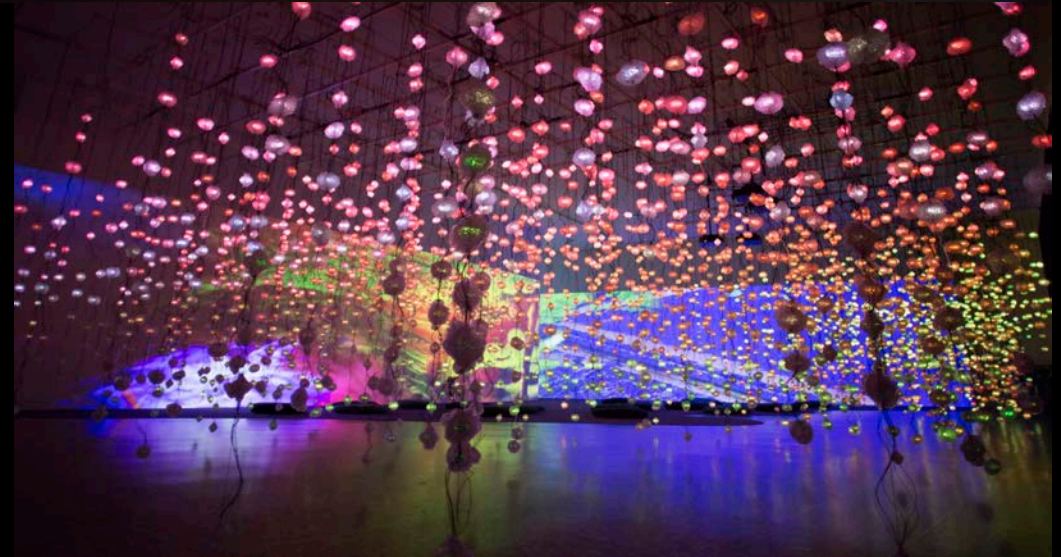


AHST 4342-001 (88513)
New Media Art Histories
Fall 2023
Dr. Charissa N. Terranova
University of Texas at Dallas
Arts & Humanities
Tuesdays-Thursdays 10:00-11:15
Class Location: ATC 2.602

Office Hours: By appointment
Office Location: ATC 2.704
Contact: terranova@utdallas.edu
www.charissaterranova.com

11/30/23

**November 30 Distributed Networks, Immersive
Environments, and Experimental Exhibitions**



Views of *Pixel Forest* (2016) and *Worry Will Vanish* (2014),
an immersive experience by Swiss artist Pipilotti Rist at the
Museum of Fine Arts, Houston, 2023

Distributed Networks

Immersive Environments

Experimental Exhibitions

TV Charged Environments and Distributed Networks

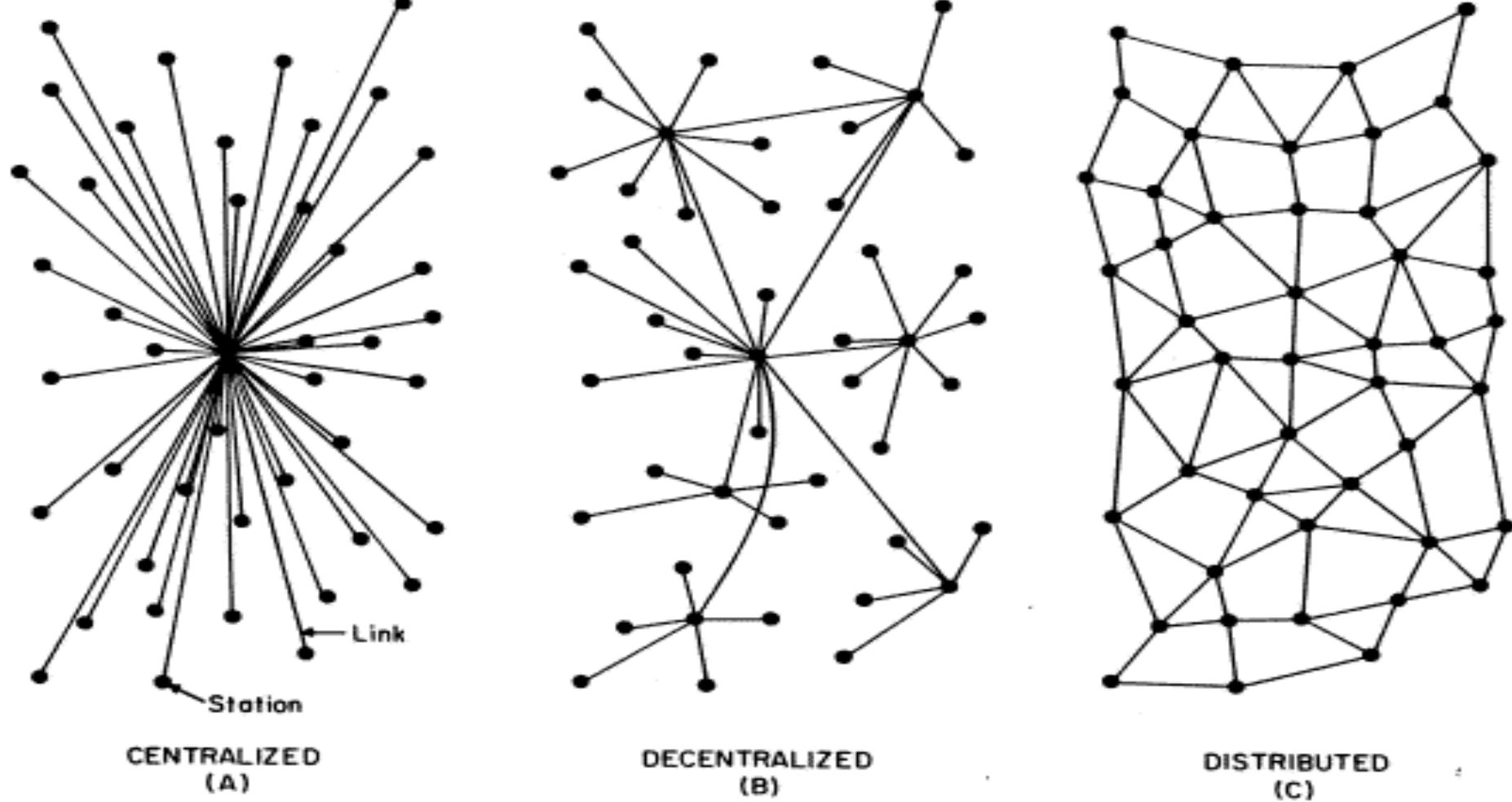


FIG. 1 — Centralized, Decentralized and Distributed Networks

Diagram of Centralized, Decentralized, and Distributed Networks from Paul Baran, *On Distributed Communications: I. Introduction to Distributed Communications Networks* (Santa Monica, CA: RAND Corporation, 1964).

Paragone vs. Distributed Networks

Paragone
(meaning comparison)

Which of the arts is
best equipped to rival
nature - painting or
sculpture?

Leonardo da Vinci,
Treatise on Painting,
notes compiled after
his death, comparing
painting and sculpture:
Painting has universal
truth because of its
superior ability to
mimic nature and sits
at the top of the arts
hierarchy.



Leonardo, Lady with an Ermine, 1489-90

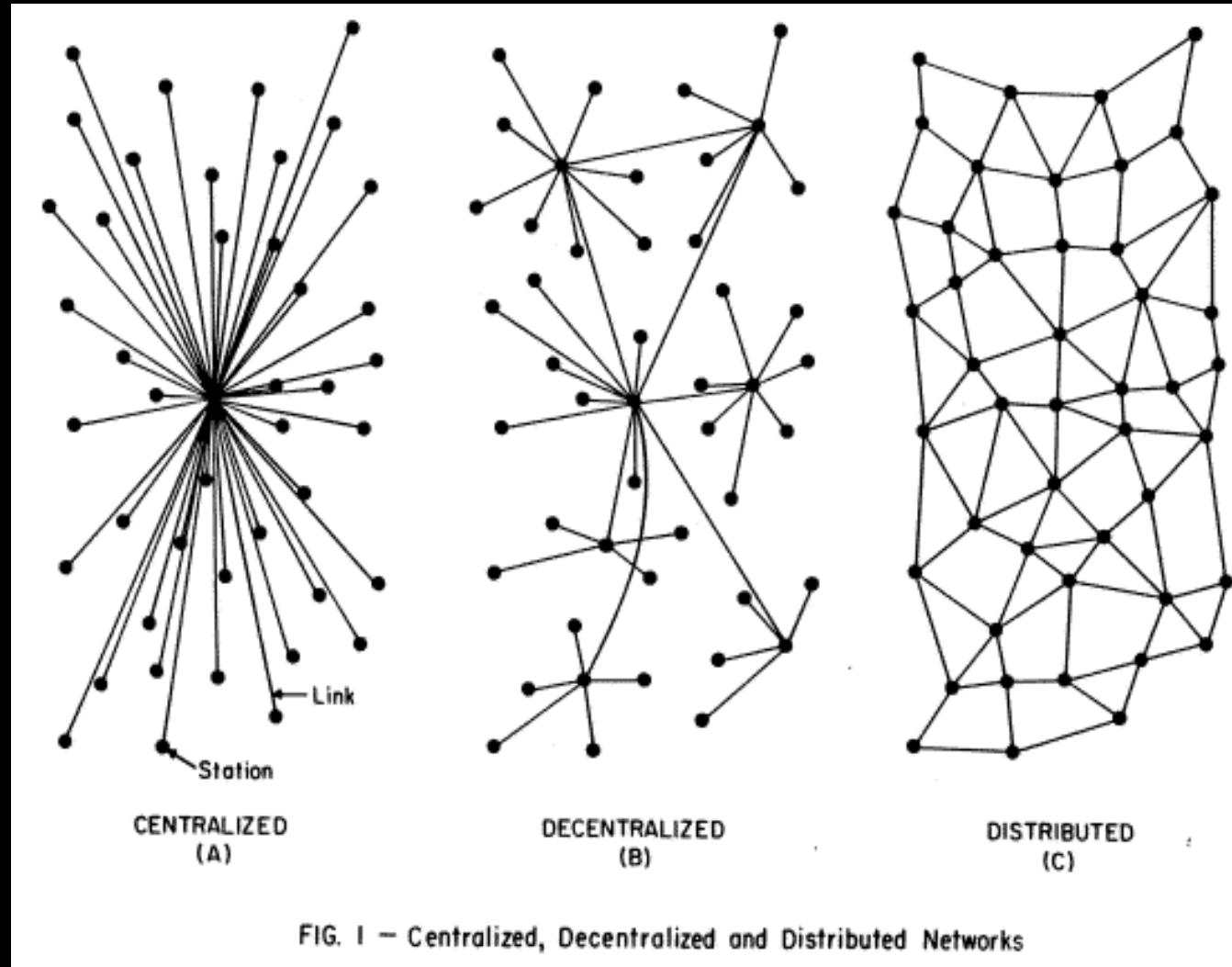
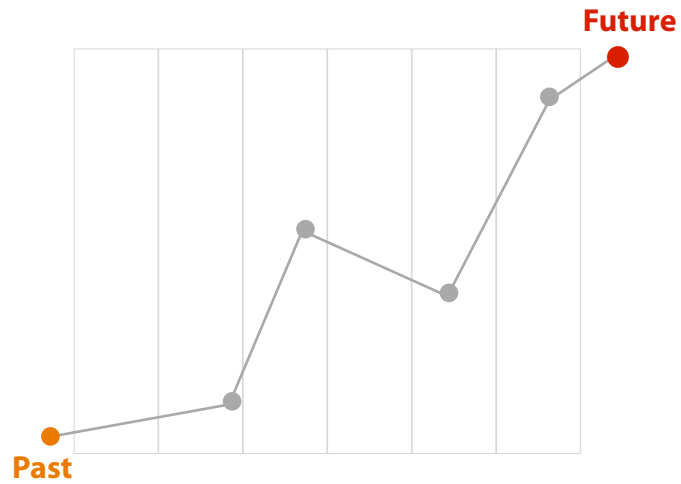


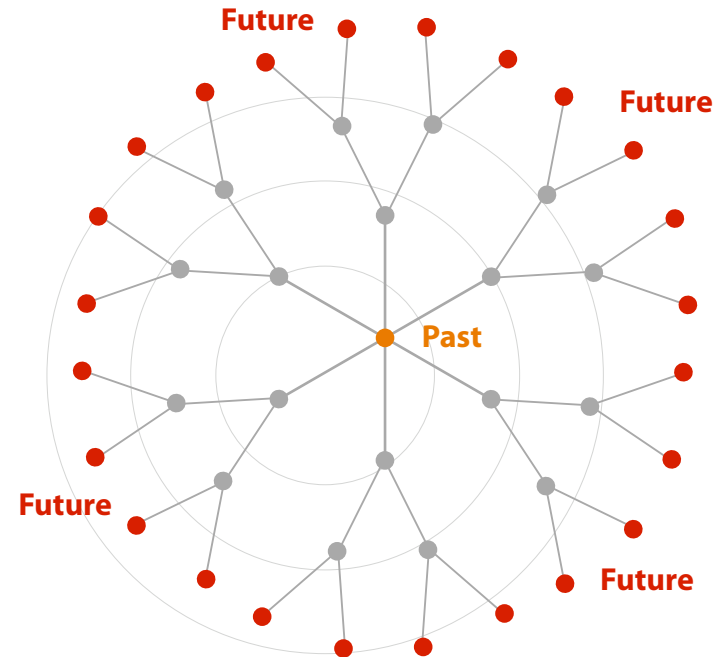
FIG. 1 - Centralized, Decentralized and Distributed Networks

Art History: From teleology to distributed systems

Hegel/Wölfflin - Linear Growth/Progress



Peckham - Feedback (Exponential Growth)









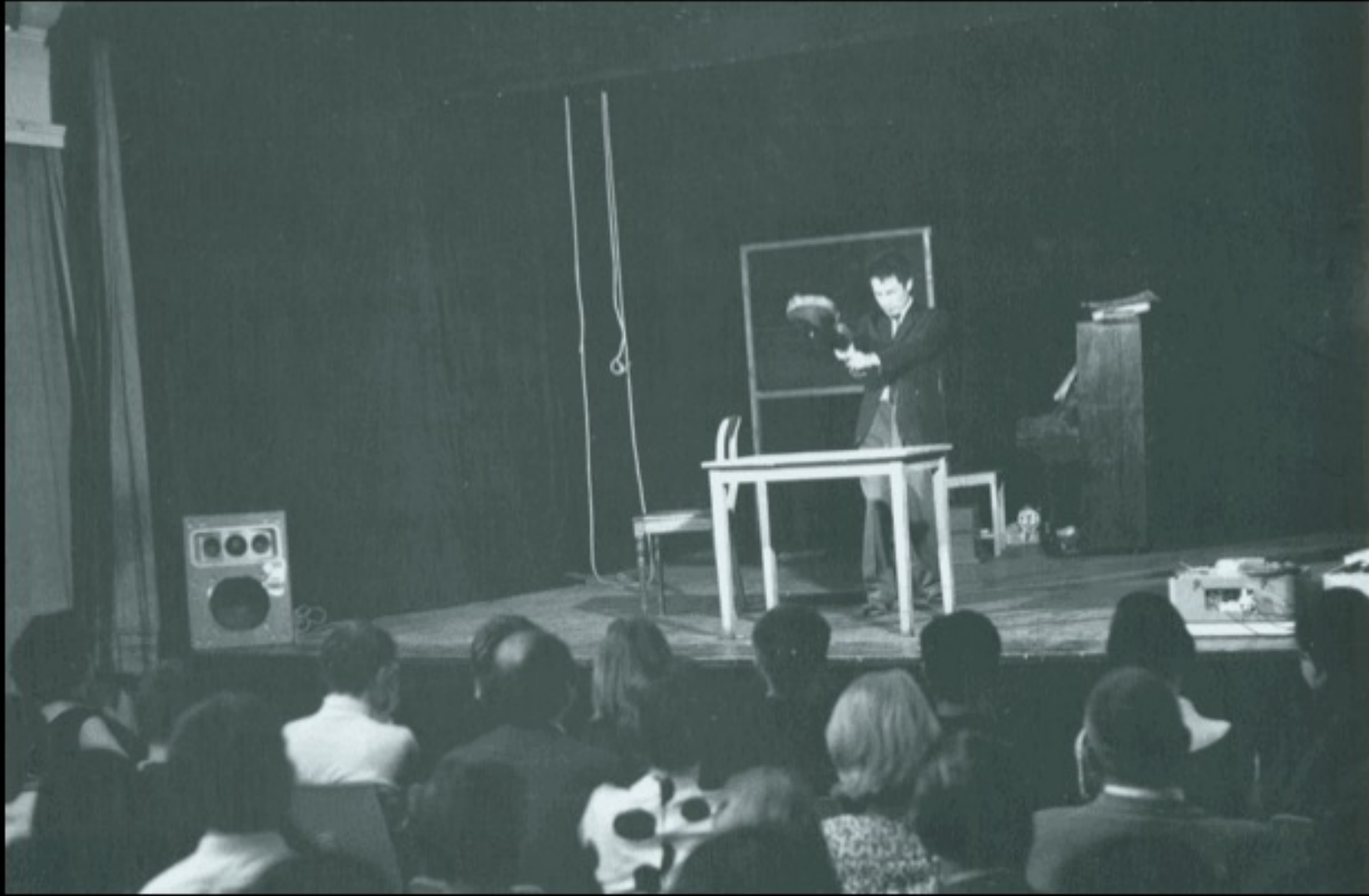


FLUXUS = NEO-
DADA/POST-NEO-
DADA/CONCEPTUALISM

Nam June Paik [1932-2006]

- Nam June Paik (1932-2006) had a unique role in transforming the nascent medium of video into a contemporary art form,
- ‘father of video art’ to the ‘George Washington of video’
- His work made television an interactive and artist-empowered instrument rather than simply a one-way conduit of received programming.
- South-Korean-born American artist
- particularly noted for his video art
- Paik studied music history, art history, and philosophy at the University of Tokyo
- He graduated with a dissertation on Arnold Schoenberg
- He went to Germany in 1956 to continue the study of music history at the University of Munich
- In Germany he met composers Karlheinz Stockhausen and John Cage, who inspired Paik to go into electronic art
- Paik worked with Stockhausen in a studio for Electronic Music.
- Involved with Fluxus
- He began working with modified television sets in 1963
- Bought his first video camera in 1965, returning to Japan to conduct experiments with electromagnets and color television alongside electronic engineer Shuya Abe.
- With Abe he constructed his first video synthesizer while artist-in-residence at WGBH, the Boston public broadcaster
- He was known for using rapid cuts and fast motion in his videos.
- He also claimed to have coined the term “information superhighway” in a paper written in 1974.





Nam June Paik, One for Violin Solo, 1962



Nam June Paik, Zen for TV, 1963

TELEVISION,
COMPUTERS,
AND
VISUAL POETRY



Nam June Paik, Magnet TV, 1965



Nam June Paik, TV Clock, 1963 (1989 version)

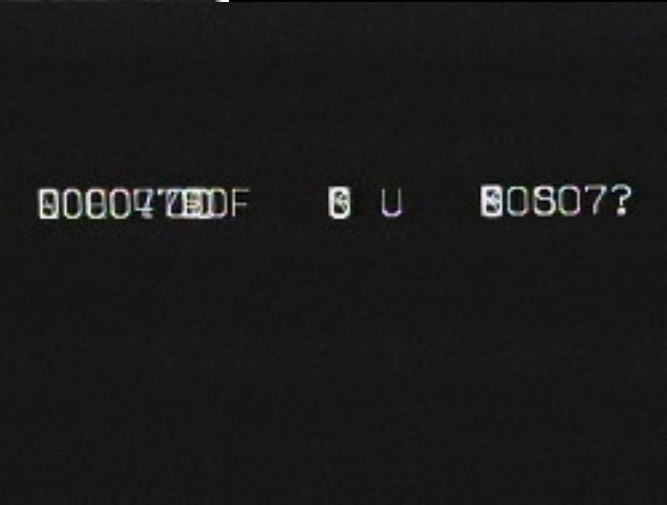


Nam June Paik, The Moon is the Oldest TV, 1965

Nam June Paik arrived to New York as an immigrant in 1964. He had recently completed his studies in music and had become an enthusiastic champion of technology and electronics for use in performances and art making. New York offered rich territory in the communications industries, ground ripe with new technologies. Paik had previously studied western music in both Japan and Western Europe before moving to the United States. He had been formally trained in the arrangement of orchestral scores, actions in a script, and instrumentation. They were programs.

The practical and conceptual relationships between compositions for music and code for computer programs are sound, so to speak. In 1966, Paik was invited to Bell Labs and introduced to FORTRAN computer programming by James Tenney and Michael Noll. He was well prepared and by 1967 Paik was a "Resident Visitor".



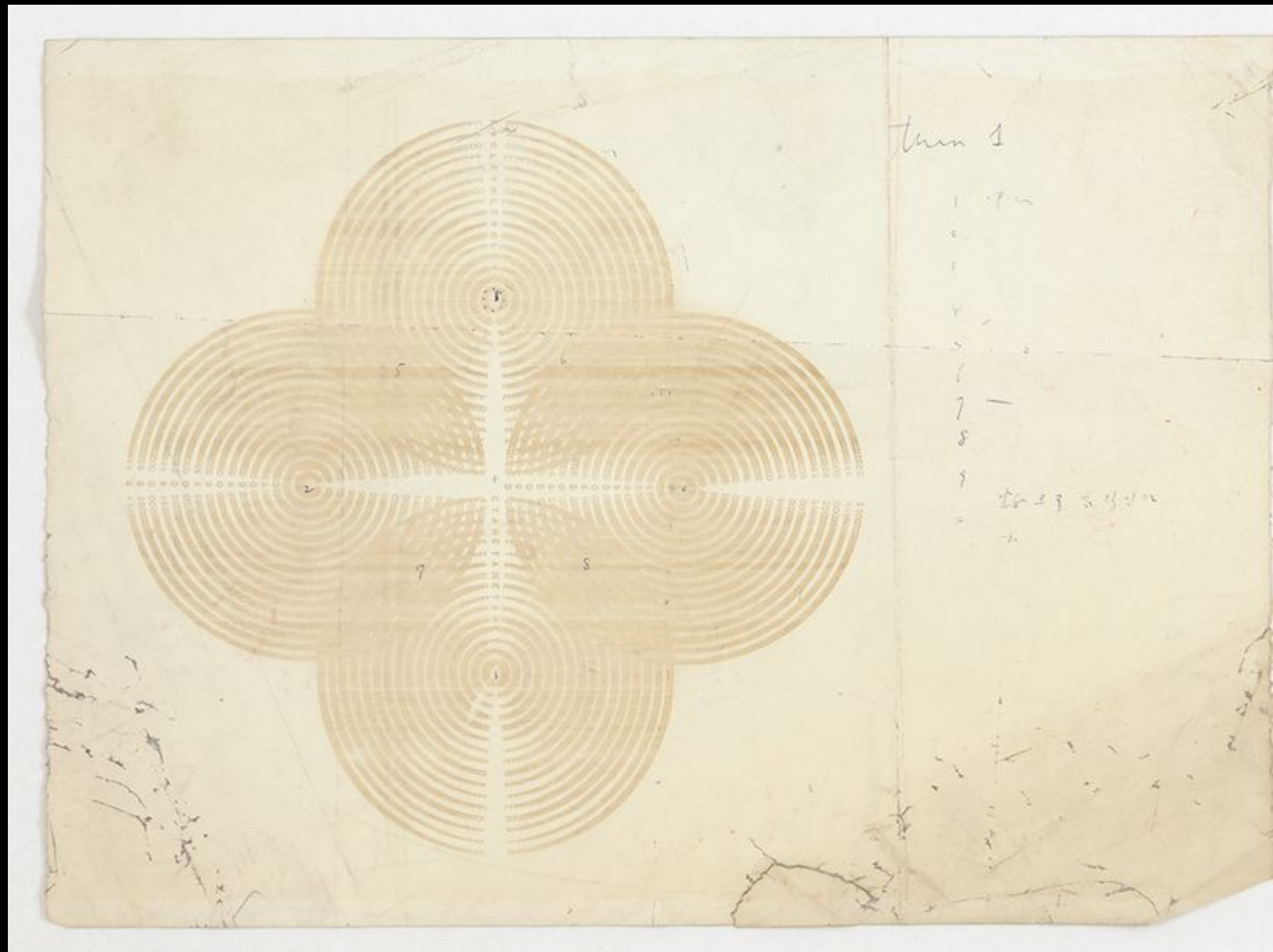


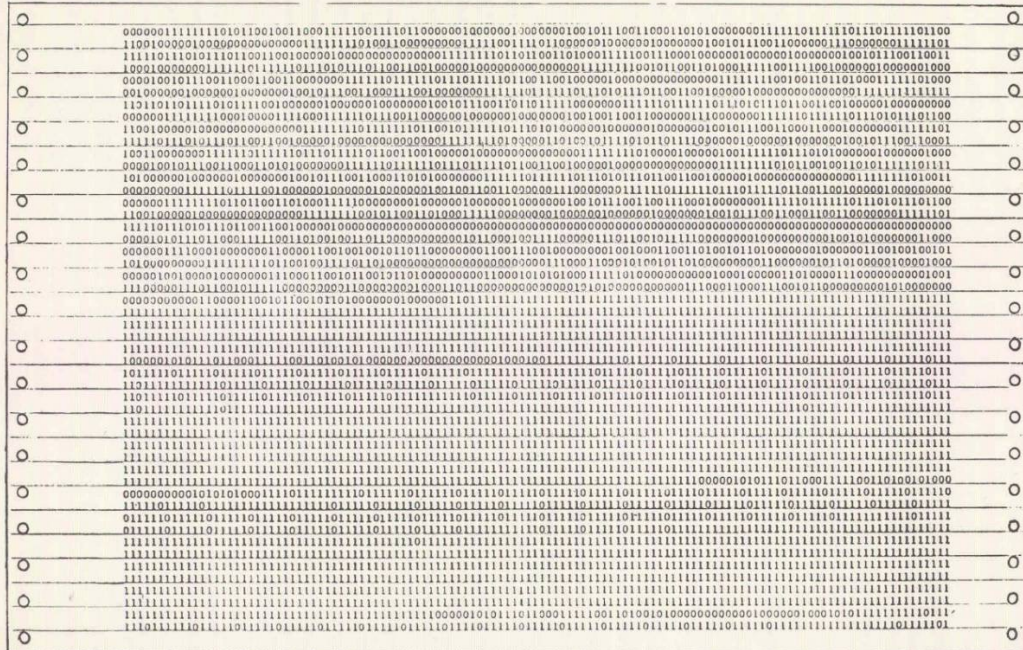
In his research at Bell Labs, Paik produced videos, graphics, computer punch cards, negatives and continuous feed printouts, all compiled from the FORTRAN programming language. Three distinct programs leading to computer-generated media reveal his work with both moving and static images. *Digital Experiment at Bell Labs* is a starkly minimal video recording of the computer screen, marking a gesture toward the origins of computer imaging. [*Digital Experiment at Bell Labs*] shows a dot (a single pixel) that jumps randomly along a diagonal line. There is text that appears at the end, but that most likely is some sort of data dump from the computer and was not programmed by Paik. The word HEAD flashes at one point; the plotter would have created it to indicate the beginning of a movie strip of film.

The FORTRAN program to create this movie would have been quite short. A subroutine would be used to give a random number within a specified range. A fixed number would be added and the result used as the X and Y coordinates of the point to be plotted. All this would be repeated within a couple of DO loops, with each frame sent to the Stromberg-Carlson SC-4020 microfilm plotter to create the movie.

A second piece is *Confused Rain* (1967; below), a computer generated print that results from randomly placed letters spelling out C O N F U S E, suggesting a "mix of real rain and simulated rain in the computer."

The third complete work is *ETUDE*, a previously unknown computer composition from 1968. In *ETUDE* (right), Paik wrote a computer program to create four concentric, intersecting circles displaying the somewhat irreverent text LOVE HATE GOD DOG, each repeating word composing its own diameter. While in residence at Bell Labs, Paik wrote in a letter, "it is my ambition to create the first computer-opera in music history."





The first "snapshots" of Mars looked like this - because only "zeros" and "ones" could be transmitted to earth from Mariner IV. But IBM computers helped convert them into the close-up photographs you've seen - including the remarkable photographs of the Mars craters never before seen by man.

The First "Snapshots" of Mars (1966), a lithograph that Paik made just before his residency at Bell Labs consists of a page of zeros and ones from printouts sent back to Earth from Mariner IV of the surface of Mars. These were the first images from a planet long hoped to harbor extraterrestrial life. The decoding of these images would reveal a desiccated surface utterly devoid of life. Rather than give the viewer the disappointing image of barren craters that had been circulating in the media, Paik shows a section of their binary code, the raw data that made its way through space before being translated by machine into a form fit for human vision. He presents an image of a picture designed for machine consumption, its content utterly meaningless for humans in the symbolic form in which it exists...revealing the disjunction between man and machine. (Kaizen, 232)



Charlotte Moorman (1933-1991)

Left: Vin Grabill, *Charlotte Moorman performs Nam June Paik's TV Bra for Living Sculpture on the roof of her loft, 62 Pearl Street, New York, July 30, 1982.* © Vin Grabill. Courtesy of Grey Art Gallery, New York University; Right: Charlotte Moorman performing Jim McWilliams's *Ice Music for Sydney*, Art Gallery of New South Wales, 1976

<https://www.artsy.net/article/artsy-editorial-the-topless-cellist-charlotte-moorman-finally-finds-her-place-in-art-history>



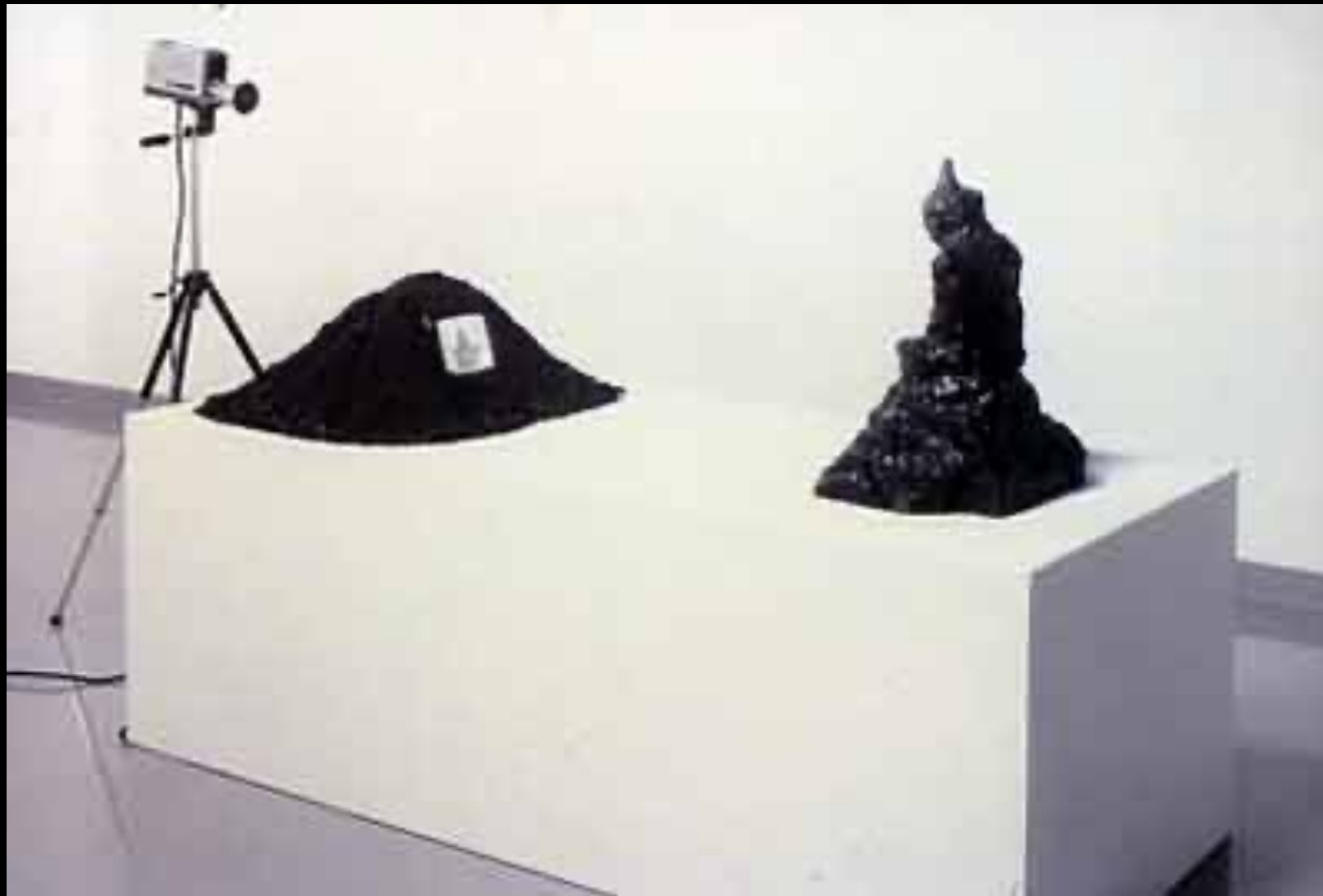
Nam June Paik and Charlotte Moorman,
Cello Performance with TVs, 1971

Nam June Paik / Charlotte Moorman - TV
Bra for Living Sculpture (1969) and
Chamber Music (1969):

<https://www.youtube.com/watch?v=3G3XomkkTPY>



Nam June Paik, TV Garden, 1974 (2000 installation)



Nam June Paik, Video Buddha, 1981



Nam June Paik, Reclining Buddha, 1993-94

Titian, Venus of Urbino, 1538



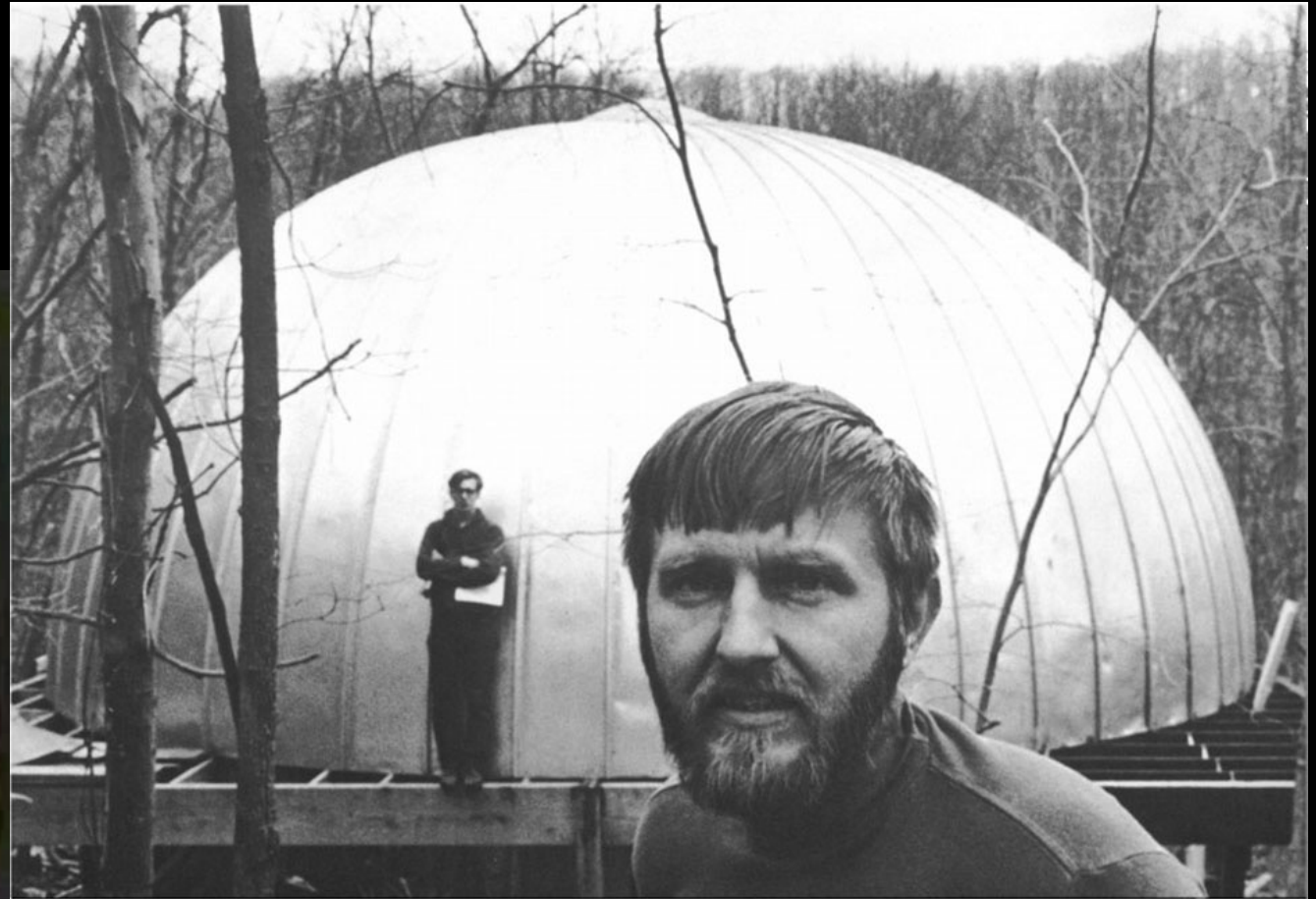
Nam June Paik, Reclining Buddha, 1993-94

Poem Field is the name of a series of eight computer-generated animations by Stan VanDerBeek and Ken Knowlton in 1964-1967. The animations were programmed in a language called Belflix (short for "Bell Flicks"), which was developed by Knowlton.



Stan Vanderbeek and Ken Knowlton, Jazz by Paul Motian, Poem Field No. 2, Life Like, 1967

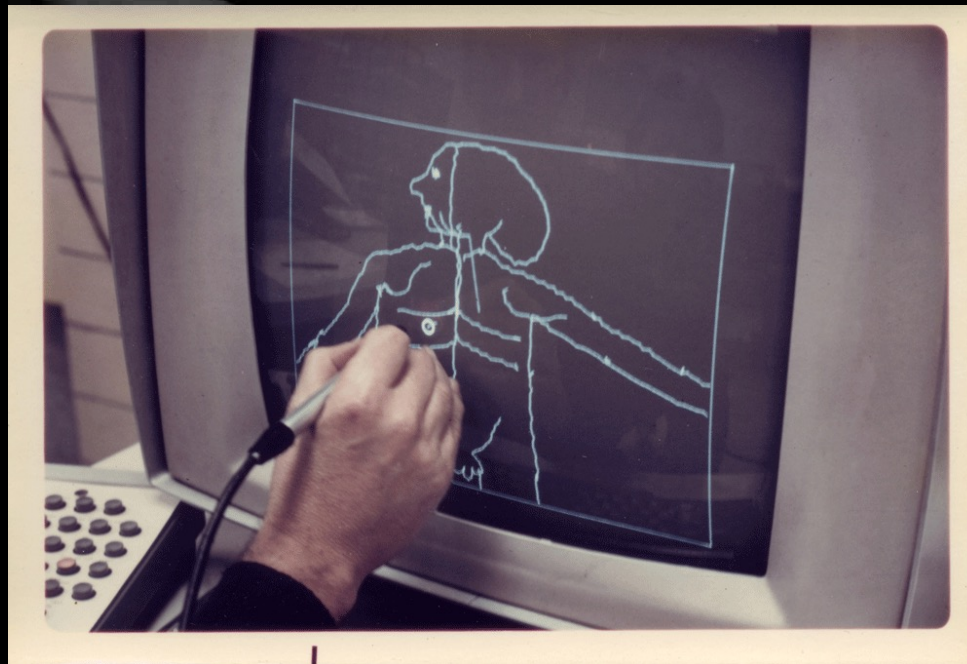
<https://www.youtube.com/watch?v=V4agEv3Nkcs>



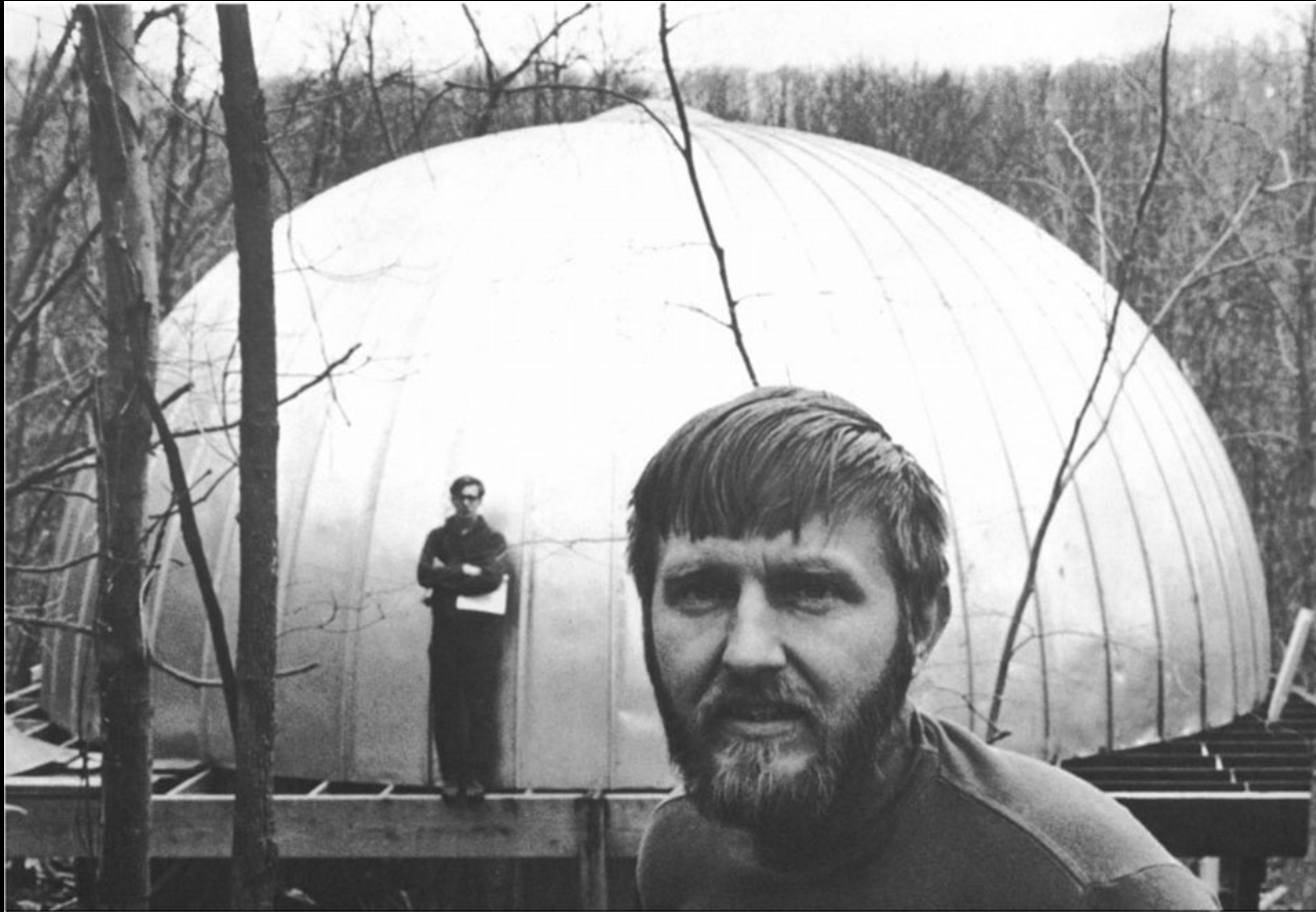
Stan VanDerBeek, Movie-Drome, 1957-1969
Stony Point, NY

Stan Vanderbeek (1927-1984)

- Trained in art and architecture at the Cooper Union, NYC
- Went to Black Mountain College
- Based on his work as a student working under poet M.C. Richards and composer John Cage at Black Mountain College, VanDerBeek incorporated collage-like practices of chance and simultaneity, experimenting with representations of text and poetry in cinematic time.
- Started his career with experimental filmmaking, working with montage and collage
- Made sets and props for the children's TV show, Winky Dink and You
- Famous for his stop-animation films, the Movie Drome, and the 8-film series "Poemfields" made with Ken Knowlton at Bell Labs using BEFLIX software for animation
- In 1967, VanDerBeek became an artist in residence at MIT's nascent Center for Advanced Visual Studies, founded two years earlier by György Kepes



Stan Vanderbeek, Movie Drome,
1957-1969



Influenced by Buckminster Fuller's spheres, VanDerBeek had the idea for a spherical theater where people would lie down and experience movies all around them. Floating multi-images would replace straight one-dimensional film projection. From 1957 on, Vanderbeek produced film sequences for the Movie Drome, which he started building in 1963. His intention went far beyond the building itself and moved into the surrounding biosphere, the cosmos, the brain and even extraterrestrial intelligence.

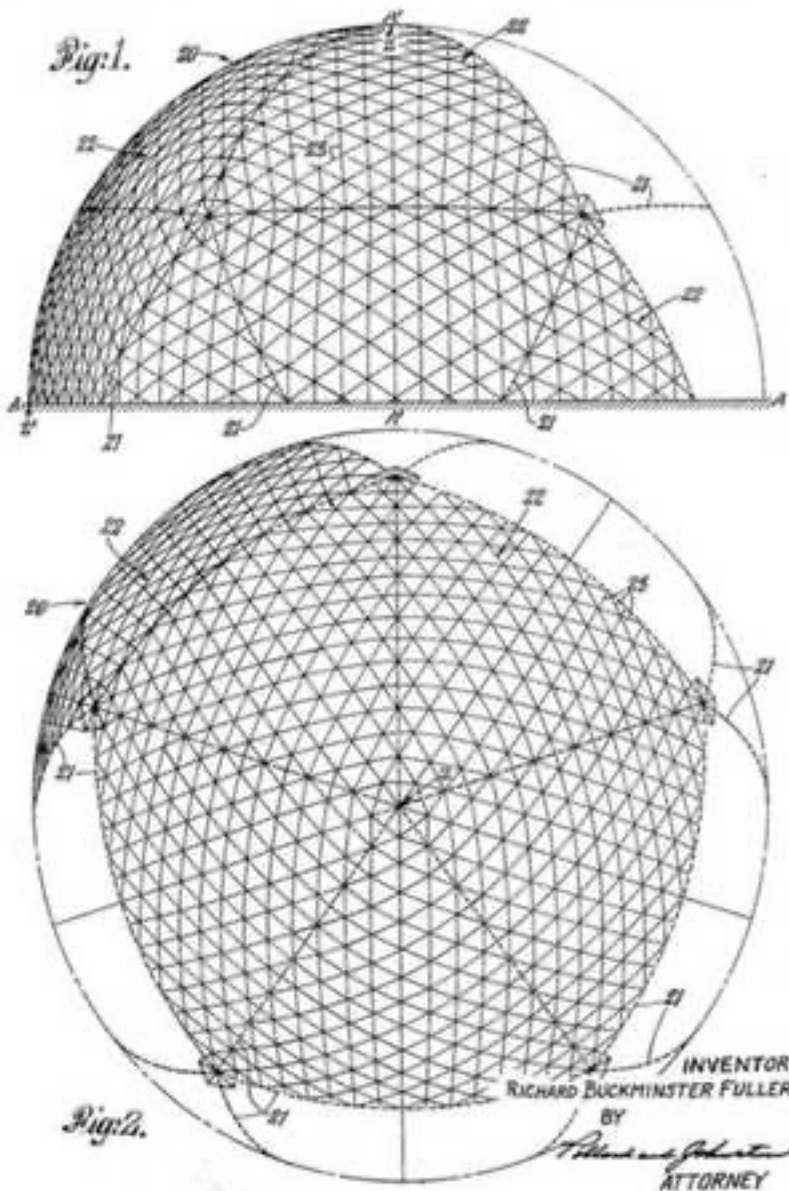
June 29, 1954

R. B. FULLER
BUILDING CONSTRUCTION

2,682,235

Filed Dec. 12, 1961

5 Sheets-Sheet 1



Buckminster Fuller, Geodesic
Dome, 1950



Buckminster Fuller in front of the exhibition dome at the American National Exhibition, Moscow, 1959



The Movie Drome was a grain silo dome transformed by VanDerBeek into an 'infinite projection screen'. Viewers entered the dome through a trap-door in the floor; then, after entering, they were invited to spread out over the floor and lie with their feet pointing towards center of the space. Then the audience experienced a dynamic and distributed set of movies and images around them, created by over a dozen slide and film projectors filling the concave surface with a thick collage of moving imagery. These experiences consisted of many random image sequences and continuities, with the result that none of the performances were alike. In this way, the analogue imagery mimics algorithmic image loops.

<https://www.youtube.com/watch?v=-Vp1xJdWrOk>

Expanded Cinema

The term “expanded cinema” was popularized in a text of the same name by Eugene Youngblood, and was most commonly used (though Youngblood’s definition was considerably broader) to describe multi-screen and mixed-media presentation built around one or more film projectors. Cinema is “expanded” in more than one sense in this definition: it could utilize a number of screens or surfaces, it could involve other not-strictly-cinematic mediums, and it could utilize the conventionally static screening environment; even the audience could be implicated or drawn into the flow of performance/event.

-- Steven McIntyre, “Theoretical Perspectives on Expanded Cinema and the ‘Cruel’ Performance Practice of Dirk de Bruyn” (2008)

Expanded Cinema (1970)

Gene Youngblood

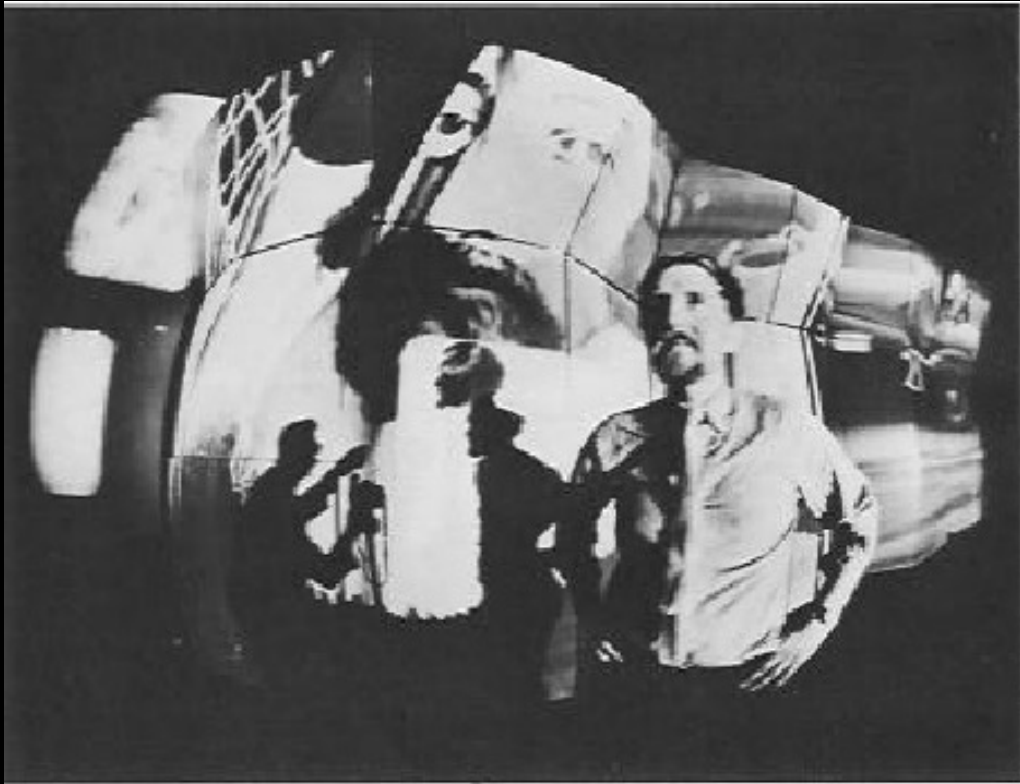
In the cinema, feedback is possible almost exclusively in what I call the synaesthetic mode, which we'll discuss presently. Because it is entirely personal it rests on no identifiable plot and is not probable. The viewer is forced to create along with the film, to interpret for himself what he is experiencing. If the information (either concept or design) reveals some previously unrecognized aspect of the viewer's relation to the circumambient universe – or provides language with which to conceptualize old realities more effectively – the viewer recreates that discovery along with the artist, this feeding back into the environment the existence of more creative potential, which may in turn be used by the artist for messages of still greater eloquence and perception...

When finally we erase the difference between art and entertainment – as we must to survive – we shall find that our community is no longer a community, and we shall begin to understand radical evolution.

The Artist as Ecologist, from *Expanded Cinema* by Gene Youngblood (1970)

For some years now the activity of the artist in our society has been trending more toward the function of the ecologist: one who deals with environmental relationships. Ecology is defined as the totality or pattern of relations between organisms and their environment. Thus the act of creation for the new artist is not so much the invention of new objects as the revelation of previously unrecognized relationships between existing phenomena, both physical and metaphysical. So we find that ecology is art in the most fundamental and pragmatic sense, expanding our apprehension of reality.

Artists and scientists rearrange the environment to the advantage of society. Moreover, we find that all the arts and sciences have moved along an evolutionary path whose milestones are Form, Structure, and Place. In fact, man's total development as a sentient being can be said to follow from initial concerns with Form or surface appearances, to an examination of the Structure of forms, and finally to a desire to comprehend the totality of relationships between forms, that is, Places. Since it generally is thought that art represents the avant-garde of human insight, it is interesting to note that science itself has evolved through Form, Structure, and Place appreciably in advance of the arts.



L: Stan VanDerBeek with multifaceted surface for multiple-projection intermedia environment. Photo: Richard Raderma; R: He presides over intermedia presentation at his Movie Drome in Stony Point, N.Y. Photo: Bob Hanson.

Experimental Exhibitions: Art and Technology

SOFTWARE

Information technology: its new meaning for art

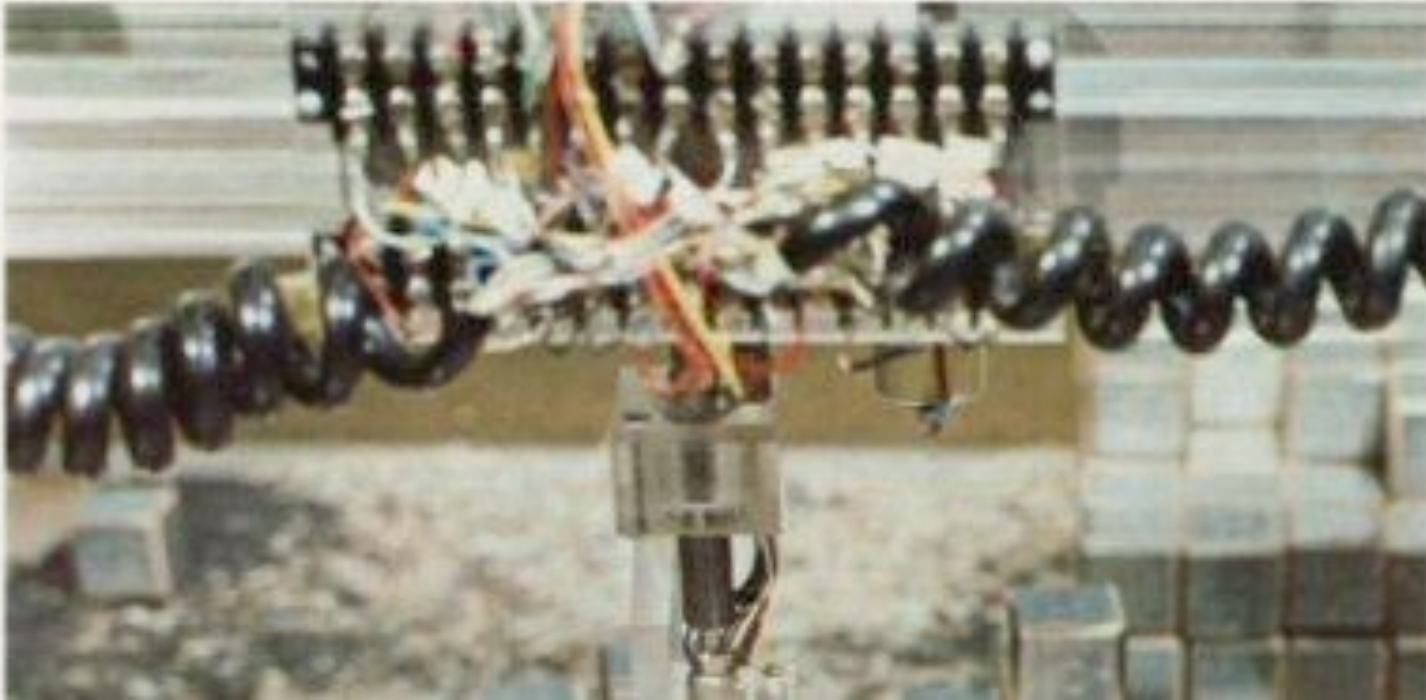


Software, Information Technology: Its New Meaning for Art Jewish Museum, NYC, fall 1970

Participating artists: Vito Acconci, David Antin, Architecture Group Machine M.I.T., John Baldessari, Robert Barry, Linda Berris, Donald Burgy, Paul Conly, Agnes Denes, Robert Duncan Enzmann, Carl Fernbach-Flarsheim, John Godyear, Hans Haacke, Douglas Huebler, Joseph Kosuth, Nam June Paik, Alex Razdow, Sonia Sheridan, Evander D. Schley, Theodosius Victoria, Laurence Weiner.

SOFTWARE

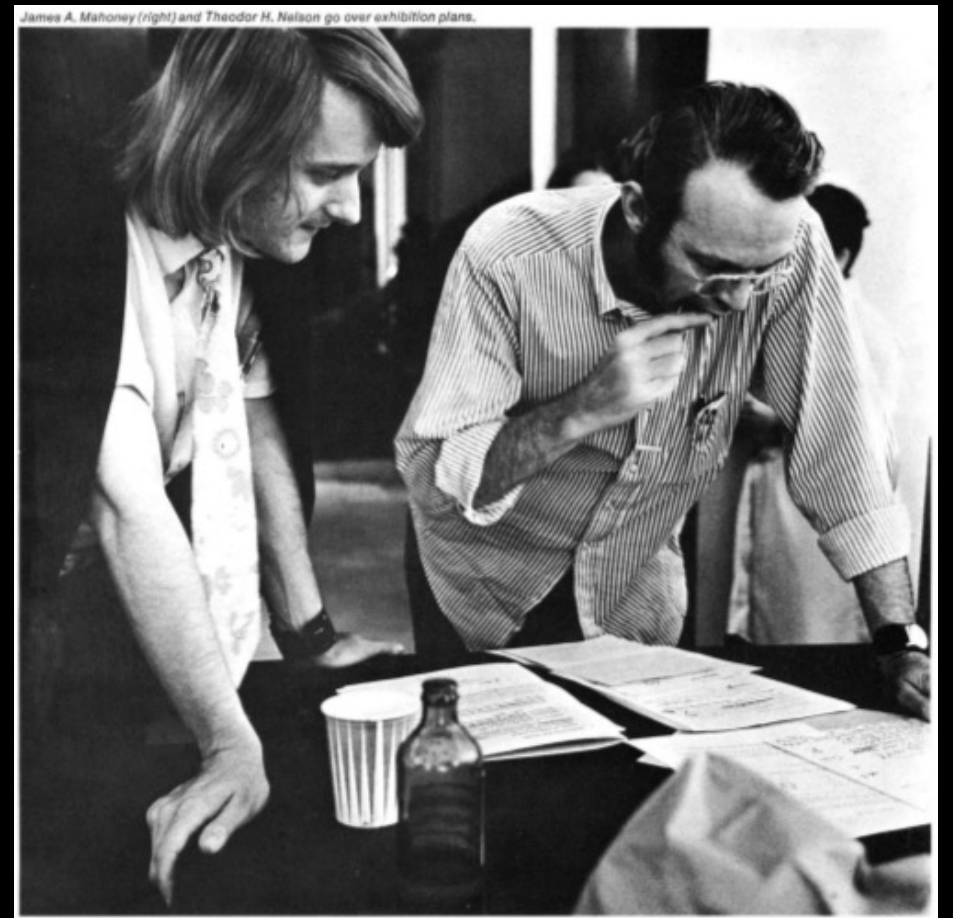
Information technology: its new meaning for art



The exhibition Software proved that art was a system as such. For Burnham, the logic of the art in Software was relational, a matter of people interacting with information, be it other living creatures, commands written on the wall, printed teletexts, or various kinds of machines.

Before launching into his explanation of the terms “software” and “hardware” in the catalog essay for the show, Burnham made clear that an ecological paradigm had superseded the traditional understanding of the ontologically freestanding and disparate art object made according to the conventionally bound and separate medium. According to Burnham, “In just the past few years, the movement away from art objects has been precipitated by concerns with natural and man-made systems, processes, ecological relationships, and the philosophical-linguistic involvement of Conceptual Art. All of these interests deal with art which is transactional.”

As transactional work, the art of Software mediated ideas and interaction between artist, viewer, and world. Intimating the coming rise of the personal computer, for example, Ned Woodman and Theodor H. Nelson's "Labyrinth: An Interactive Catalogue" was a participatory text retrieval system. It had a round keyscope for a screen and an F-key and R-key for visitors to move text forward and backward. Reflecting the ever-increasing importance of demographic information, Hans Haacke's "Visitor Profile" required museumgoers to answer questions about themselves and their beliefs in the creation of a statistical database. Bringing the transactional action into the public realm of the city and mass media, Joseph Kosuth's "The Seventh Investigation (Art as Idea as Idea) Proposition One" was made up of four ambiguous texts placed in different public contexts: a billboard in Chinese and English in the Chinatown neighborhood of New York City; an advertisement in *The Daily World*; a banner in Italian in Turin; and a text in the exhibition Information at the Museum of Modern Art in New York. The constant movement of information – ideas flowing through various conduits and modes of mediation – was more important than any single, separate object. Artwork in this instance becomes catalyst and connector. Thinking art through systems theories further dislodged its form and matter from market-created hierarchies of value. Burnham explained that the art in the show dealt with, "underlying structures of communication or energy...for this reason most of Software is aniconic; its images are usually secondary or instructional while its information takes the form of printed materials." In giving life to the terms "software" and "hardware," Burnham carefully treaded Cartesian waters, explaining, "our bodies are hardware and our behaviour software." Tempering the Cartesianism, though, the inculcation of systems theory would transform this would-be binary into a rhizomatic reticulation of harry bodily interconnection.



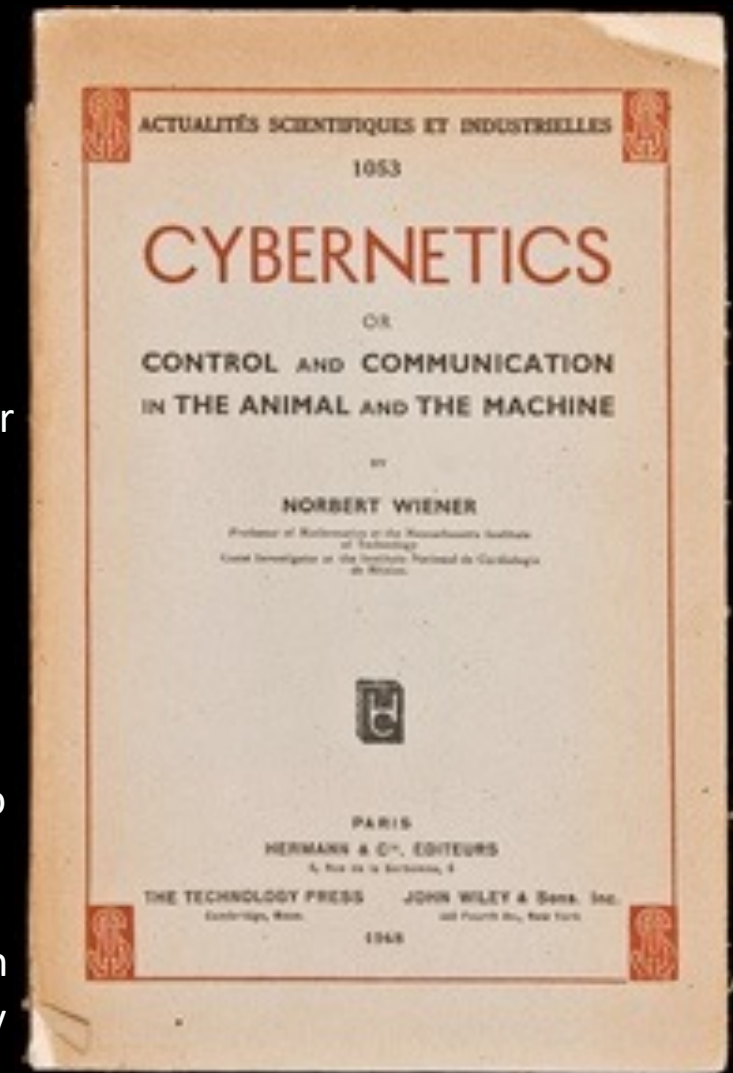
Ted Nelson (left) in collaboration with programmer Ned Woodman created an interactive exhibition catalog for the show called "Labyrinth", "by choosing their own narrative paths through an interlinked database of texts, then receive a print-out of their particular "user history." The self-constructed, non-linear unfolding of Labyrinth shares affinities with structuralist critiques of authorship, narrative structure, and "writerly" (as opposed to "readerly") texts, made by Barthes. [...] It should be noted that this first public exhibition of a hypertext system occurred, and this was perhaps not just a coincidence, in the context of experimental art." [Shanken]



Les Levine, Contact: A Cybernetic Sculpture, 1969
9 monitors, video cameras

<http://news.google.com/newspapers?nid=1817&date=19690418&id=biceAAAAIBAJ&sjid=BZwEAAAAIBAJ&pg=5429,4061379>

"I don't tend to think of my work purely in psychological terms," he explains, "but one must assume some psychological effect of seeing oneself on TV all the time. Through my systems the viewer sees himself as an image, the way other people would see him were he on television. In seeing himself this way he becomes more aware of what he looks like. All of television, even broadcast television, is to some degree showing the human race to itself as a working model. It's a reflection of society, and it shows society what society looks like. It renders the social and psychological condition of the environment visible to that environment."



Levine is fascinated with the implications of self awareness through the technology of close-circuit TVs.

none \$1 – 1999 \$2000 – 4999 \$5000 – 14999 \$15000 – 29999 over \$30000	How much money have you spent on buying art(total)?	Do you think the preferences of those who financially back the art world influence the kind of work artists produce?	yes, a lot somewhat slightly not at all don't know
only to themselves patrons of museum museum membership museum staff artists' representatives publicly elected officials American Association of Museums College Art Association National Endowment for the Arts Associated Councils of the Arts foundation representatives other(write in) _____ don't know	To whom should the trustees of art museums be accountable(more than one can be named)?	Have you ever lived or worked for more than one half year in a poverty area?	yes no
		It has been charged that the present U.S. Government is catering to business interests. Do you think this is the case?	always often occasionally never don't know
		Do you think the collectors who buy the kind of art you like, share your political/ideological opinions?	generally yes generally no don't know
		How old are you?	under 18 years 18 - 24 years 25 - 30 years 31 - 35 years 36 - 45 years 46 - 55 years 56 - 65 years over 65 years
responsible not responsible don't know	Some people say President Nixon is ultimately respon- sible for the Watergate scheme. Do you agree?		
poverty lower middle income middle income upper middle income wealthy	How would you charac- terize the socio-economic status of your parents?	Would your standard of living be affected, if no more art of living artists were bought?	yes no don't know
Catholic Protestant Jewish other mixed none	What is the religious back- ground of your family?	Do you daily read the political section of a newspaper?	yes no
		Do you think the visitors of the J. Weber Gallery who participated in the poll dif- fered from those who did not?	very different somewhat d. essentially same don't know

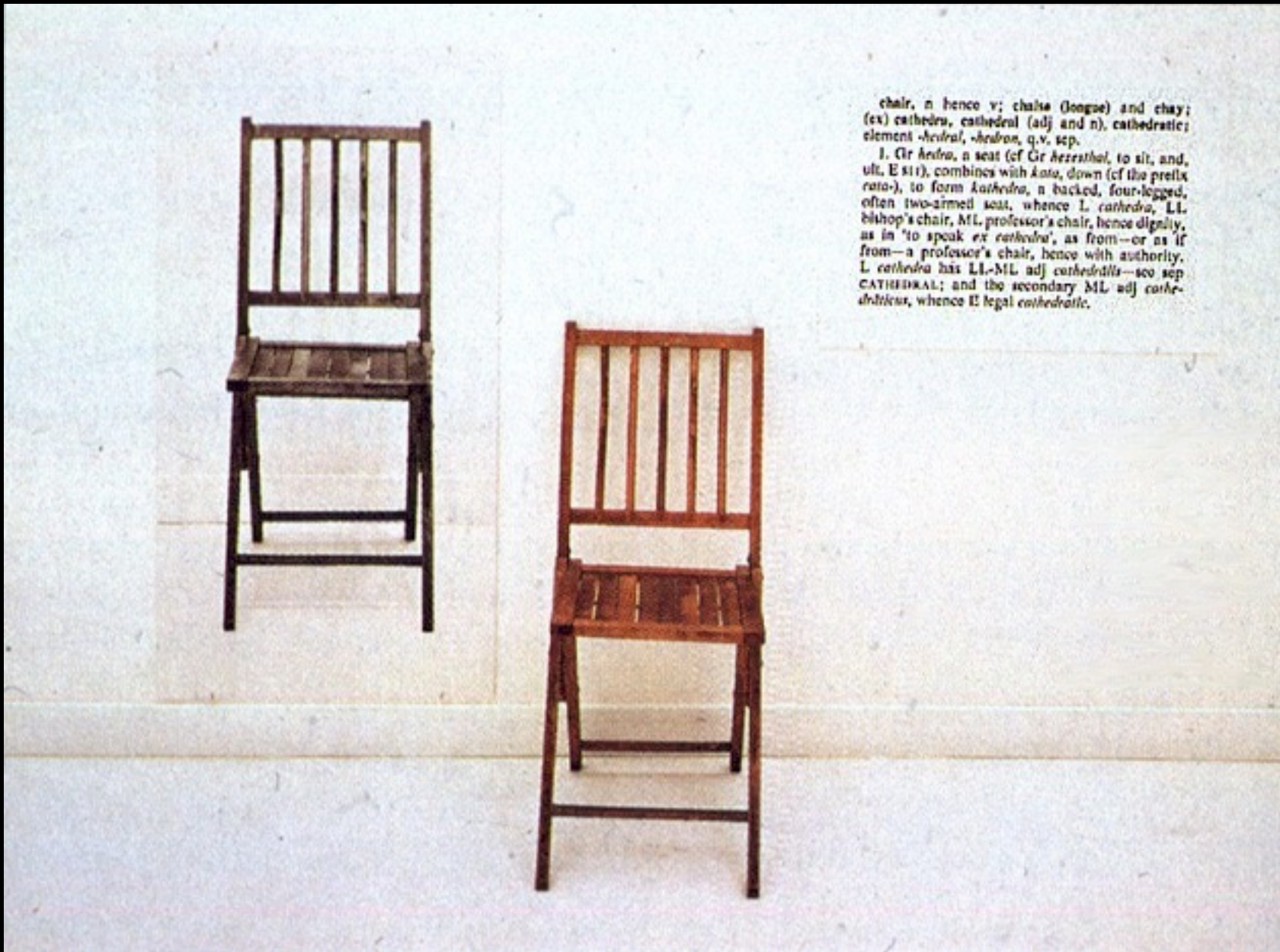
Thank you. Drop the card into the ballot box. Your answers will be tabulated with the answers of all other visitors. Intermediate results will be posted during the exhibition.

Hans Haacke, Visitor's Profile, 1970

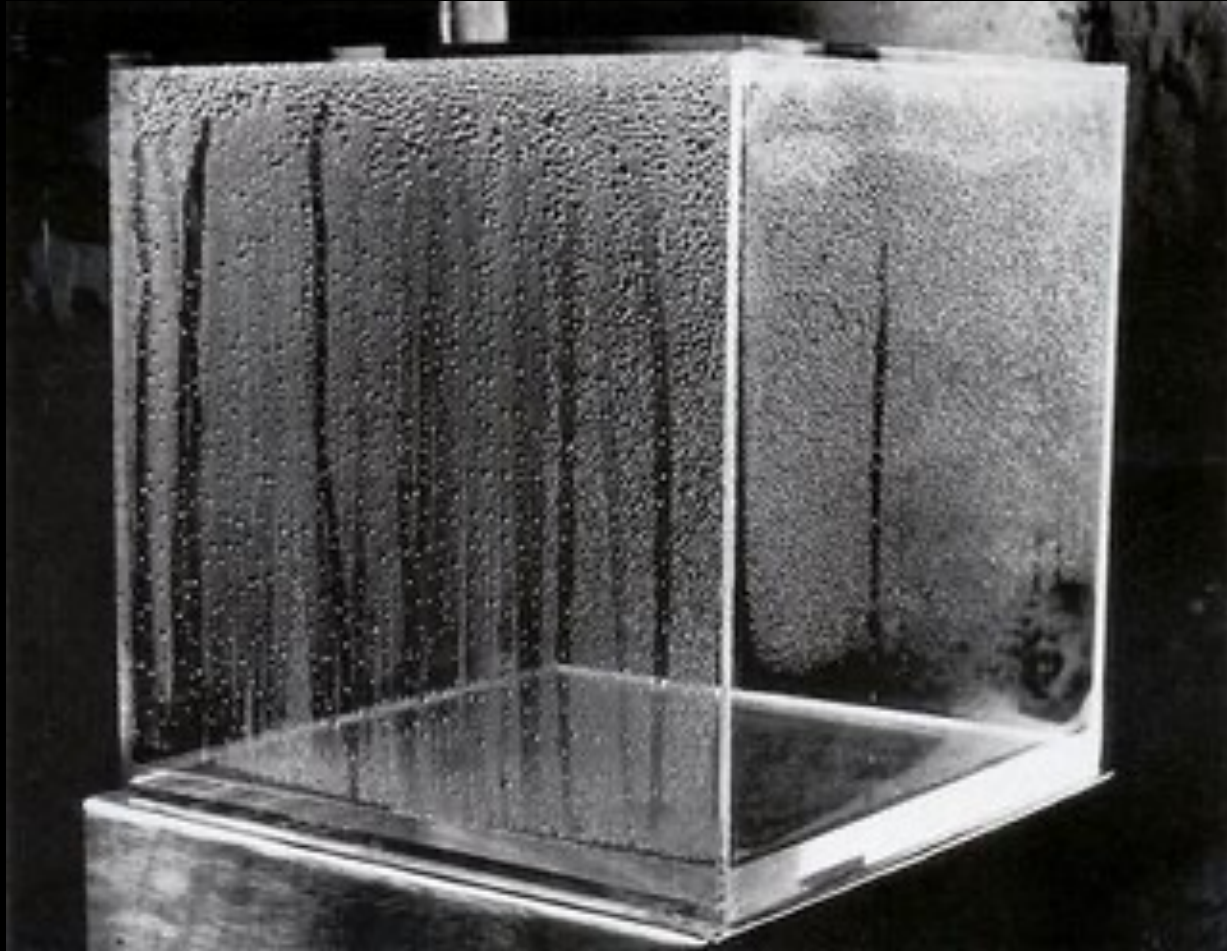
The piece consisted of a questionnaire about contemporary events that was distributed to museum visitors to a group exhibition in Milwaukee. While Haacke had used questionnaires in his works before, this particular questionnaire was the first time that he successfully used a computer to compile the results and generate a statistical profile of the exhibition's audience. The work introduced the idea of visitors playing an active role in their information environment and "completing" the work of art.



Joseph Kosuth, The Seventh Investigation (Art as Idea as Idea) Proposition One, 1970



Joseph Kosuth, One and Three Chairs, 1965

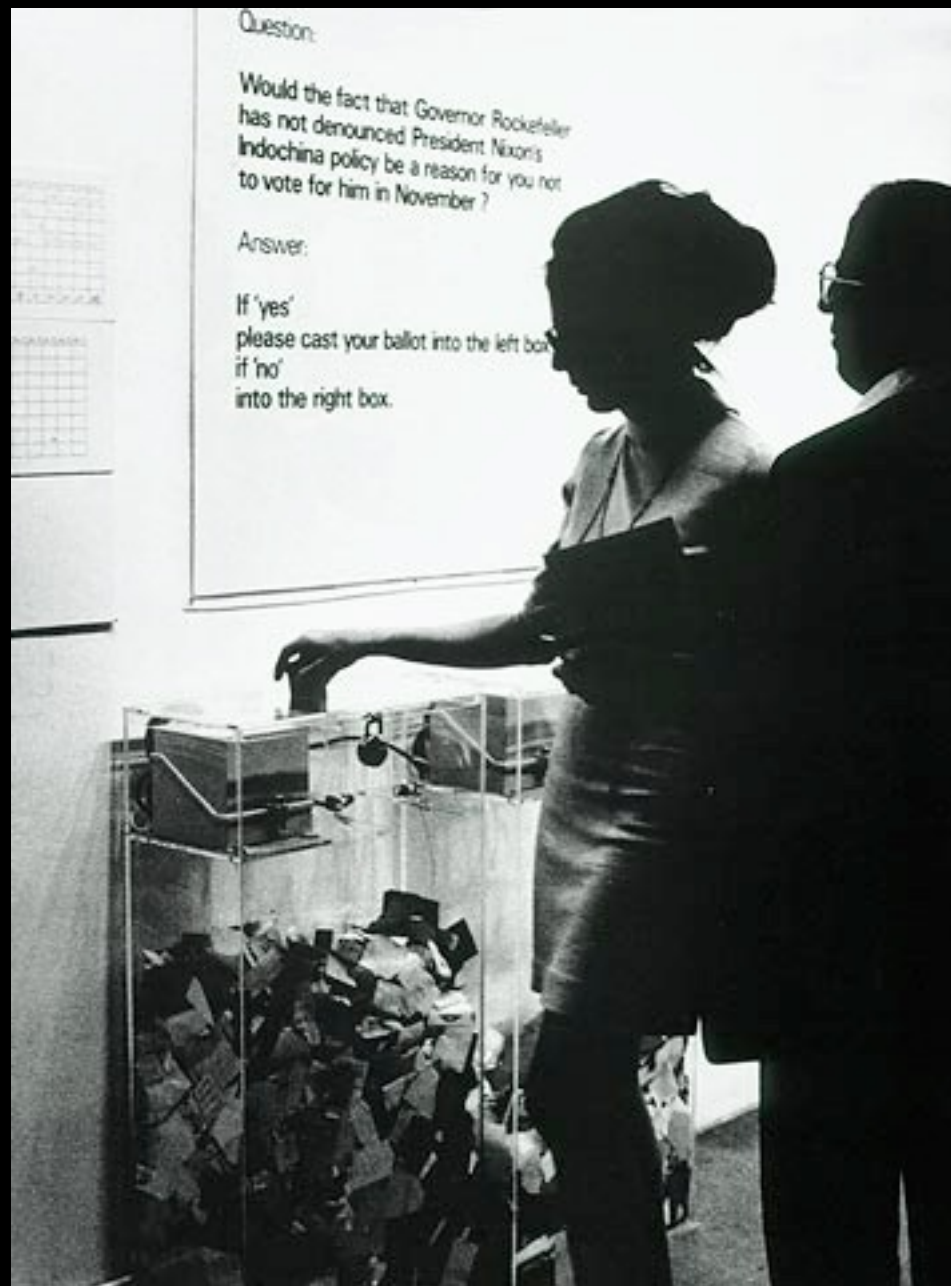


Hans Haacke, Framing (Condensation Cube), 1963-65



Hans Haacke,
Chickens Hatching,
1969

In *Chickens Hatching*, Haacke installed eight small incubators in the Art Gallery of Ontario and placed inside fertilized chicken eggs, which he synthetically monitored with a feedback system of lamps and thermostats until they hatched.



Hans Haacke, Poll, 1970



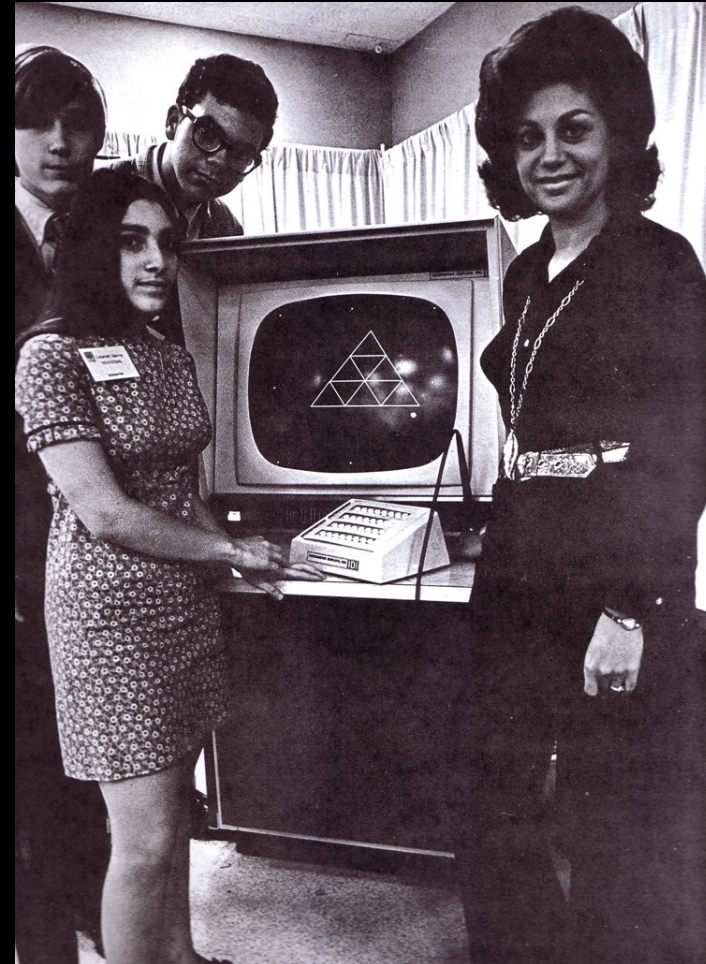
At *Software*, Agnes Denes programmed her computer display with the assistance of Theodor H. Nelson and The R.E.S.I.S.T.O.R.S.

CONCEPTUAL ART BETWEEN LANGUAGE AND TECHNOLOGY

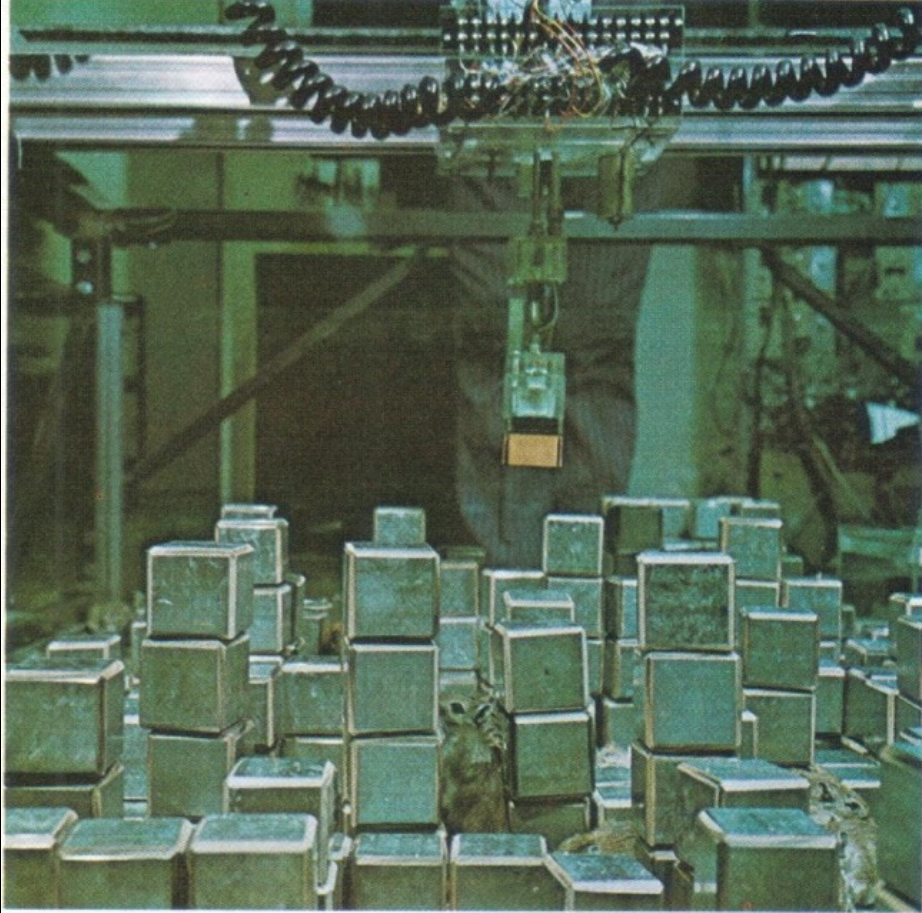
How is information at work in both of these works of art?



Joseph Kosuth, One and Three Chairs, 1965



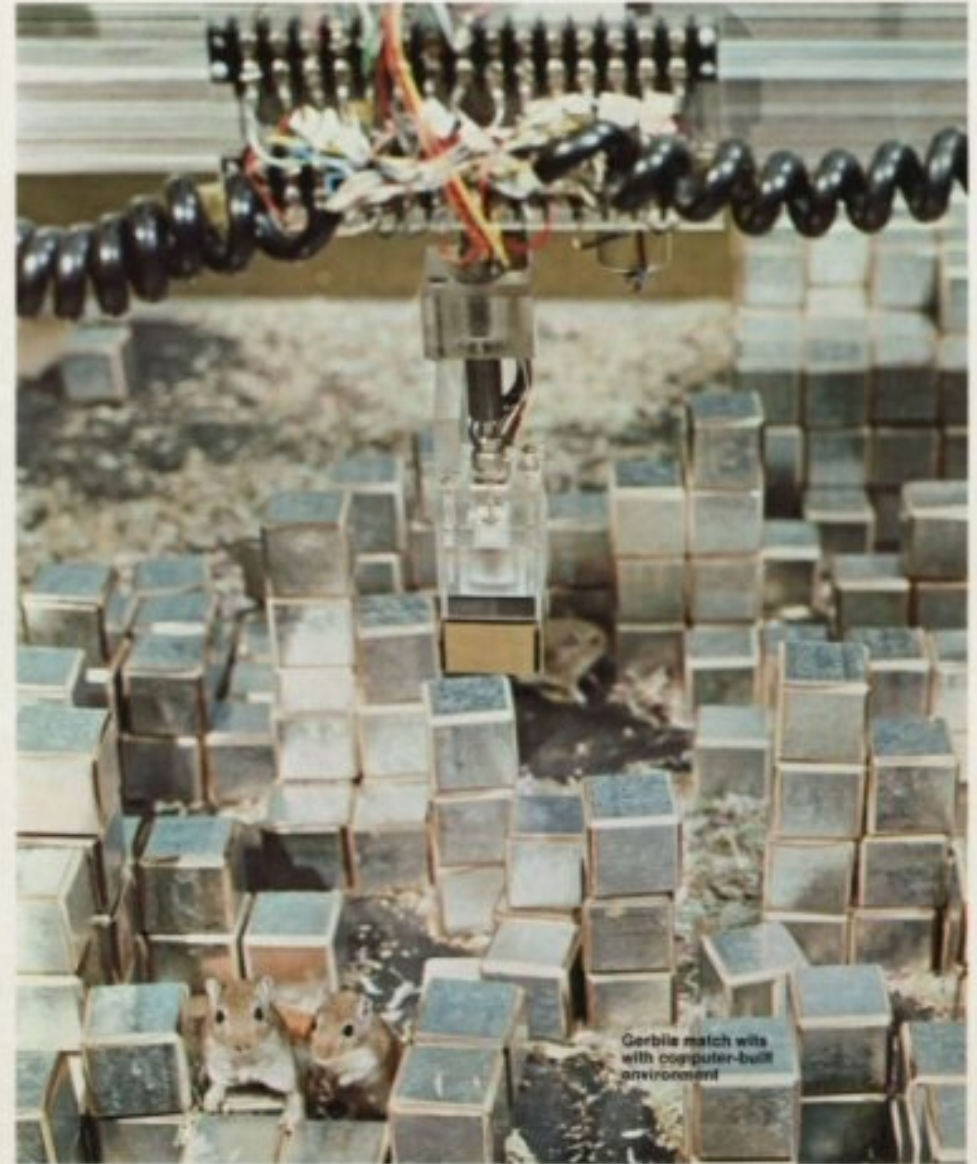
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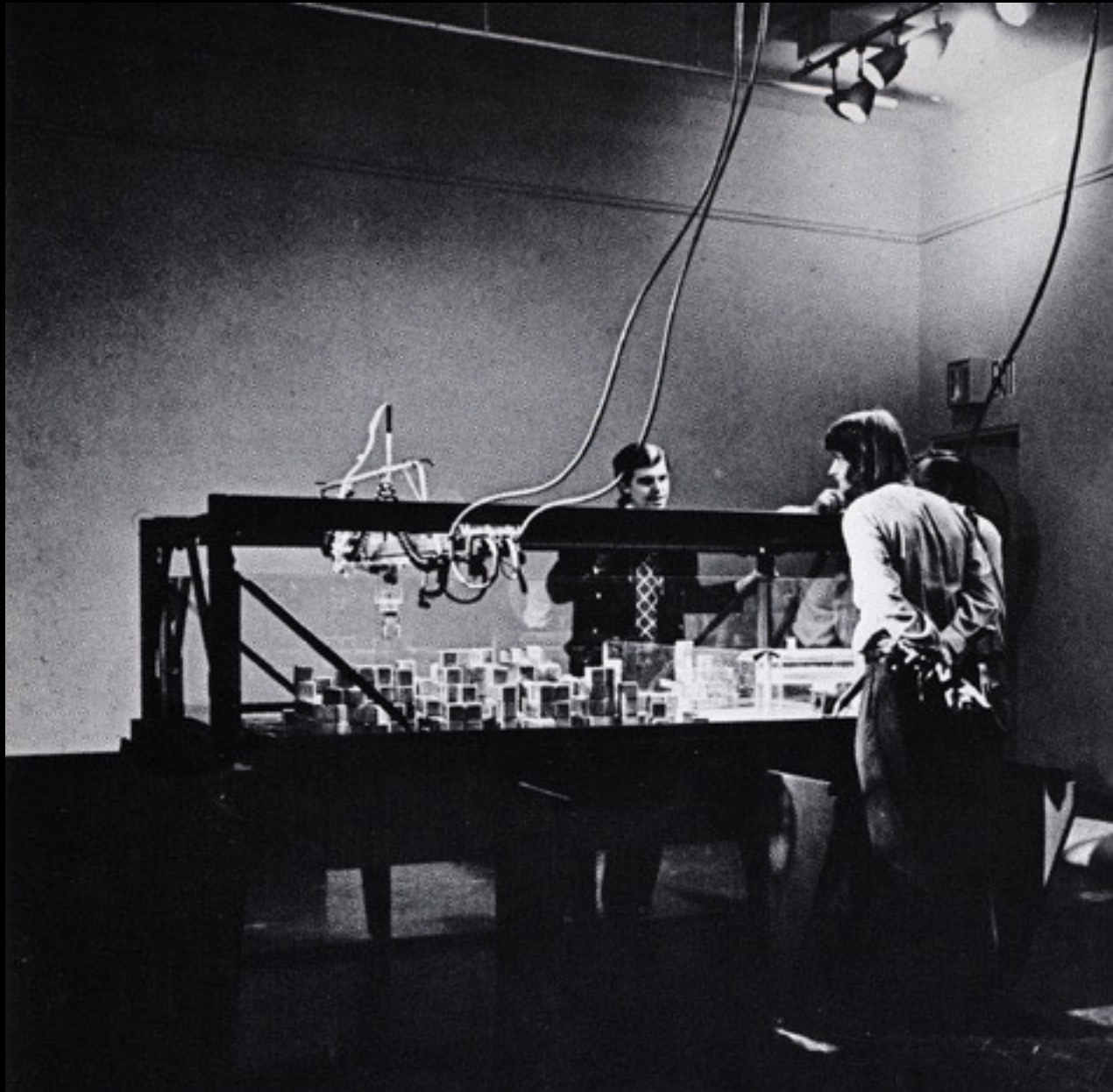
"Seek", 1970 by Nicholas Negroponte with the Architecture Machine Group , M.I.T. Originally shown at the "Software" exhibition, curated by Jack Burnham for the Jewish Museum in New York 1970. This piece consisted of a Plexiglass encased, computer-controlled environment full of small blocks and inhabited by gerbils, who continuously changed the position of the blocks. Following instructions programmed by the authors the robotic arm automatically rearranged the blocks in a specific pattern. Once the arrangement was disrupted, a computer-controlled robotic arm rebuilt the block configurations in a manner its programmers believed followed the gerbil's objectives. The designers, however, did not successfully anticipate the reactions of the animals, who often outwitted the computer and created total disarray. The exhibit was also referred to as "Blocksworld".

SOFTWARE

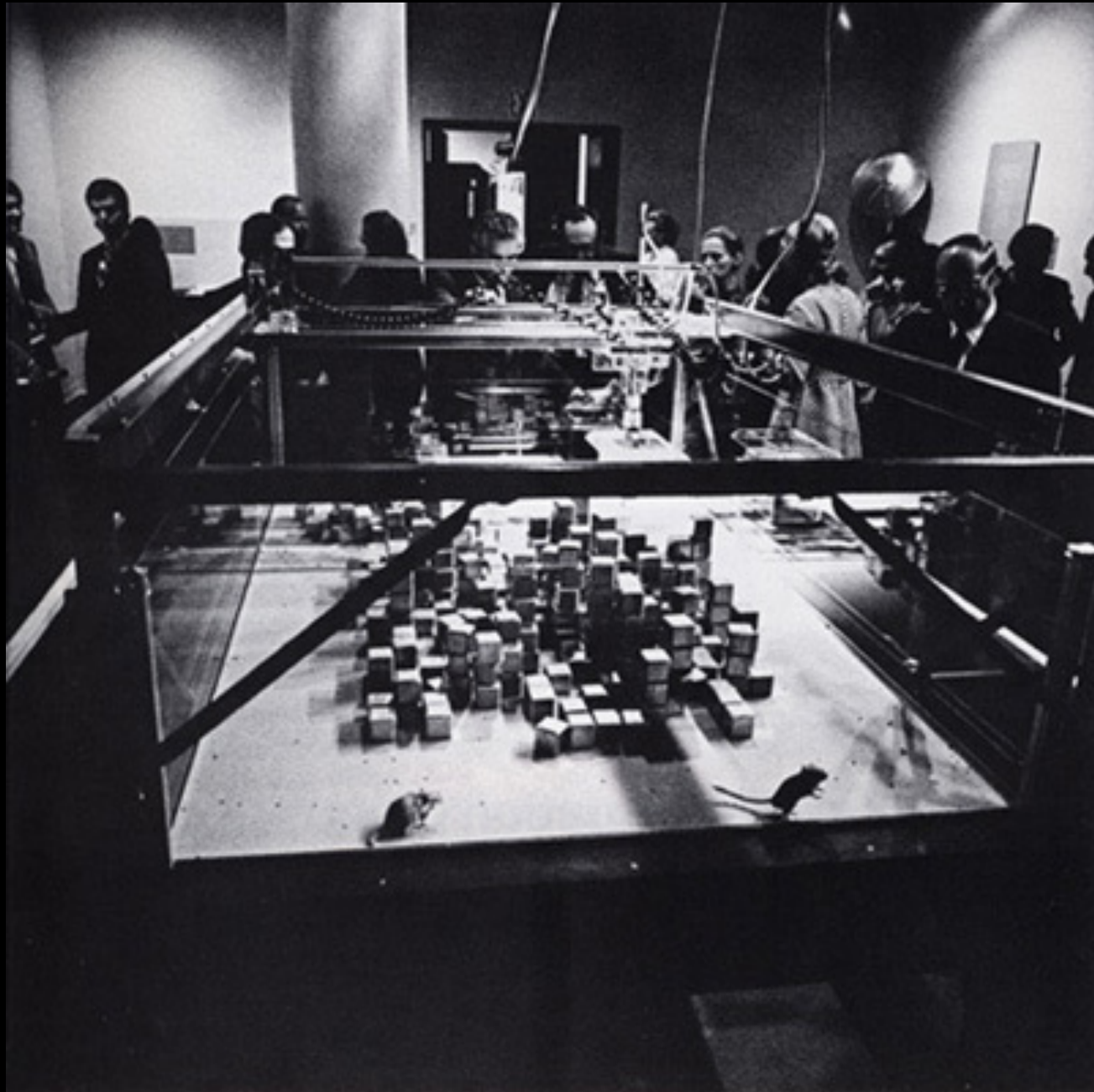
Information technology: its new meaning for art



Gerbils match wits with computer-built environment



The Architecture Machine Group, MIT, Seek, 1969-70



The Architecture Machine Group, MIT, Seek, 1969-70

Cybernetic Serendipity

Serendipity

Serendipity

the faculty of seeing
happy chance discoveries

the faculty of seeing
happy chance discoveries
of laws of cultural and communication systems
by human and electronic

an exhibition

at the Institute of Contemporary Arts

from

August 2nd

to October 20th

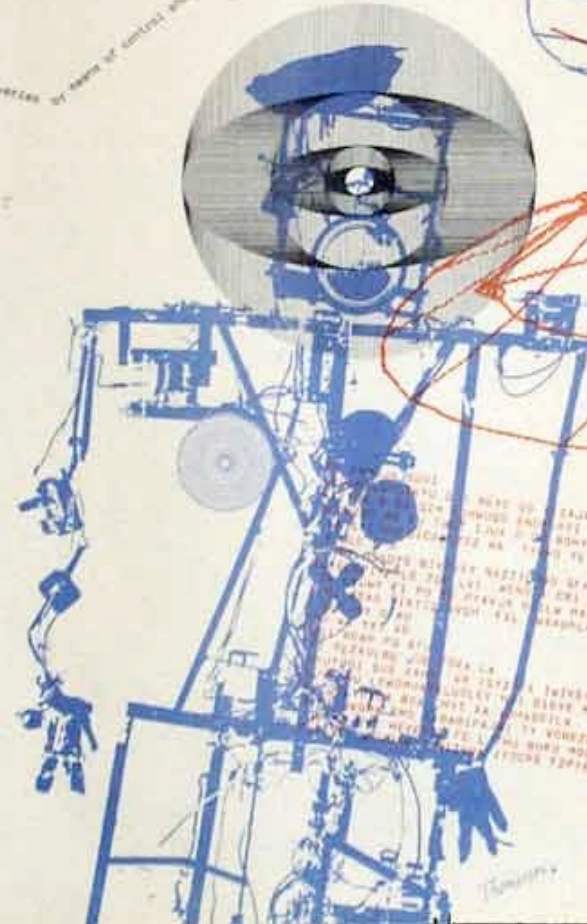
Institute of Contemporary Arts

1, Queen's Gallery, Whitehall, London SW1A 2AH



Telephone: 01-235 8300
Telex: 2111
Fax: 01-235 8300

Open daily 10.00-18.00
Closed on Mondays



PROGRAMME
SERENDIPITY
LECTURES



Thursday August 9
Tuesday August 13
Thursday August 15
Tuesday August 20
Thursday August 22
Tuesday August 27
Thursday September 3
Tuesday September 10
Thursday September 12
Thursday September 19
Tuesday September 24
Thursday September 26
Tuesday October 1
Tuesday October 8
Thursday October 10
Thursday October 17

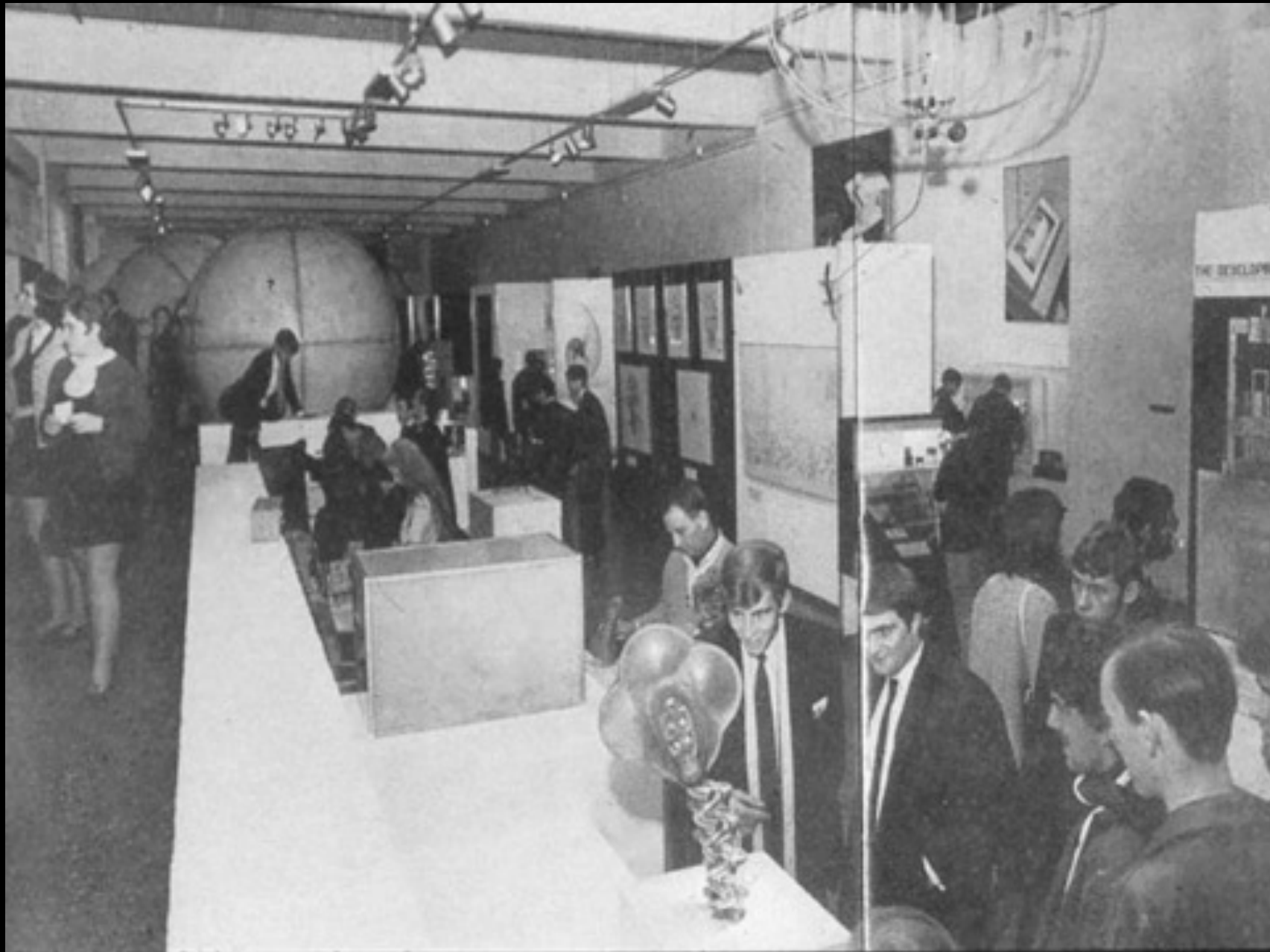
Thursday August 9
Tuesday August 13
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Cybernetic Serendipity, curated by Jasia Reichardt at the ICA London August 2nd to October 20th, 1968











Art by Telephone, Chicago, Museum of Contemporary Art, 1969

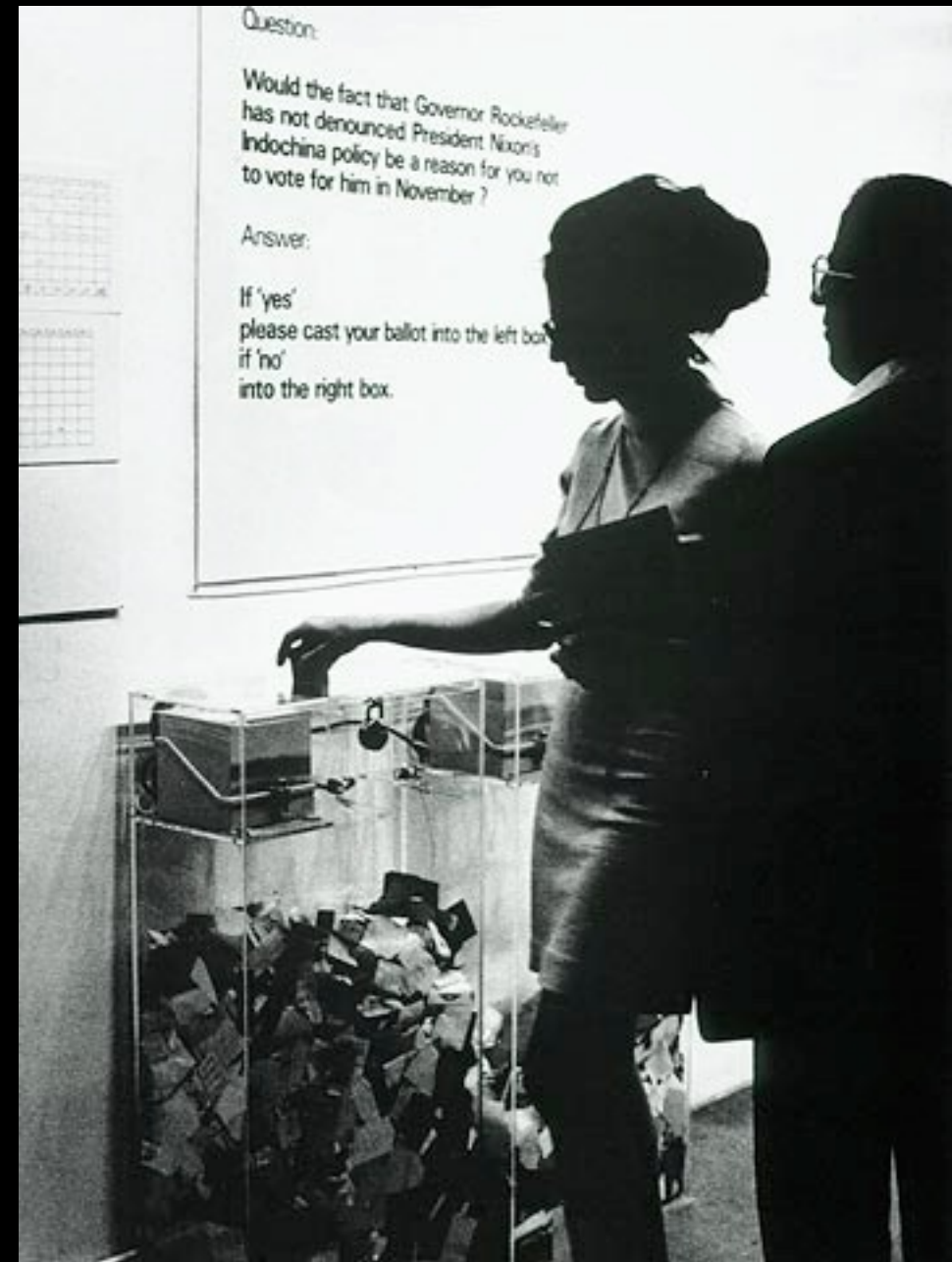
On the LP the Museum's director, Jan van der Marck, interviews, by long-distance telephone, artists Siah Armajani, Richard Artschwager, John Baldessari, Iain Baxter, Mel Bochner, George Brecht, Jack Burnham, James Lee Byars, Robert H. Cumming, Francoise Dallegret, Jan Dibbets, John Giorno, Robert Grosvenor, Hans Haacke, Richard Hamilton, Dick Higgins, Davi Det Hompson, Robert Huot, Alani Jacquet, Ed Kienholz, Joseph Kosuth, Les Levine, Sol LeWitt, Robert Morris, Bruce Nauman, Claes Oldenburg, Dennis Oppenheim, Richard Serra, Robert Smithson, Guenther Uecker, Stan Van Der Beek, Bernar Venet, Frank Lincoln Viner, Wolf Vostell, William Wegman, and William T. Wiley, each discussing with van der Marck how to execute an artwork for inclusion in the show to be fabricated by in Chicago strictly by the artist's verbal instructions.



*The Machine As Seen at the End of the
Mechanical Age,
New York, Museum of Modern Art,
1968*



Information, curated by Kynaston McShine,
Museum of Modern Art, New York, 1970



Hans Haacke, *Poll*, 1970

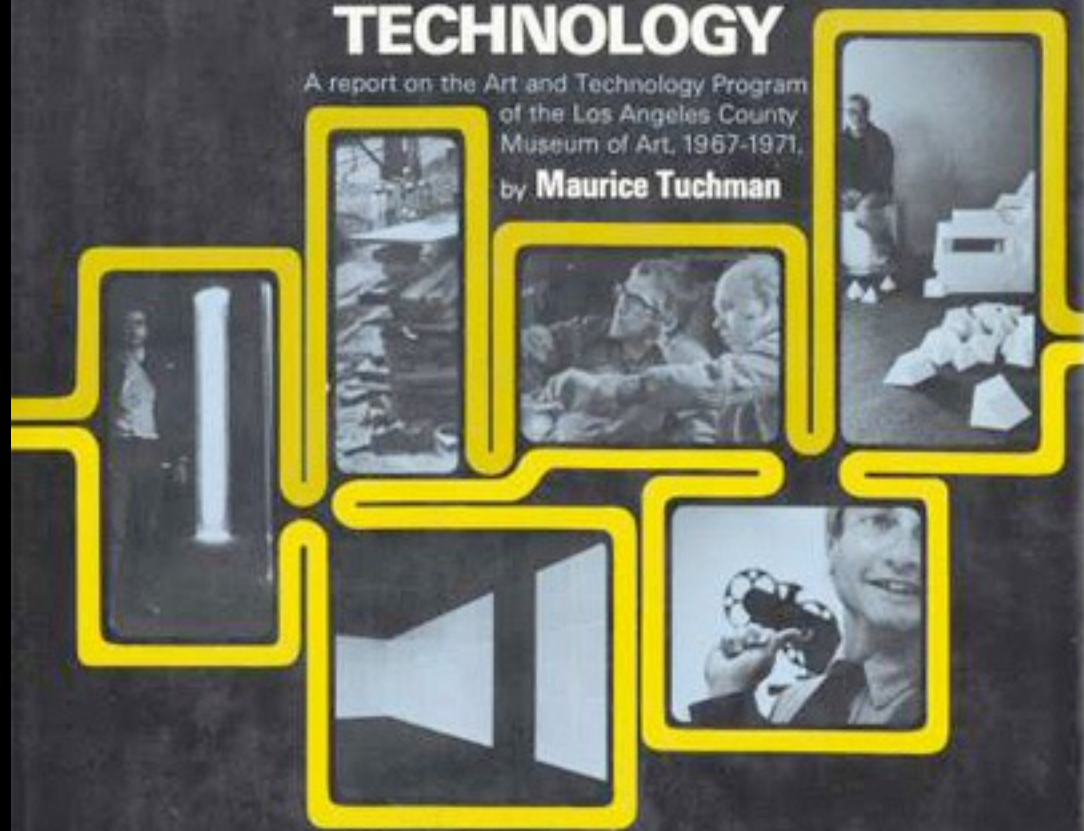


Information, Museum of Modern Art, New York, 2 July – 20 September 1970

ART AND TECHNOLOGY

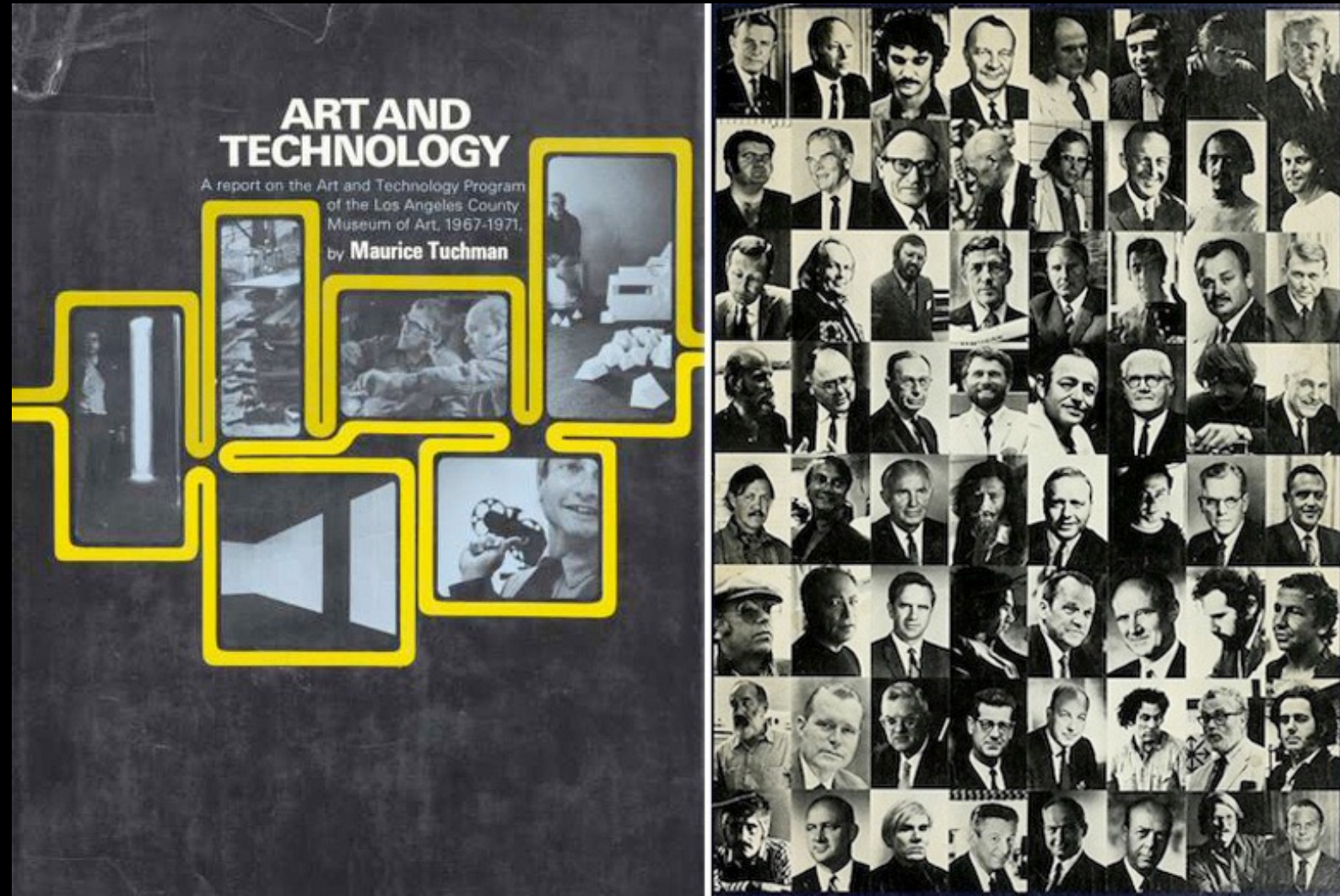
A report on the Art and Technology Program
of the Los Angeles County
Museum of Art, 1967-1971.

by **Maurice Tuchman**



The Art and Technology Program at LACMA—or A & T as it came to be known—was a forward-thinking initiative run by the museum from 1967 to 1971. The brainchild of curator Maurice Tuchman, A & T paired artists with corporations in the areas of aerospace, scientific research, and entertainment. Although some of the matches (such as James Turrell and Robert Irwin's well-known collaboration with Garrett Corporation) did not result in completed artworks, other partnerships led to ambitious projects that were exhibited at the 1970 World Exposition in Osaka, Japan, and at LACMA in 1971.

Among the artists who realized work through A & T were Oyvind Fahlstrom, Newton Harrison, R. B. Kitaj, Rockne Krebs, Claes Oldenburg, Robert Rauschenberg, Richard Serra, Tony Smith, Andy Warhol, and Robert Whitman. This installation features photographs, correspondence, and ephemera documenting the original Art and Technology Program at LACMA.





Robert Irwin and James Turrell in the anechoic chamber at the University of California, Los Angeles. The artists explored the concept for an unrealized project with the Garrett Corporation as part of the original Art and Technology program at LACMA. They experimented sensory deprivation chambers, meditation processes and ganzfields (fields of sight with no objects in them to focus on), measuring the reactions volunteers had to various sensory experiments. At first, they thought they would build some kind of sound-free anechoic chamber for the LACMA show, but reading through the notes, memos and interview transcripts from the last stretch of the project, is like watching the three men gradually disengage themselves from goals and order.

The Art and Technology Program was the brainchild of LACMA's curator of Modern Art, Maurice Tuchman. According to Tuchman, "Much of the most compelling art since 1910 has depended upon the materials and processes of technology, and has increasingly assimilated scientific and industrial advances. Nevertheless, only in isolated circumstances have artists been able to carry out their ideas or even initiate their projects due to the lack of an operative relationship with corporate facilities. Our objective now is to provide the necessary meeting ground for some eminent contemporary artists with sophisticated technological personnel and resources. Naturally we hope that this endeavor will result not only in significant works of art but in an ongoing union between the two forces. It is our conviction that the need for this alliance is one of the most pressing esthetic issues of our time."

PARTICIPATING CORPORATIONS





Artist Newton Harrison (right) and Jet Propulsion Laboratory technician Ray Goldstein examining a preliminary design for Harrison's Art & Technology installation of glow discharge tubes, 1969

<https://unframed.lacma.org/2014/07/07/art-and-technology-in-the-archives-at-the-balch-art-research-library>

Source of information at right: <http://theharrisonstudio.net/wp-content/uploads/2011/03/artasinqury1.pdf>

HELEN MAYER HARRISON - NEWTON HARRISON: The Ecological Argument

A Self-generating Eco-system

Although Newton Harrison taught painting at the University of San Diego since 1967, his interest soon switched to experiments with forms of colored light, such as glow discharge tubes, to see if light could behave like color. Thus, when he was invited to participate in the *Art and Technology Program* of the Los Angeles County Museum of Art in 1969, he submitted a proposal on “light as color.”²⁵³ Because the program set out to bring artists in touch with scientists, he was put in touch with Dr. Robert Meghreblan and some of the other plasma experts from the Jet Propulsion Laboratories (JPL) in Pasadena, California. After this meeting “evolved (into) a productive problem solving situation,” a rapport was established between Harrison and JPL staff which existed throughout the collaboration. Harrison’s research resulted in an installation of five plexiglass tubes, made by a local plastics firm, containing liquid crystals, which would change color under heat and pressure. Newton described the final effect: “...in the first tube I put an arc that was a mixture of helium and argon. The helium helped the arc path; the argon guaranteed that it would be a shocking pink-violet arc. We set it up so that the gas was injected in such a way that it started out as lightning, staying lightning for about two minutes; became an arc; stayed the arc for about three minutes; became a glow - a total glow in the tube ... the glow started to break down into platelets and then I shot more gas in so it would be an arc again. This was a ten minute cycle.”²⁵⁴