AHST 4342-001 (85802)
History of Media and New Media Art
Fall 2012
Dr. Charissa N. Terranova
University of Texas at Dallas
Arts & Humanities
M-W 1:00-2:15
Class Location: AH2 1.204

November 28, 2012

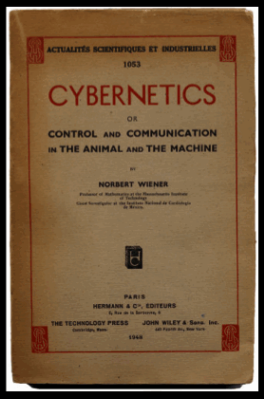
# Bodies, Surrogates, and Emergent Systems

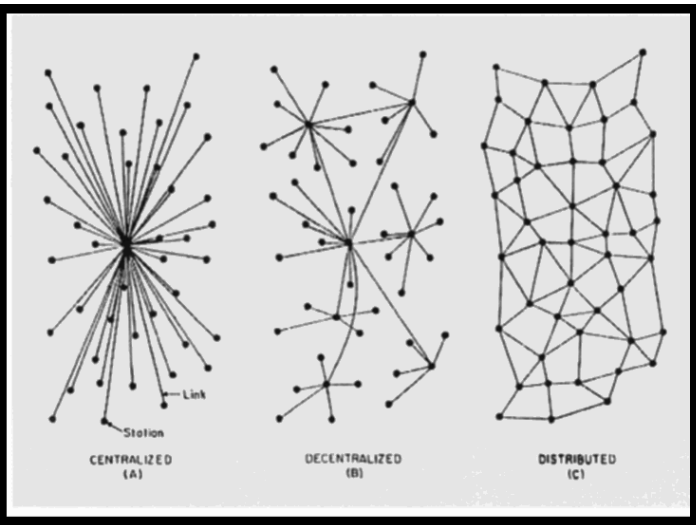
Cybernetics
[Cyborg]
Norbert Wiener

Embodiment
Dematerialization

Cybernetics – 1.) Interdisciplinary study of complex systems 2.) The study of human control functions and of mechanical and electronic systems designed to replace them, involving the application of statistical mechanics to communication engineering. [Origin: < Gk kybernt(és) helmsman, steersman (kyberné-, var. s. of kybernân to steer + -tés agent suffix) + -ics; term introduced by Norbert Wiener in 1948]

**Norbert Wiener** (1894 -1964)

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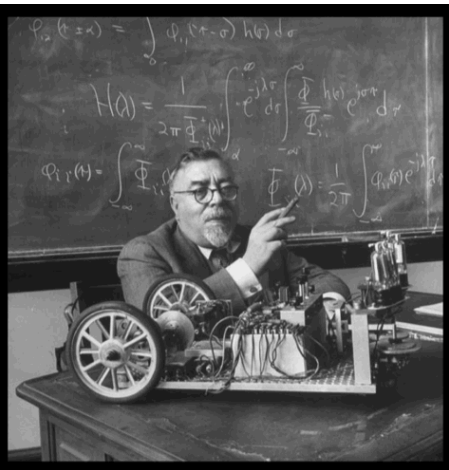
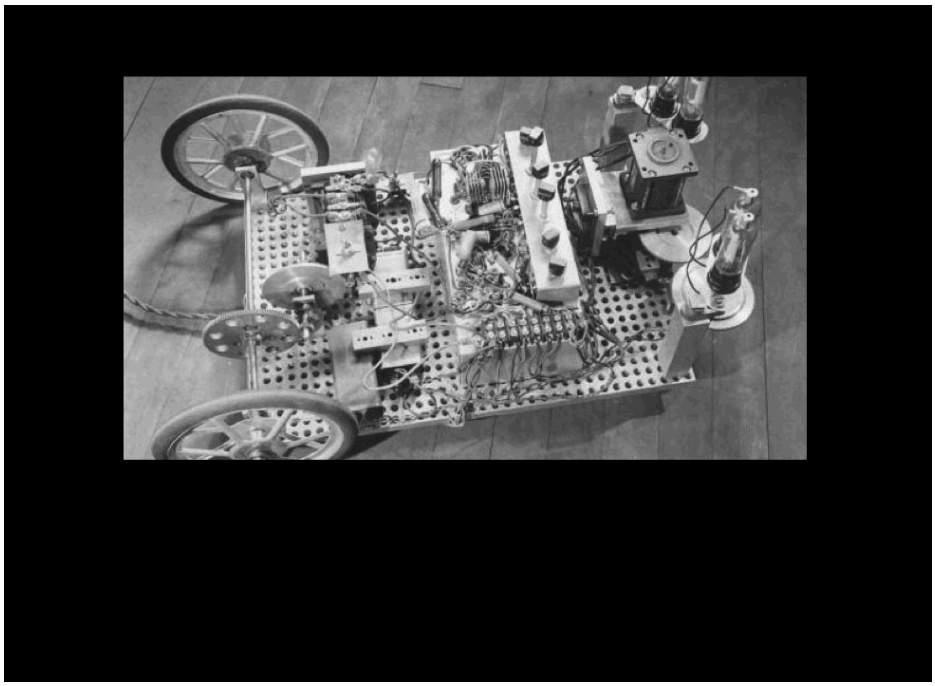
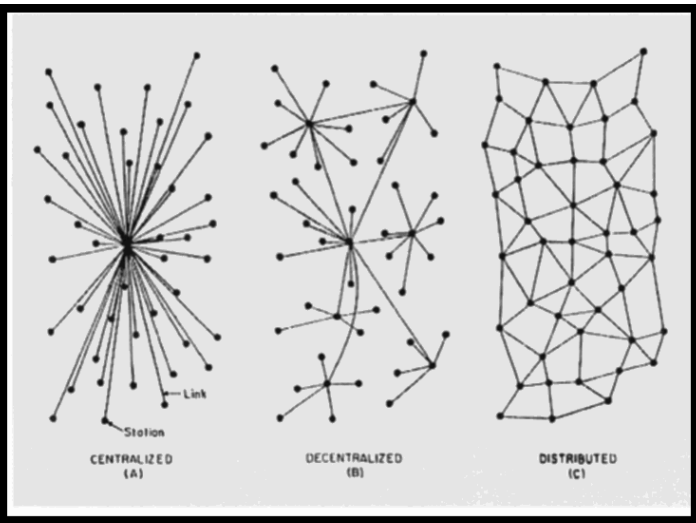


Norbert Wiener with Moth “Palomilla” 1949

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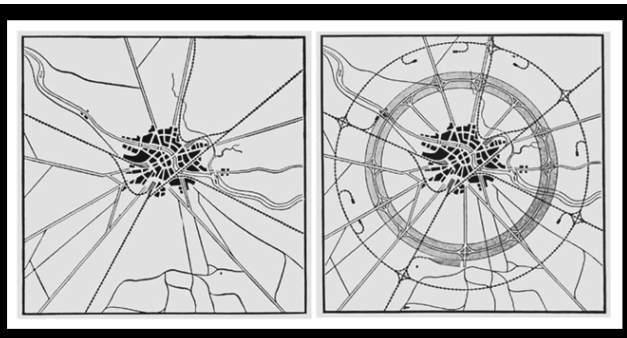
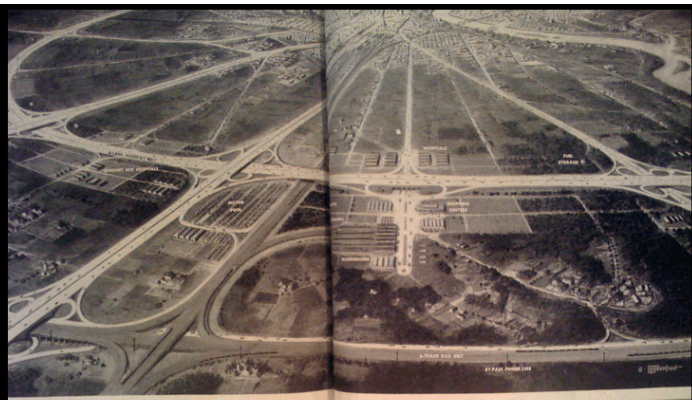


Norbert Wiener, Life Belt from Civilian Defense Plan, July-November 1950

"How U.S. Cities Can Prepare for Atomic War:
M.I.T. Professors Suggest A Bold Plan to Prevent Panic and Limit Destruction," *Life*, December 18, 1950

• Correspondence between Norbert Wiener and Walter Reuther, President of United Automobile Workers
• in letter of July 1950, Reuther suggests “a positive program of social and economic action directed at elimination of poverty and social injustice which are the source of communist power”
• Wiener responds by encouraging the strengthening of civilian defense, “which needs as much bolstering as our military defense” and the decentralization of cities
• logical outcome: more and better highways; more cars




# LIFE BELTS AROUND CITIES WOULD PROVIDE PLACE FOR BOMBED-OUT REFUGEES TO GO

The Wiener civil defense plan is calculated to meet two urgent needs in the after-bomb crisis. It would tend to check panic among the survivors of a city that has been A-bombed by giving them a definite place to head for, an escape route that could be reached by moving in any direction away from the city. It would also provide vital transportation services to continue fire-fighting, taking food and supplies to the bombed city and bringing casualties out. The emergency transportation system suggested by Wiener would be tied in with existing rail and road facilities; thus no city would be completely cut off from outside aid.

The drawing above shows a mythical U.S. city equipped with the three major elements in Wiener's proposed escape route and communications network: 1) additional roads, radiating like the spokes of a wheel from the center of the metropolitan area, to serve as multiple for the people; 2) an express highway that encircles the city about 10 miles from the edge of the built-up area to intersect every road that leads out of the city; 3) a railroad belt line for

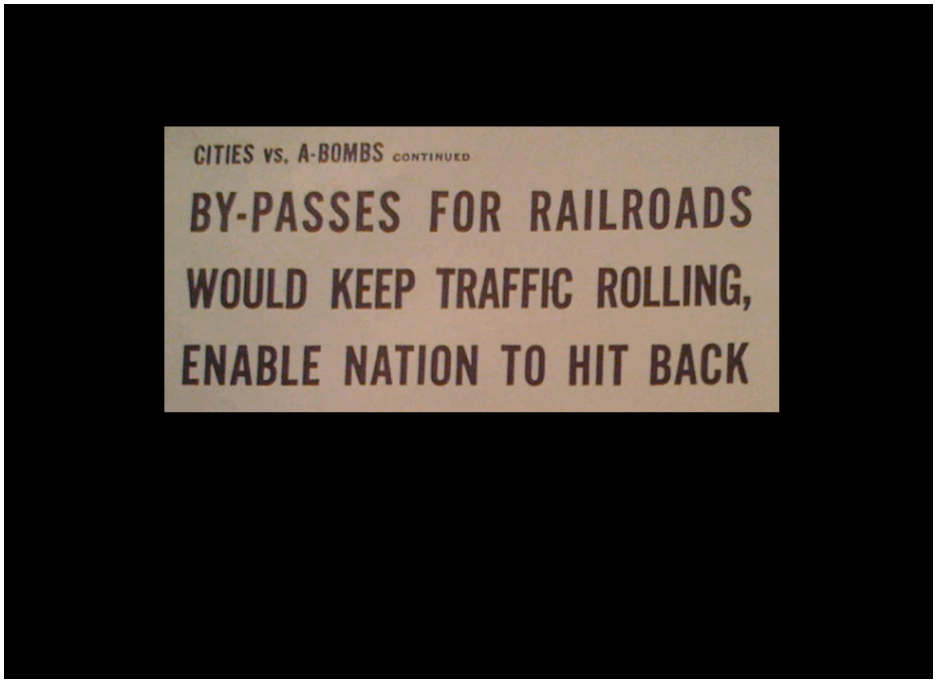
◄ MAP OF MYTHICAL CITY (TOP) SERVES THE PLAN

...beyond the express highway to provide ...ary auxiliary link between existing rail ...ys (pp. 20, 21).

...ness the city and the express highway ...ing it, zoning regulations will prohibit ...all construction. This area will be kept ...ar as possible to serve as a safety zone, pro... an unhindered exit from the city. But ...the highway life belt will be built the bor... supply warehouses, truck depots and ...ts necessary to cope with the emer... Nearby land will be reserved as parks and made ready for large tent cities which could quickly be erected to shelter the refugees. Supermarkets, suburban homes and small businesses would be permitted to grow up near the life belt to supplement the emergency rations and housing set up for a fleeing population.

In any circumstance the Wiener plan would be useful. In war it would bolster the nation's civilian defenses. In peace it would expand and ...ntrate the current trend of many city dwellers to end the suburbs and help relieve the traffic congestion which plagues most U.S. cities.

◄ LIFE BELTS WITH PROPOSED CITIES BELTS ►


CITIES VS. A-BOMBS CONTINUED
BY-PASSES FOR RAILROADS
WOULD KEEP TRAFFIC ROLLING,
ENABLE NATION TO HIT BACK

TIES vs. A-BOMBS CONTINUED

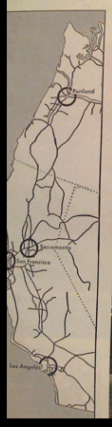
# Y-PASSES FOR RAILROADS VOULD KEEP TRAFFIC ROLLING, NABLE NATION TO HIT BACK

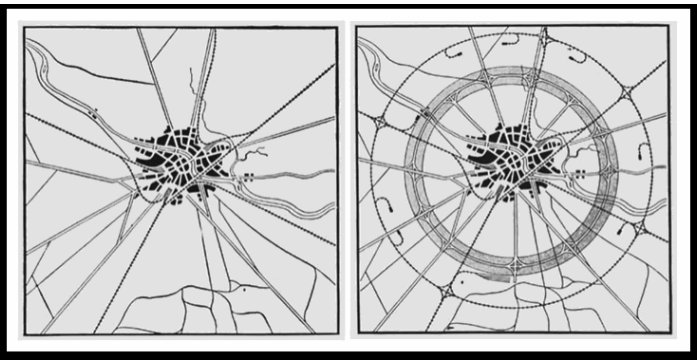
After atomic bombs have dropped on U.S. targets the disrupted stellar economy and all that remains of industry must be restored to efficient operation in order to launch sustained counterattacks against the enemy and survive as a nation. Wiener believes such an effort depends upon preserving our heavy transport system, particularly our rail network. U.S. railroads now waste across the country as an elaborate bayonet pattern of lines, almost all of which draw together at the large cities to form bottled-up sections (below). A few A-bombs could cover these knots and collapse the entire network. The resulting tangle would tie up movements of food, gas, troops and medical supplies and bring about an inevitable defeat of the U.S.

By building by pass belt tracks around each large city, Wiener believes the danger of atomic damage to railroads would be practically eliminated. Tangle and personnel could be shuttled past shattered cities without delay, and no single point in the network would be worth the price of an A-bomb.

The cost of constructing the belts in terms of dollars and man-power would be huge—right of way for the tracks alone can run to $1 million per mile—and probably will bring the greatest opposition to the plan. But the Panama Canal attests that the U.S. can support mammoth construction where it is needed. And the price of not building the rail and highway rings could be even greater. Wiener thinks that price might be national disaster.

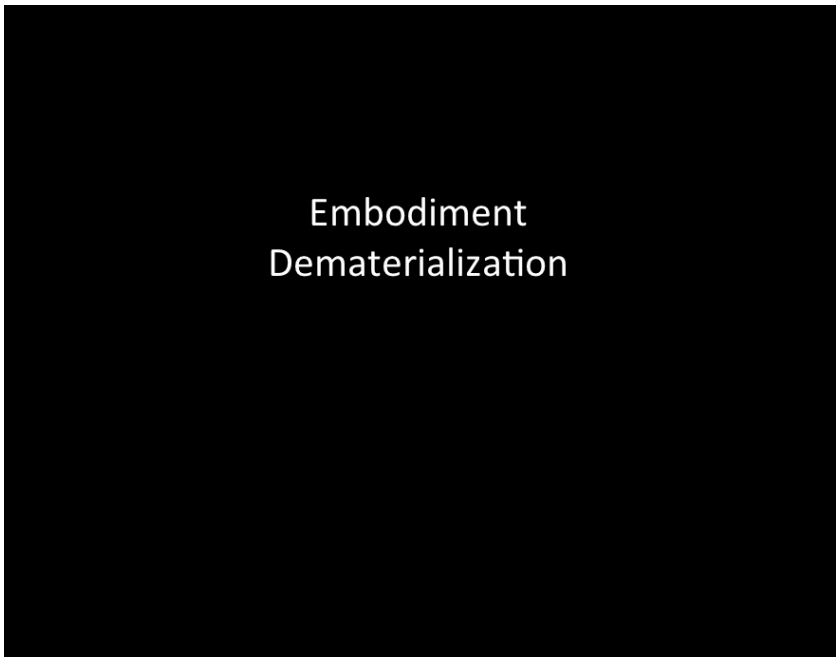
MIDWESTERN MAZE carries vital west-east rail traffic ... gate interstate lines, additional belt lines are needed around ...

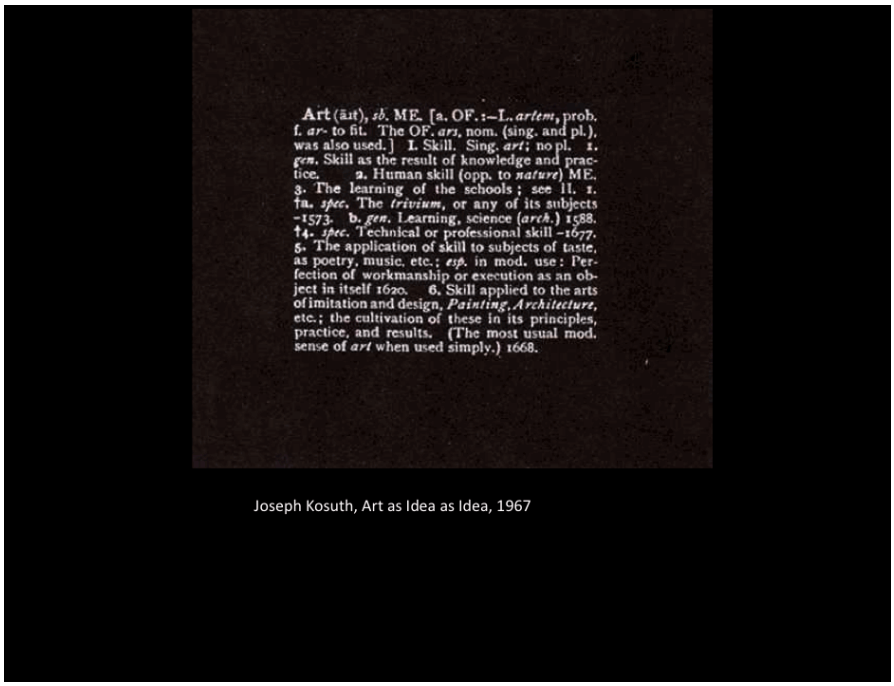




1.) additional roads, radiating like the spokes of a wheel from the center of the metropolitan area, to serve as exits for people
2.) an express highway that encircles the city about 10 miles from the edge of the built-up area to intersect every road that leads out of the city
3.) a railroad belt line five miles beyond the express highway to provide a direct auxiliary link between existing rails

"The decentralization of our cities…plus the release of the whole communication system from the threat of a disastrous tie-up are reforms which are long overdue, war or nor war. [The city] is a place where railroads, telephone and telegraph centers come together, where ideas, information and goods can be exchanged…We believe that the measures we have suggested have an intrinsic tendency to make the city a better organized and safer place to live. They would also serve to thwart the extreme and unhealthy internal growth which is now taking place in most of our big municipalities."

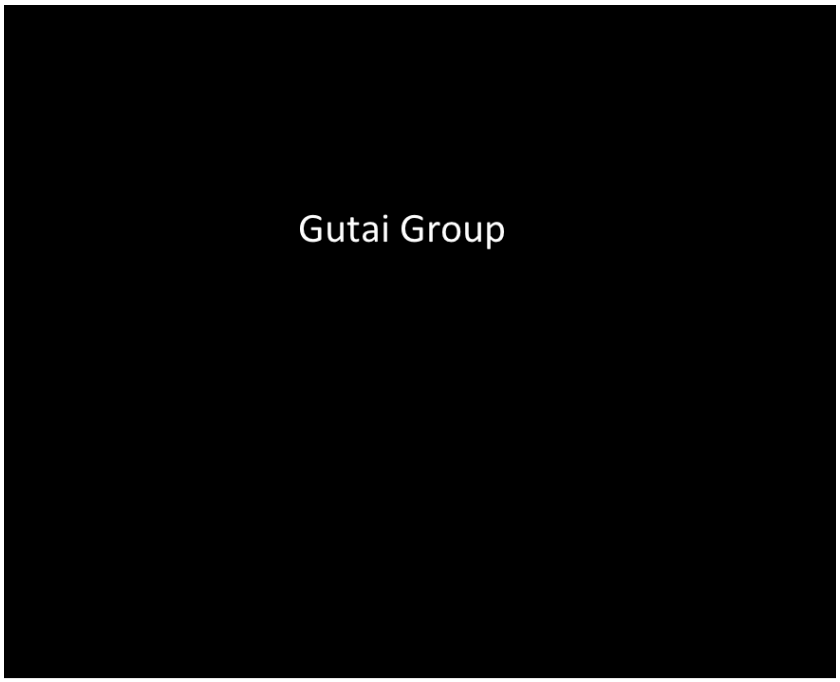

Embodiment
Dematerialization



**Art** (ärt), *sb.* ME. [a. OF. :—L. *artem*, prob. f. *ar-* to fit. The OF. *ars*, nom. (sing. and pl.), was also used.] **I.** Skill. Sing. *art*; no pl. **1.** *gen.* Skill as the result of knowledge and practice. **2.** Human skill (opp. to *nature*) ME. **3.** The learning of the schools; see II. 1. †**a.** *spec.* The *trivium*, or any of its subjects –1573. **b.** *gen.* Learning, science (*arch.*) 1588. †**4.** *spec.* Technical or professional skill –1677. **5.** The application of skill to subjects of taste, as poetry, music, etc.; *esp.* in mod. use: Perfection of workmanship or execution as an object in itself 1620. **6.** Skill applied to the arts of imitation and design, *Painting, Architecture*, etc.; the cultivation of these in its principles, practice, and results. (The most usual mod. sense of *art* when used simply.) 1668.

Joseph Kosuth, Art as Idea as Idea, 1967

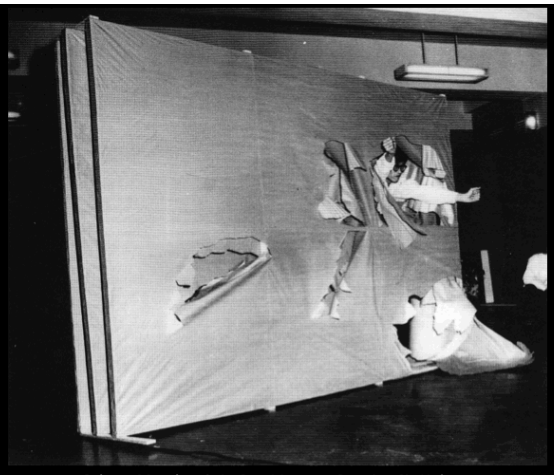
Atsuko Tanaka, Electric Dress, 1956


Gutai Group

# Gutai Manifesto
# [December 1956]

Lock these corpses into their tombs. Gutai art does not change the material but brings it to life. Gutai art does not falsify the material. In Gutai art the human spirit and the the material reach out their hands to each other, even though they are otherwise opposed to each other. The material is not absorbed by the spirit. The spirit does not force the material into submission. If one leaves the material as it is, presenting it just as material, then it starts to tell us something and speaks with a mighty voice. Keeping the life of the material alive also means bringing the spirit alive, and lifting up the spirit means leading the material up to the height of the spirit.

Atsuko Tanaka, Electric Dress, 1956



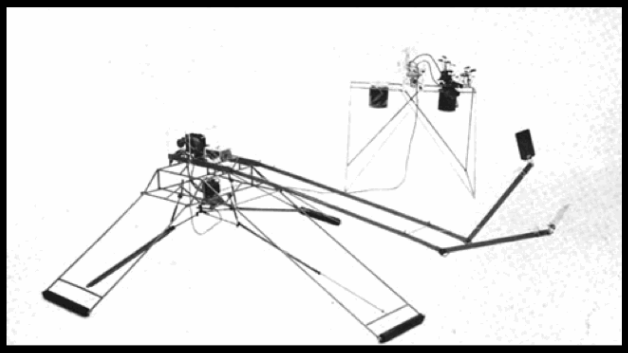
**Saburo Murakami**, At One Moment Opening Six Holes, **1955**

Saburo Murakami, Passing Through, 1956

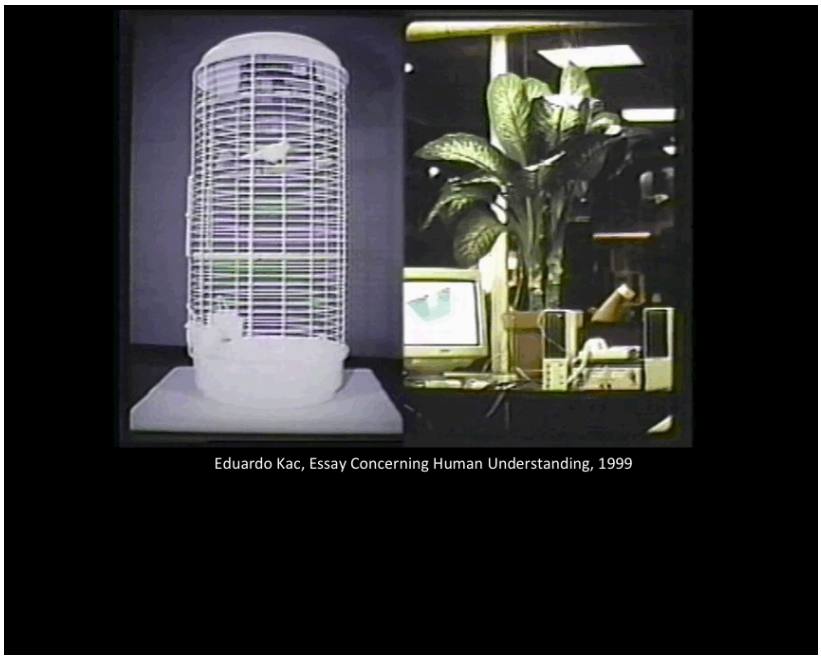
Kazuo Shiraga Challenging Mud 1955

Kazuo Shiraga making a foot painting

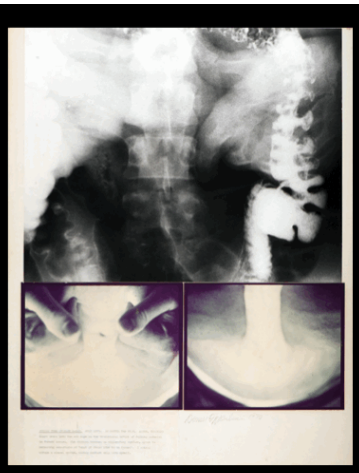
Kazuo Shiraga, Chizensei Kirenji, 1961



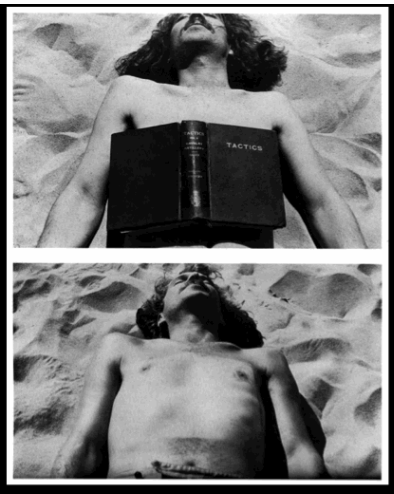
Thomas Shannon, Squat, 1968, electricity, metal, plant



Eduardo Kac, Essay Concerning Human Understanding, 1999

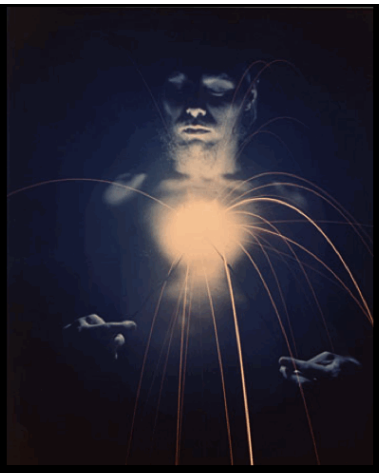


Dennis Oppenheim, Stills from
Stomach X-Ray, 1970




Dennis Oppenheim, Reading Position for Second Degree Burn, 1970

Dennis Oppenheim,
Annual Rings, 1968



Chris Burden, Doorway to Heaven, 1973

Chris Burden, Shoot, 1971 http://www.youtube.com/watch?v=JE5u3ThYyl4

Chris Burden, Transfixed, 1974

David Rokeby, Very Nervous System, in the street in Potsdam in 1993
1986-2000

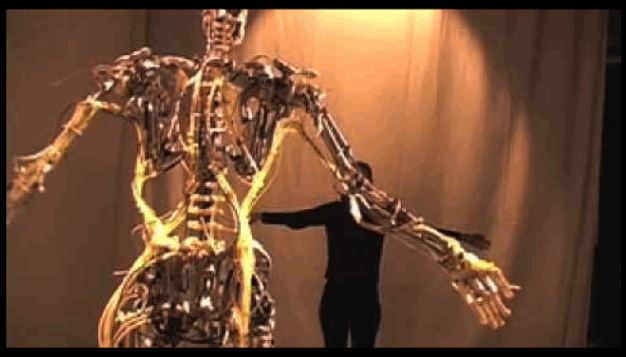
http://www.davidrokeby.com/vns.html

"What we're up against here are two of contemporary art's guiding imperatives. Rule 1) Justification by meaning: the worth and interest of a work resides in what it's about. Rule 2) Absolute freedom of interpretation: a work is "about" anything that can, at a pinch, be said about it. In short, meanings are arbitrary, but compulsory. And this double bind holds almost universal sway. Whenever you learn that a work explores or investigates or raises questions about something, that it's concerned with issues around this or notions of that or debates about the other, you know you're in its grip. It's weird how people can't resist. If you want to make art sound serious, this is simply the way you do it. Read any gallery wall-caption or leaflet or catalogue, and see how long it is before the writer commends the work solely on the basis of what it's about. And then note how it is isn't really about that at all."

-- David Rokeby

Chico MacMurtrie, The Amorphic Landscape, 2004

A portion of *The Amorphic Landscape*. Visible (from left to right) are the *Tree* with the drumming *Mulabundas*, *Geck* (hanging from the *Tree* branch), the xylophonic *House* and *Rude Boy* (in the background), *Electro Drummer*, *Landscape Mountains*, the *Rope Climber*, *Feisty Children* (in the aperture), and *Transparent Body*.



Chico MacMurtrie and Rick W. Sayre, Tumbling Man, 1991

http://www.youtube.com/watch?v=9n3xRbnyojo

Chico MacMurtrie, Totemobile, 2008

http://www.youtube.com/watch?v=BdfNFhHxF7I&feature=youtube_gdata_player

Critical Art Ensemble in Halle/Saale, Germany performing "Radiation Burn: A Temporary Monument to Public Safety", October 15th 2010

Critical Art Ensemble with Beatriz da Costa and Shyh-shiun Shyu,
Free Range Grain, 2008

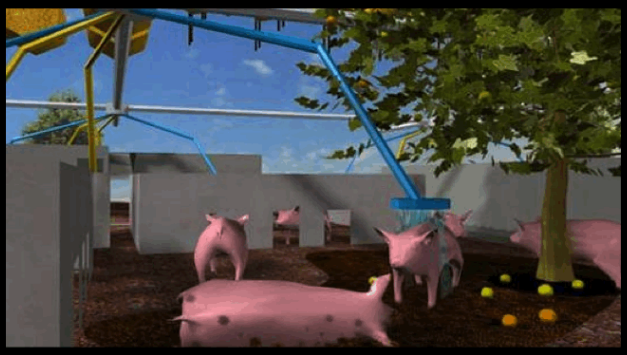
Esther Polak and Eva Auzina with Marcus The, MILK, 2004

Locative media provides a democratic conceptual framework, by which to examine certain technological assemblages and their potential social impacts. Locative media strives, at least rhetorically, to reach a mass audience by attempting to engage consumer technologies, and redirect their power.

MVRDV, Pig City, 2000

The Rotterdam firm of architects MVRDV is known for its experimental design and is responsible for a good deal of the present Dutch architectural time. They proposed a futuristic concept to overcome the future pork production struggles in the Netherlands. With a production of 16.5 million tons of pork, the Netherlands is the chief exporter of pork within the European Union. In 1999, 15.2 million pigs and 15.5 million humans inhabited the Netherlands. One pig needs an area of 664 m2, including current food processing: composed of 50% intensive grain production and 50% industrial by-products. In the case of organic farming, pigs would be fed with 100% grain, leading to a required 130% more field surface due to reduced grain production. This would cause a demand of 1726 m3 per pig, including the organic food processing. This would mean that there would be only 774 m2 per person left for other activities. In other words 75% of the Netherlands would be dedicated to pigs. Therefore MVRDV came up with “vertical farming” instead of expanding the production grounds over the Netherlands they will rise up to the sky forming “Pig City” which comprises 76 towers, each 622 meters high and with floors measuring 87 by 87 meters on which pigs are to be kept, so called “Pig flats”.

Each flat will be inhabited by an appropriate to the species' number of pigs. Even a balcony to watch the sundown is included.



MVRDV, City Pig/Pig City, 2009
http://www.youtube.com/watch?v=x1r5GutrXX4