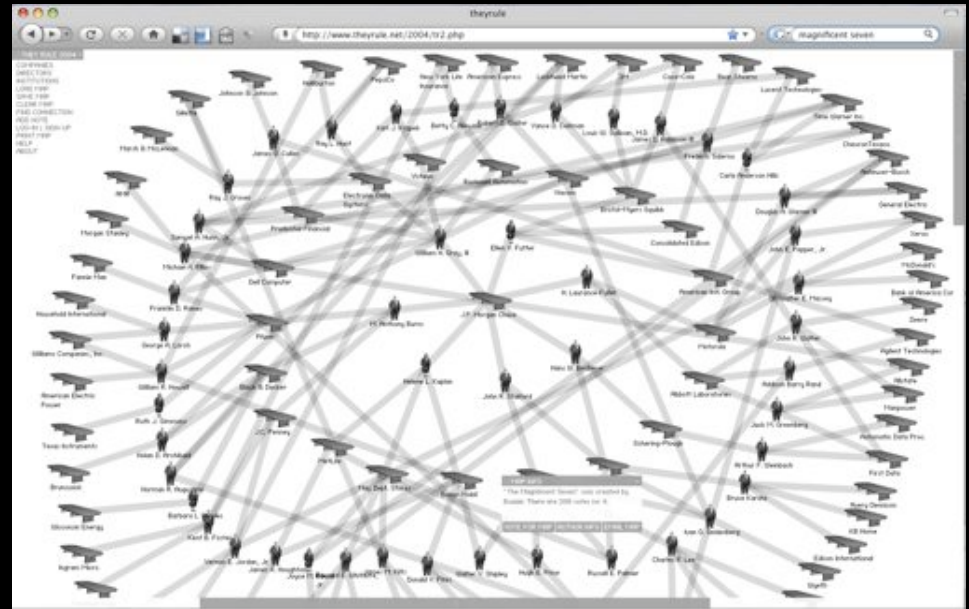
It possesses an *electronic tactility* that parallels the real economic effects of E-commerce.



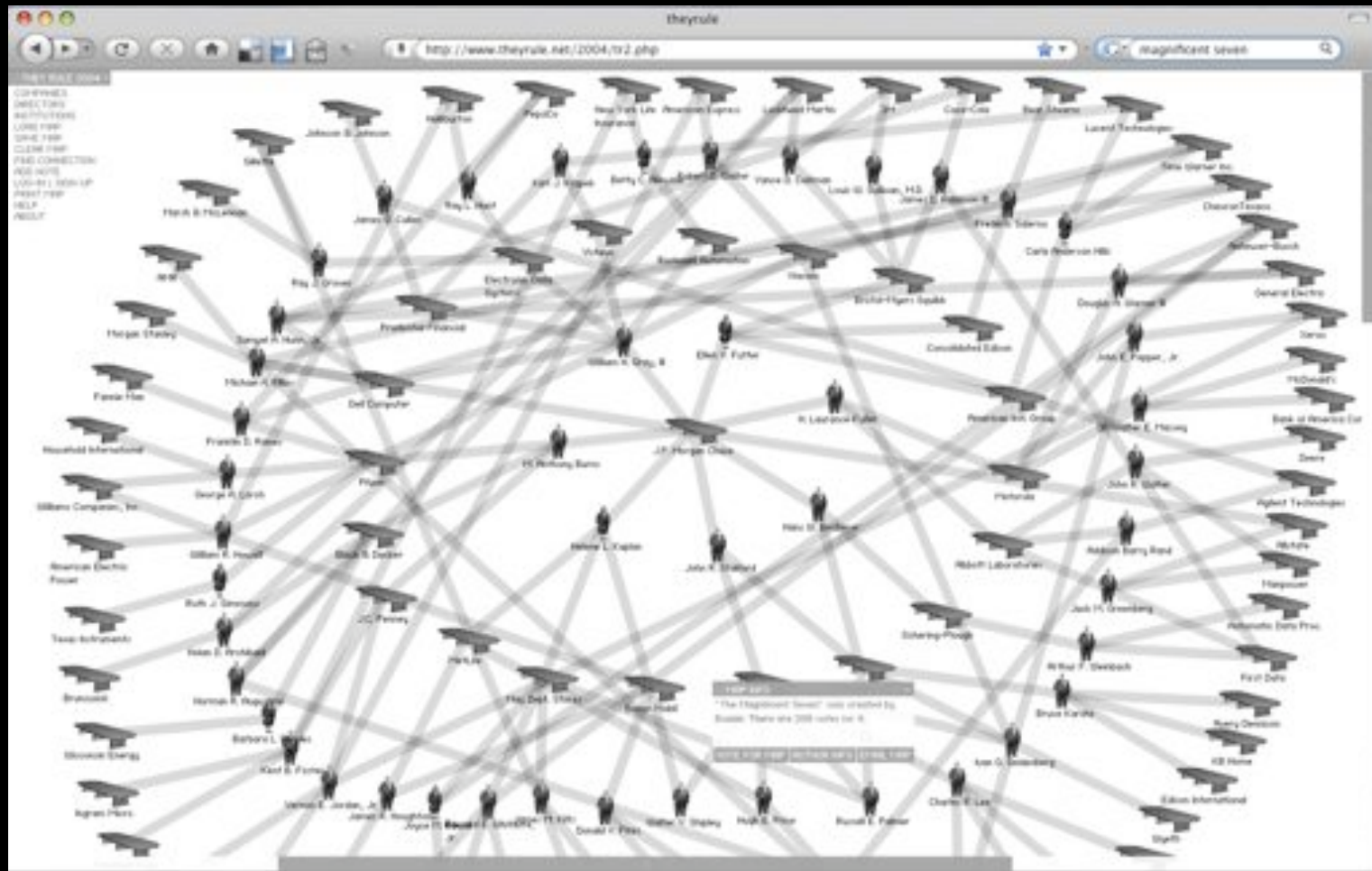
Mark Lombardi, *Oliver North, Lake Resources of Panama, and the Iran-Contra Operation*, ca. 1984-86, 4th Version, 1999



Mark Lombardi, *George W. Bush, Harken Energy, and Jackson Stevens* c.1979-90, 5th version, 1999

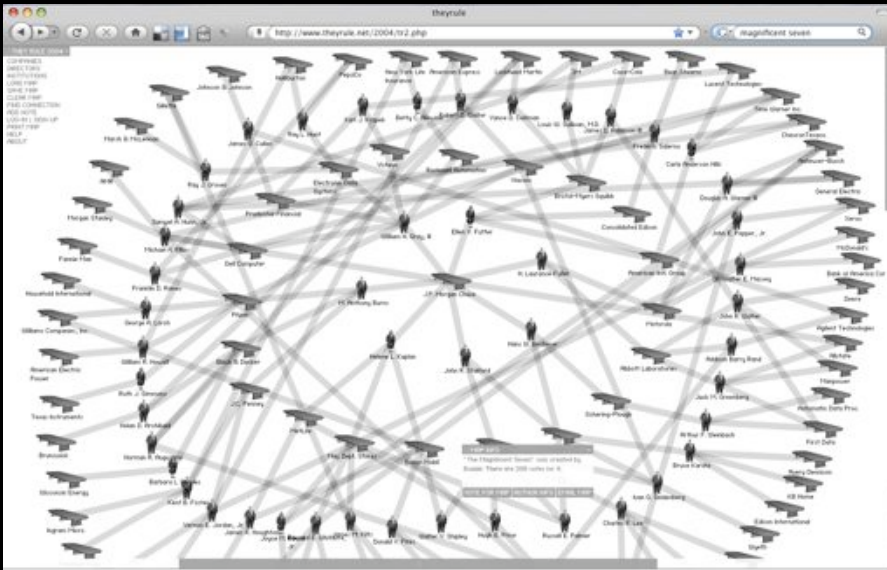


Josh On, *They Rule*, 2004

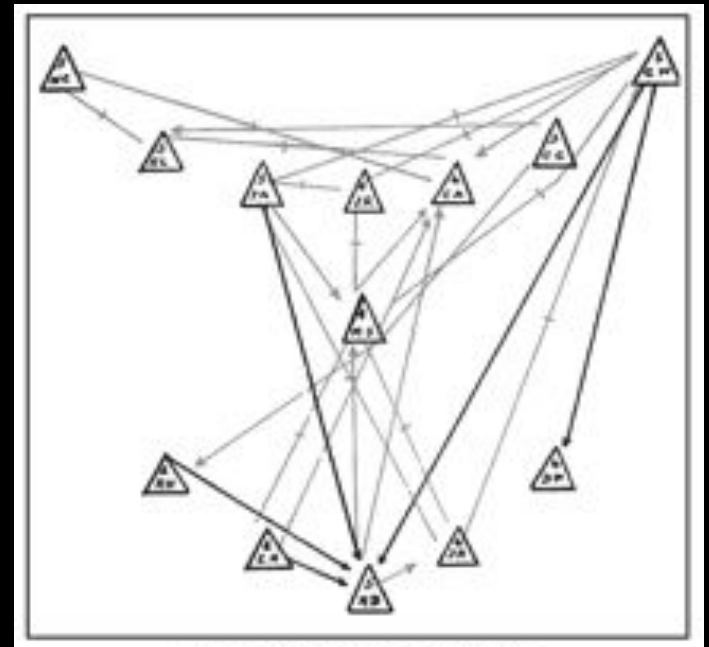


Josh On, *They Rule*, 2004

*They sit on the boards of America's largest companies.
 Many sit on government committees.
 They make decisions that affect our lives.
 They rule.*

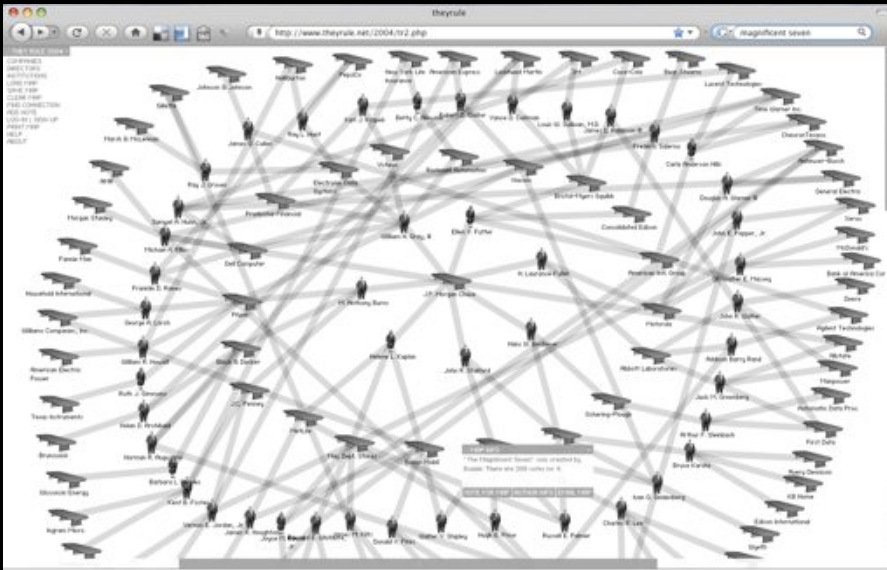


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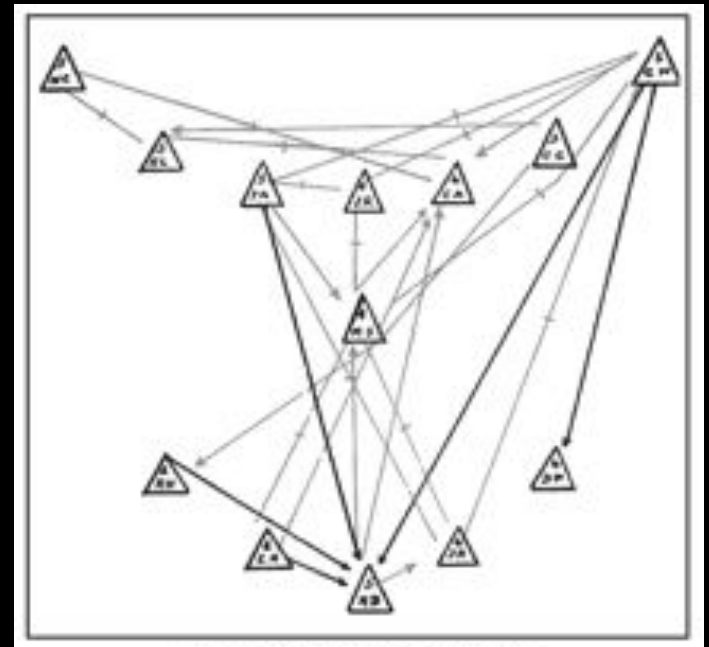


Jacob Moreno, c 1950s
Sociogram of a Football Team

Like Moreno, On wanted to “reveal the hidden structures that give a [corporation] its form: the alliances, the subgroups, the hidden beliefs, the forbidden agendas, the ideological agreements, the ‘stars’ of the show.”

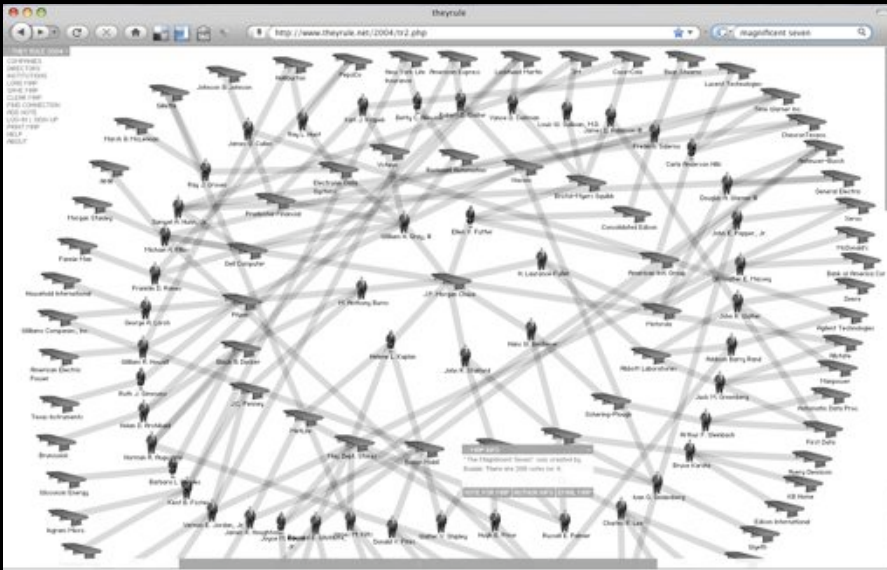


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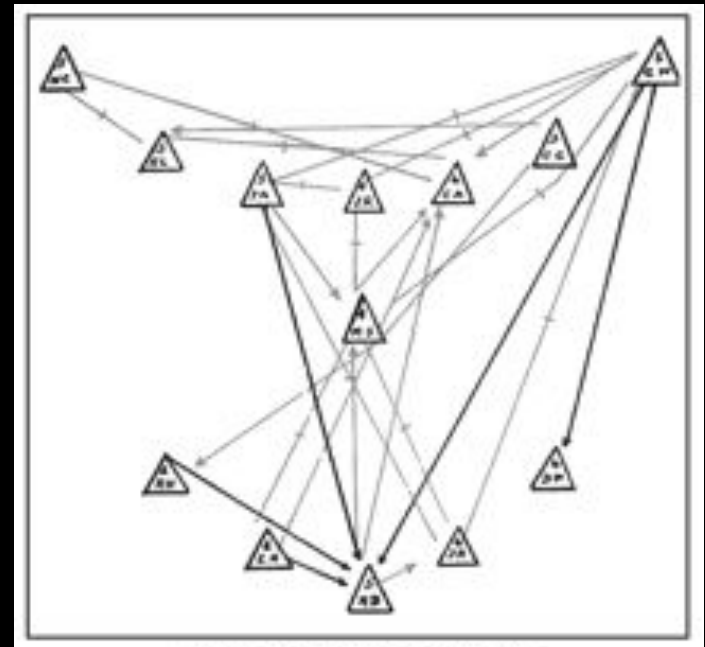


Jacob Moreno, c 1950s
Sociogram of a Football Team

“[e]very participant should feel about the experiment that it is his (or her) own cause [...] that it is an opportunity for him (or her) to become an active agent in matters concerning his (or her) life situation.” - Moreno, 1951



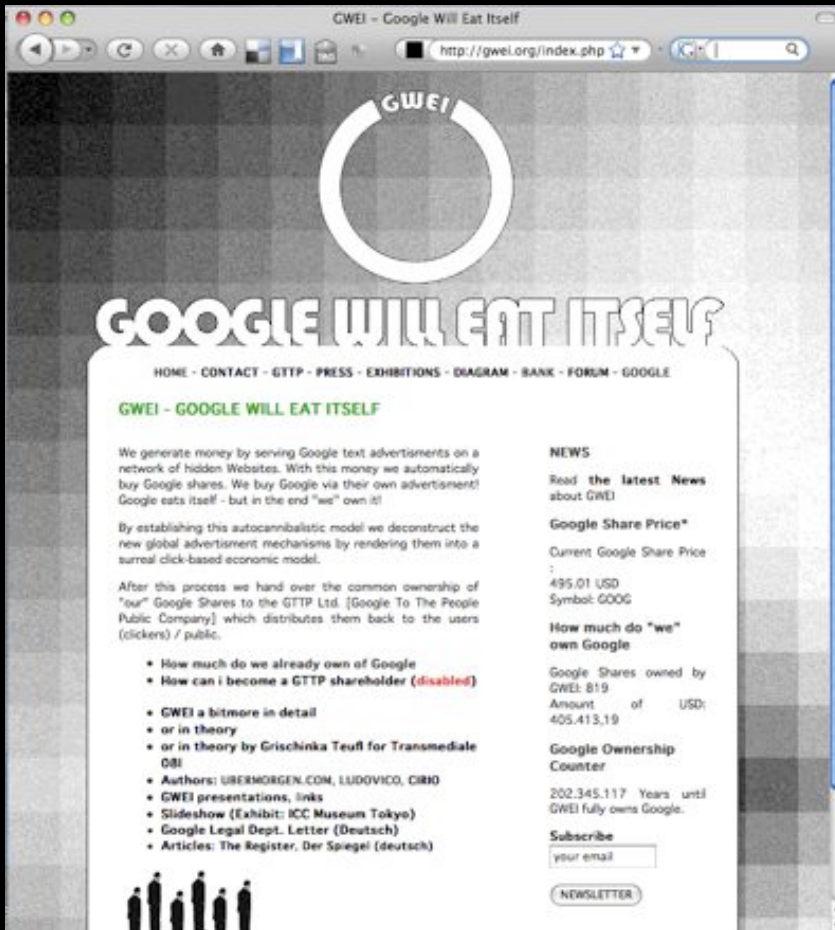
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“I gave [people] the ability to actually move things around ... save that as a map, and annotate it” - On, 2011



How much do "we" own Google

Google Shares owned by GWEI: 819
 Amount of USD: 405.413,19
 Adsense-Clicks: 1.556.361
 Adsense-Page Impressions: 37.538
 Adsense-CTR: 2,41%

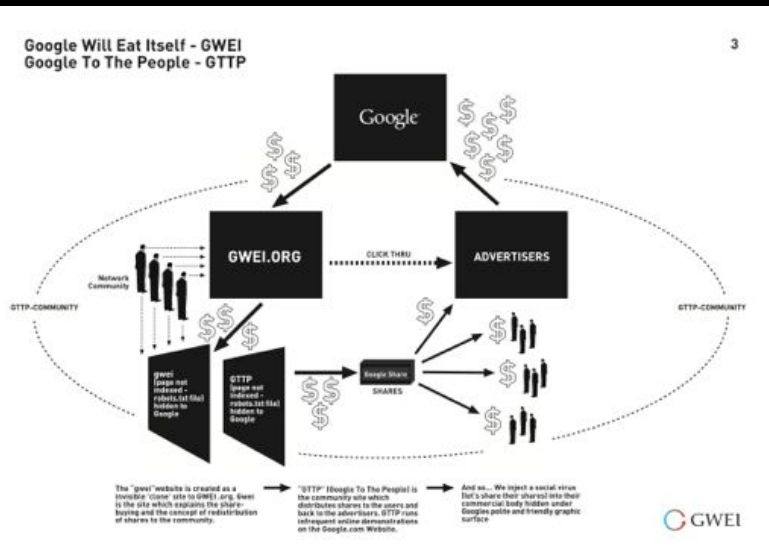
Google Ownership Counter

202.345.117 Years until GWEI fully owns Google.

Google Share Price*

Current Google Share Price : 495.01 USD
 Symbol: "GOOG"

Übermorgen (Hans Bernhard, Liz VLX)
 with A Ludovico, P Cirio, et al
Google Will Eat Itself (GWEI), 2005 -6



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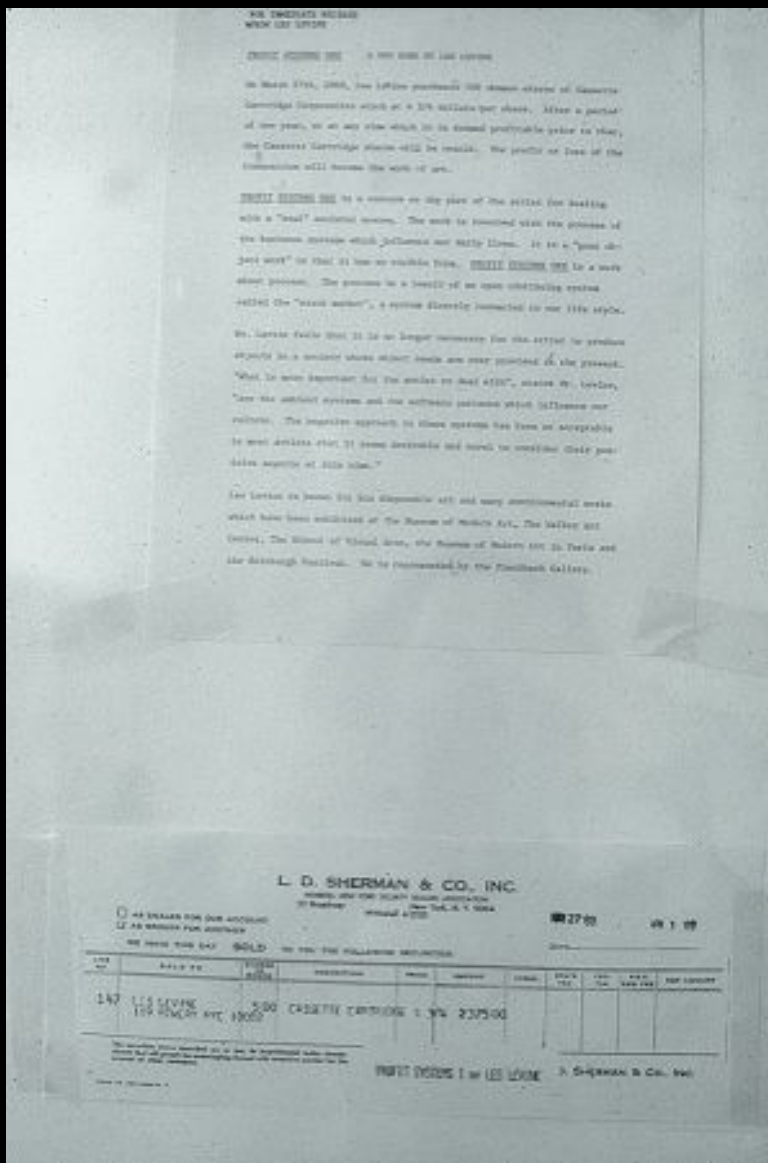
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“On March 27, 1969, Levine bought five hundred common shares of stock in the Cassette Cartridge Corporation. After a period of one year, or at any time which it is deemed profitable prior to that, the Cassette Cartridge shares will be resold. The profit or loss of the transaction will become the work of art.”

Les Levine, *Profit System One*, 1969



Levine claimed that “[w]hat is more important for the artist to deal with [...] are the ambient systems and the software patterns which influence our culture.’

UBS e-banking via Internet
 UBS Funds
 UBS Keyinvest
 UBS Quotes

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12/03/2005, 6:08:51 PM GMT, Internet Time: 0797

Search

General | Bonds | Derivatives | Structured products | UBS Investment Fund

Number of instruments found: 4

Name	Type	Symbol	Valor	Place	Trade Vol.	Currency	Close	Bid	Ask	Last	Time
Google-A	N 2M Shares	GCOG	1916494	NMS	3755682	USD	413.87	417.7	417.71	417.7	17:20:00
Google-A	N 2M Shares	GGQ1	1916494	FRA	3875	EUR	350	355.73	356.73	355.7	19:15:13
Google-A	N Shares	GCOG	1916494	SWX	525	CHF	542.5	550.5	551.5	551.5	16:34:10
Google-A	N 2M Shares	GGEA	1916494	LON		GBP	237.26	240.31	242.79	242.2531	17:02:10

Search Criteria: goog

Search type: all | Symbol search activated

Instrument type: Shares

Stock Exchange: all

GICS Sector: all

Currency: all

Country: all

Industry: all

Sorting 1: | Sorting 2: | Sorting 3:

Search | Reset

GWEI shares a similar approach.



Haacke, *Rhine Water Purification Plant*, 1972
Museum Haus Lange, Krefeld



PIGEONBLOG

about pigeons pollution **0100**

origins
 a brief summary

pigeon navigation
 a brief summary

pigeon service
military
 police
 underground & civic

rural / domestic
 urban pigeons
 pigeon racing

special interview
 Interview with Pigeon
 Rander and Retrad
 Navy Photographer Art
 Black (Jun '06)
 part I
 part II
 part III

Pigeons in the Military, Police and Trafficking Border

Military
 In the late 19th and early 20th century, homing pigeons were frequently used as message carriers within European battle zones. Equipped with a small message capsule, pigeons would carry messages between troops and allies, allowing people if soldiers were captured behind enemy lines. They would also provide important time sensitive information that couldn't be sent by other means. Pigeons were hard to detect, difficult to shoot down, and fast communicators.

In 1903, German Engineer Julius Neubronner combined a small analog camera with a mechanical timer and attached it around a pigeon's neck. This creative approach to aerial photography soon raised interest from the German military. Shortly thereafter, exploring the potential for secret aerial photography carried out by pigeons began in earnest.





Contact - upcoming events -
 press coverage -

Beatrice da Costa, *Pigeon Blog*, 2006



“Pollution levels were visualized and plotted in real-time over Google’s mapping environment, thus allowing immediate access to the collected information to anyone with connection to the Internet.” - Da Costa, 2012

Real Costs

http://www.therealcosts.com/ real costs

RealCosts home installation screen shots wiki change units credits by Michael Mandberg

What is Real Costs?

Real Costs is a Firefox plug-in that inserts emissions data into travel related e-commerce websites. The first version adds CO2 emissions information to airfare websites such as Orbitz.com, United.com, Delta.com, etc. Following versions will work with car directions, car rental, and shipping websites. Think of it like the nutritional information labeling on the back of food... except for emissions.

10 diggs digg it

Download Now :

[Download Current Real Costs Firefox Plugin](#)

For Developers :

Current Greasemonkey Development Snapshot:
[realcosts.user.js](#)
 Requires [Greasemonkey](#)
 This is like the source code for the plugin
 Developer? Get in touch: [Michael \[a\] Mandberg \["\] com](mailto:Michael [a] Mandberg [)
 Unsure what this is? you probably should click above.

Current version (v0.0.6) is **beta**. It works on [these websites](#)

The screenshot shows the Real Costs website interface. At the top, there's a navigation bar with links like 'home', 'installation', 'screen shots', 'wiki', 'change units', and 'credits'. The main content area features a large heading 'What is Real Costs?' followed by a description of the Firefox plug-in. Below this is a 'Download Now' section with a prominent green button for downloading the current Firefox plugin. A section for developers provides a link to a Greasemonkey development snapshot and contact information for the developer, Michael Mandberg. On the right side, there's a detailed flight search interface. It includes a search bar, a 'Start Over' button, and a 'Lateral View of the Day' section. A prominent bar chart compares CO2 emissions for various transport modes: Airplane, Bus, Train, Car, Ship, and Cargo. The Airplane mode shows the highest emissions, significantly exceeding the others. Below the chart, there are sections for 'What you can do' (listing options like Bus & Train, Find a Carpool, Carbon offsets?, and More Info) and a 'Select an Outbound Flight' section with search results for a flight from New York to Los Angeles.

Michael Mandberg, *The Real Costs*, 2007

Pocket version • Suomi • svenska • Slang • По-русски Feedback • Instructions • FAQ

HSL HRT Journey Planner

Link to page Journey Planner classic Journey Planner API

HSL Journey Planner My departures • Timetables • Line Search • Cycling and walking

Basic search Advanced search

From Lentoasema, Vantaa Map Save Directory

To Pohjoinen Hesperiankatu 23, Helsinki Map Save Directory

Time 13:40 Departure time Arrival time

Date

	Mon	Tue	Wed	Thu	Fri	Sat	Sun
10	07	08	09	10	11	12	13
March	11	14	15	16	17	18	19
2011	12	21	22	23	24	25	26
	13	28	29	30	31	01	02
April	14	04	05	06	07	08	09

Search Save route Cycling/walking route

Traffic exceptions No traffic alerts for the results. HSL /Traffic exceptions Mobile version

Suggestion: Saturday 12.3.2011 Lentoasema, Vantaa - Pohjoinen Hesperiankatu 23, Helsinki

Now Later + Show 5 suggestions

	ARRIVAL	TRAVEL TIME	TOTAL WALKING DISTANCE	CO ₂ EMISSIONS FOR THE CHOSEN ROUTE
615T	13:51	14:22	0,4 km	1,5 kg
	Lentoas. T2, I	0,1 km	Vihorvuori	0,2 km
615	14:11	14:31	1 km	3,7 kg
	Lentoas. T2, I	0,3 km	Eimäenkatu	0,6 km
615T	14:21	14:52	0,4 km	
	Lentoas. T2, I	0,1 km	Vihorvuori	0,2 km

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This is like the source code for the plugin. Developer? Get in touch: Michael [at] Mandiberg [dot] com. Unsure what this is? you probably should click above.

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HSL/HRT Journey Planner, Helsinki

Michael Mandiberg, *The Real Costs*, 2007

Pocket version • Suomi • Svenska • Slang • По-русски Feedback • Instructions • FAQ

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HSL Journey Planner My departures Timetables Line Search Cycling and walking

Basic search Advanced search

From: Lentoasema, Vantaa Map Save Directory Return connection

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HSL/HRT Journey Planner, Helsinki

Michael Mandiberg, *The Real Costs*, 2007

Mandiberg's innovative work not only creates awareness in an art context but also anticipates and provides a model for similar applications in a larger social context

[A]rtists are 'deviation amplifying' systems, or individuals who, because of psychological makeup, are compelled to reveal psychic truths at the expense of the existing societal homeostasis. With increasing aggressiveness, one of the artist's functions [...] is to specify how technology uses us. - Jack Burnham, 1968

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'Just as the entire mode of existence of human collectives changes [...] so too does their mode of perception. The way in which human perception is organized – the medium in which it occurs – is conditioned not only by nature but by history.' - Walter Benjamin, 1935-8

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‘Just as the entire mode of existence of human collectives changes [...] so too does their mode of perception. The way in which human perception is organized – the medium in which it occurs – is conditioned not only by nature but by history.’ - Walter Benjamin, 1935-8

Strategic uses of new media – the prevailing media of our time – may offer precisely the perspective required to ‘reveal psychic truths’ and ‘specify how technology uses us’.

“The digital is imbedded in the larger [...] systems within which we exist and operate [...]. Through this embeddedness, the digital can act back on the social so that its specific capabilities can engender new concepts of the social and of the possible.” - Saskia Sassen, 2006

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Metacritical approaches to new media – ones that *use new media to interrogate new media* - provide a particularly useful method to reflect on *how* new media tools, theories, and practices are deeply embedded in modes of knowledge production, perception, and interaction, and are thus *inextricable from corresponding epistemological and ontological transformations*.

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The explicit use of new media in and as art may offer an advantageously embedded position from which to investigate myriad hidden connections in network culture and to contemplate central perceptual and existential shifts of the early 21st century.

INVESTIGATORY ART :

INSTITUTIONAL CRITIQUE, REAL-TIME SYSTEMS, AND NETWORK CULTURE

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- Jack Burnham, “Real Time Systems” (1969)

Edward A Shanken
Dorothy Kayser Hohenberg COE Lecture II
University of Memphis

April 2, 2013

www.artexetra.com