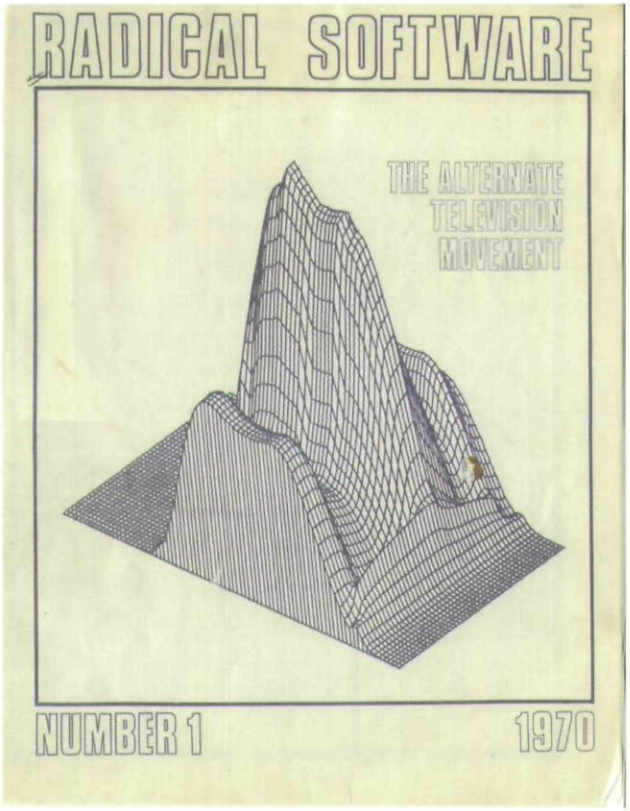
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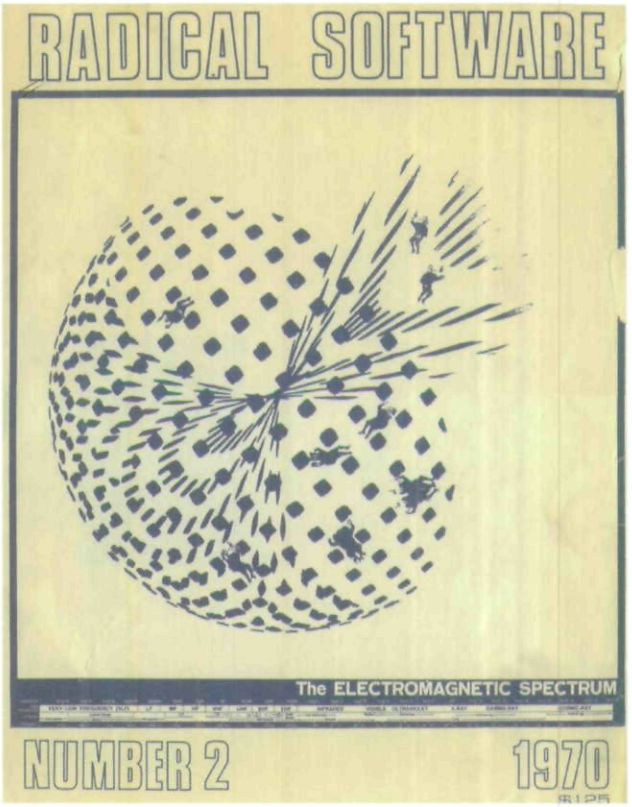
NUMBER 1
1970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NUMBER 2
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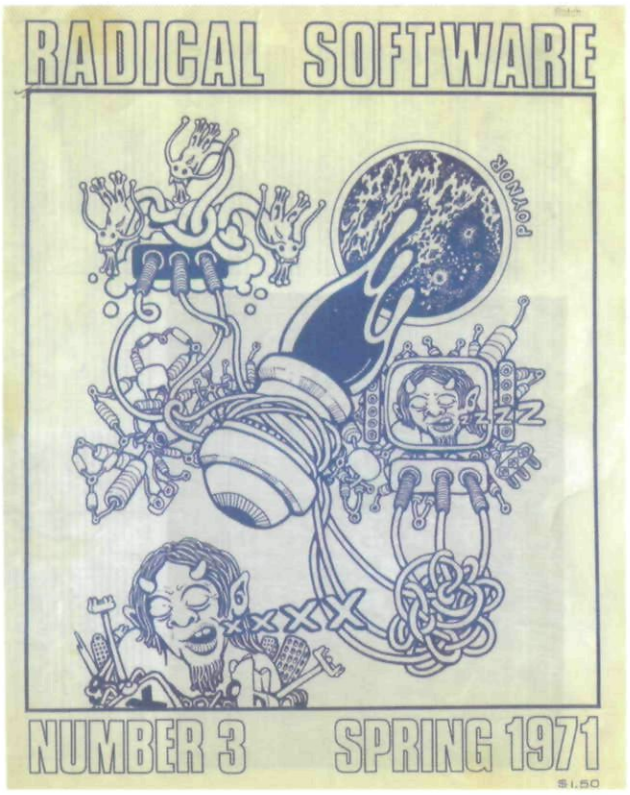
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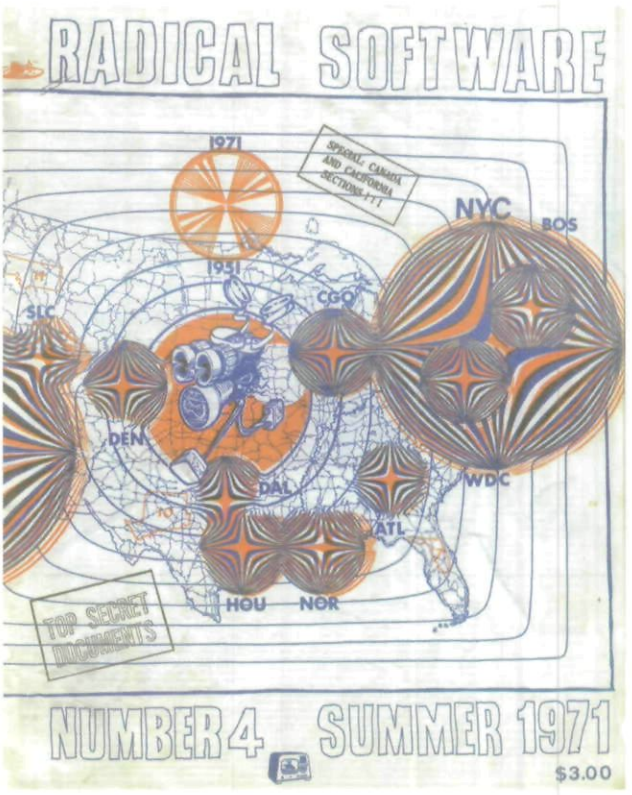
RADICAL SOFTWARE
1971
1951
SPECIAL CANADA AND CALIFORNIA SECTIONS-YYT
NYC
BOS
CGO
SLC
DEN
DAL
WDC
ATL
HOU
NOR
TOP SECRET DOCUMENTS
NUMBER 4
SUMMER 1971
$3.00

***Radical Software*, covers of first four issues.** The masthead of the periodical carried this notice: "To encourage dissemination of the information in *Radical Software* we have created our own symbol of an *x* within a circle: ⊗. This is a Xerox mark, the antithesis of copyright, which means DO copy. (The only copyrighted contents in this issue are excerpted from published or soon-to-be-published books and articles which are already copyrighted.)"

William Kaizen

Steps to an Ecology of Communication: *Radical Software*, Dan Graham, and the Legacy of Gregory Bateson

If recalled at all today in the context of the art world, ecology is often reduced to its affiliation with earthworks. Its broader associations have been written out of most later accounts of the 1960s and 1970s in favor of phenomenology, semiotics, and institutional critique. Circa 1970, ecology was linked with cybernetics and transformed into media ecology, providing a means for recasting the psychology of the self and how it communicates. Ecology became a model for both understanding and producing art, one which allowed for the notion of context to be reinvented, as postwar abstraction gave way to an exploration of the formats of the mass media. Ecology was inaugurated as a science during the nineteenth century with the work of the naturalist Ernst Haeckel and others. By the middle of the twentieth century in the United States, following the development of cybernetics and especially through the work of Gregory Bateson, ecological systems came to be understood not only as natural but also as social and technological. They were extended to include humanity with a particular focus on the problem of communication and communication media.

The term "media ecology," based on the reception of Bateson's thought, emerged and was developed in the pages of the 1970s media-activist magazine *Radical Software*. An early issue contained an article defining media ecology as "the study of a medium of communication and its affect upon other media/society," but Bateson's definition of media ecology was far more radical.[1] He argued that when one thinks about mediation ecologically, there are no longer clear separations among technology, communication, affect, and sociability. Bateson's influence on media art has been largely overlooked. His writing and citations of his writing appeared through the run of *Radical Software*. The artist Dan Graham, who appeared briefly in *Radical Software*, also counts Bateson among his key influences. And years before *Radical Software* began publication, Bateson appeared on several panels with leading figures in the arts, from Frank Lloyd Wright and Marcel Duchamp to Meyer Schapiro, promoting an ecological understanding of art in consonance with many ideas of the self and its mediation that would only gain wider currency in the 1960s and 1970s. What emerges from Bateson's position in these conferences, becoming apparent in *Radical Software* and Graham's work, is a move away from the formalism associated with abstract art through a focus on communicative context. Bateson's media ecology puts on display the ways in which formats limit communication, exposing how the techno-social context of communication is as relevant as any content. In a similar way, in 1964 Marshall McLuhan announced that "the medium is the message." But if McLuhan takes technological formats to be "extensions of man," Bateson goes further. He gives up any notion of man, redefining the self as an expanded mental field in which the subject and its objects are no longer separable. For Bateson, "mind" is no longer bounded by the individual body, becoming a conjunction of self and world produced through communicative ecologies.[2]

1. Arlo Raymond, "Media Ecology," *Radical Software* 1, no. 3 (1971): 19. Recent work on art and media ecology includes: Matthew Fuller, *Media Ecologies: Materialist Energies in Art and Technoculture* (Cambridge, MA: MIT Press, 2005); and David Joselit, *Feedback: Television against Democracy* (Cambridge, MA: MIT Press, 2007).
2. See Gregory Bateson, *Steps to an Ecology of Mind* (Chicago: University of Chicago Press, 1972); and Marshall McLuhan, *Understanding Media: The Extensions of Man* (New York: McGraw-Hill, 1964).

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Inside the System

In 1966, after his own early experiments with cinema and video, Andy Warhol said, "It took intelligent people years to appreciate the abstract impressionist [sic] school, and I suppose it's hard for intellectuals to think of me as Art. I'm a mass communicator."[3] There is a certain amount of retrospective irony in Warhol's statement, because it was precisely the opposition of Abstract Expressionism to mass communication that led to the movement's acceptance. Critics like Clement Greenberg had drawn strict lines between high art and mass-produced art.[4] These boundaries were only reinforced in the postwar rhetoric in which the intersection of fine art and the mass media was taboo and communication was taken to be integrally linked to the evils of mass mediation. This interdiction was readily apparent in a conference on the topic of art and communication held in 1957, especially in the opening paper given by Schapiro. While Schapiro and others equated communication with instrumentalization, a new understanding of ecology was beginning to emerge in papers presented by Duchamp and Bateson.[5]

When the American Federation of Arts (AFA) held its annual conference in Houston, April 3–6, 1957, it was expected that the usual four hundred or so people would attend. Instead, over fourteen hundred showed up to hear three days of talks by Schapiro, Duchamp, and Bateson along with Rudolph Arnheim, Stuart Davis, and others.[6] Although the conference was loosely billed as "an investigation of what the twentieth century has contributed to creative thought and expression," the hot topic discussed repeatedly throughout was the connection between communication and the arts.[7] The study of communication was an emerging discipline that had developed before World War II in sociology through an examination of the mass media as a means of propaganda. After the war a hard-science approach to communication had emerged at the Macy Conferences, where cybernetics was born.[8] Broadly, as the name coined by Norbert Wiener etymologically indicates, cybernetics was the study of homeostatic mechanisms governing systematic behavior. In cybernetics, communication meant the transmission of any content whatsoever allowing the maintenance of a discrete system, irrespective of material base or even the meaning of any particular content; thus formulated, it was a means to think about information and the efficiency of its transmission. While useful for the purposes of mathematical formalization, this move necessitated the violence of a double formalism. In the first place, it dealt with meaning only in general, as a process of coding and decoding. Second, it stripped context from meaning, proposing an ideal state of transmission divorced from any particular medium or act of mediation. Despite the host of practical applications the move yielded, it also made communication transcendental, divorcing it from its social, political, and historical contexts. After the founding of cybernetics and with the reception of Wiener's two best-selling books on the topic, communication became a buzzword, often used to promote a world in which more efficient information transmission would utopically transform everyday life.[9]

In the early and mid-1950s, artists and critics in the Unites States were relatively indifferent to the emergence of communication studies. Those who addressed the role of communication and the arts were generally critical of

3. Quoted in John Heilpern, "The Fantasy World of Warhol," *The Observer* (London), June 12, 1966, 11.

4. See Clement Greenberg, "Avant-Garde and Kitsch," in *The Collected Essays and Criticism, Volume 1: Perceptions and Judgments, 1939–1944*, ed. John O'Brian (Chicago: University of Chicago, 1986).

5. Though Schapiro and Duchamp's papers at the conference were published separately and became well known, Bateson's paper was unpublished. That Schapiro, Duchamp, and Bateson originally presented their essays together has been heretofore overlooked. See Marcel Duchamp, "The Creative Act," *Art News* 56, no. 4 (Summer 1957): 28–29, rep. in *The Writings of Marcel Duchamp*, ed. Michel Sanouillet and Elmer Petterson (New York: Da Capo Press, 1973); Meyer Schapiro, "The Liberating Quality of the Avant-Garde," *Art News* 56, no. 4 (Summer 1957): 36–42, rep. in Schapiro, *Modern Art: 19th and 20th Centuries; Selected Papers* (New York: Braziller, 1979).

6. The other participants in the conference were Philip R. Adams, director of the Cincinnati Art Museum; Jimmy Ernst, artist; Sidney Janis, art dealer; Randall Jarrell, poet and critic; Vincent Price, television and film personality and art collector; Bennett Reis, art collector; Kenneth Sawyer, art critic; William Seitz, art historian (soon to be curator at the Museum of Modern Art); and James Johnson Sweeney, director of the Solomon R. Guggenheim Museum. An exhibition of the work by Duchamp and his brothers Jacques Villon and Raymond Duchamp-Villon, entitled *Three Brothers*, accompanied the conference and was held at the Museum of Fine Arts.

7. "Press Release for the American Federation of the Arts Convention, Houston Texas, April 3–6, 1957," American Federation of Arts Papers, Archives of American Art, Smithsonian Institution, Washington D.C.

8. The Macy Conferences were a series of meetings held 1946–53. As the title of the first meeting announced, scholars from various fields of the sciences and humanities set out to explore "Feedback Mechanisms and Circular Causal Systems in Biological and Social Systems." See Steve Joshua Heims, *Constructing a Social Science for America: The Cybernetics Group, 1946–1953* (Cambridge, MA: MIT Press, 1991).

9. See Norbert Wiener, *Cybernetics, or Control and Communication in the Animal and the Machine* (Cambridge, MA: MIT Press, 1961); and Wiener, *The Human Use of Human Beings: Cybernetics and Society* (New York: Doubleday, 1950).

AFA Conference, Houston, 1957, left to right: Meyer Schapiro, Randall Jarrell, Stuart Davis, and James Johnson Sweeney. American Federation of the Arts records, 1895–1993, Archives of American Art, Smithsonian Institution (photographer unknown, photograph provided by Archives of American Art, Smithsonian Institution)

information theory, especially as applied to the fine arts.[10] Schapiro's keynote paper, "The Place of Painting in Contemporary Culture," epitomized this position. "This term," he writes, referring to communication, "has become for many artists one of the most unpleasant in our language."[11] Schapiro explains why: "The theory and practice of communication today helps to build up a world of social relationships which is impersonal, calculated and controlled in its elements, aiming always at efficiency." He opposed the application of cybernetics to everyday life because he equated the cybernetic model of communication with the overrationalization and administration of the everyday. He believed that fine art—and Abstract Expressionist painting in particular—was the last bastion of personal communication in a world that had become ever more technologized. After World War II, the merger of art and technology in what he called the "arts of communication," the mass media he took to be theorized by communications theory, was designed to insure that the greatest amount of information would be delivered to the largest possible audience as efficiently as possible: the media embodied the debasement of art by cybernetics. In the drive toward maximum communicative efficiency, content was aimed at the lowest common denominator in order to reach as many people as possible; modernist difficulty and individual struggle were erased in favor of behaviorist passivity and group assent.

Schapiro upheld painting against the arts of communication. He especially supported Abstract Expressionism, for two linked reasons. First, all paintings are inherently opposed to the mass media: they are the last, major hand-made objects in a culture that has begun to mass-produce everything. Second, Abstract Expressionism underscores this claim by emphasizing its hand-made quality,

10. In Europe, several groups were actively dealing with this subject, notably the Independent Group in England and the Zero Group in Germany. In the United States the positive reception of communication studies came largely from European immigrants, particularly those who had been affiliated with the Bauhaus, such as László Moholy-Nagy and Gyorgi Kepes.

11. Schapiro, "The Liberating Quality of the Avant-Garde," 40. Further quotations in this paragraph are from the same page. The paper is today generally known in this version, edited for publication in *Art News*. See also Schapiro, "The Place of Painting in Contemporary Culture," 1957, American Federation of Arts Papers, Archives of American Art, Smithsonian Institution, Washington D.C.

Western Roundtable on Modern Art, San Francisco, 1949, left to right: Robert Goldwater, Gregory Bateson, Mark Tobey, Andrew C. Ritchie, Darius Milhaud, Alfred Frankenstein, George Boas, Marcel Duchamp, and Kenneth Burke (photographer unknown)

inasmuch as it brings the hand of the artist to the fore, leaving behind content for the very image of artistic craftsmanship inherent in each visible, painterly mark. Furthermore, in abandoning content, Abstract Expressionism produces, he said, a "high degree of non-communication."[12] Through complexity and hermeticism it jams the codes of efficiency. Mass communication, by contrast, opens onto mass control and so demagoguery or middle-brow values, alienation or stultification. Abstract Expressionism was "ultimately opposed to communication as it is now understood."[13] Each painting was unique. It could neither be mass-produced nor mass-reproduced. It was the expression of a singular individual whose presence communicated through the act of painting, its sentiment only legible when the viewer was in the presence of the original work. The work of art became the bearer of a pure affect of a sort higher than mere instrumental communicability, one whose subtleties were excluded from the arts of communication except in the most clichéd ways. Schapiro likens the experience of the beholder of an Abstract Expressionist painting to a secularized religious experience. Rather than communication, the painting becomes an occasion for "communion and contemplation," not between an individual and God but between two people.[14] In maintaining painting as a traditional format, he concludes, Abstract Expressionism operates against the culture industry and mass communication.

Duchamp and Bateson presented their papers the next day, in a panel titled "The Creative Act." Duchamp had been invited to speak because of his reputation as an "artist-theoretician." Bateson was invited because of his reputation as a "philosopher-psychologist" with expertise in communication studies.[15] He had been an important participant in the Macy Conferences and an earlier adopter of cybernetics as a social science. In 1951 he had published the widely read *Communication: The Social Matrix of Psychiatry*, coauthored with the psychiatrist Jurgen Ruesch, which adapted cybernetic theory to psychology.[16] Duchamp and Bateson's appearance at the AFA conference was also a reunion of sorts, for the

12. Schapiro, "The Liberating Quality of the Avant-Garde," 40.
13. Ibid., 41.
14. Ibid.
15. Press release for AFA convention.
16. Jurgen Ruesch and Gregory Bateson, *Communication: The Social Matrix of Psychiatry* (New York: Norton, 1951).

AFA Conference, Houston, 1957, left to right: Lowell Collins, Marcel Duchamp, and Paul Maxwell at the exhibition *Three Brothers*. American Federation of the Arts records, 1895–1993, Archives of American Art, Smithsonian Institution (photographer unknown, photograph provided by Archives of American Art, Smithsonian Institution)

two had appeared together nearly ten years before, in 1949, at a conference entitled "The Western Roundtable on Modern Art."[17] On that occasion, instead of Schapiro, Frank Lloyd Wright had played the traditionalist, repeatedly upholding a notion of eternal truth and beauty against injunctions that these are ever-changing, culturally specific terms, and dismissing all science as it relates to aesthetic practices as "the enemy, at the present time, of all the artist would represent."[18] Bateson's response to Wright was indicative of the work he was doing at the time of the Macy Conferences. The kind of scientist Wright described, he said, was that of an earlier era, one for whom linear causality ruled. But instead of sequences that unfold in straight lines, the new scientific age heralded by cybernetics is concerned with circular causal systems. The most important mark of this change is that "we are inside the system. . . . The scientist is not outside . . . . The scientist is part of the thing which he studies, as much as the artist. And it is that move—the discovery that the observer is a significant part of the thing observed—that marks the change of epoch."[19] Bateson's point is not to elevate the importance of either the scientist or the artist, but rather to recognize that there is no objective distance from which a system can be observed: the observer and the act of observation are part of the same system. The act of observing and the thing observed form a coextensive context. This concept—that there is no outside or autonomy in relation to any given system—grounds both Duchamp's and Bateson's papers at the 1957 AFA conference and their resonance in later approaches to media ecology.

Duchamp's 1957 paper, following the title of the panel, focuses on what seems to be a most un-Duchampian topic—"The Creative Act"—but in a manner most Duchampian he sets out to undermine the very notion of artistic creativity underlying Schapiro's claims. While not directly disagreeing with Schapiro, he shifts the focus of artistic communication away from the conscious intention of the artist and toward her or his unconscious mind as well as to the

17. The Western Roundtable on Art was held in San Francisco, April 8–10, 1949. The other participants included: George Boas, philosopher; Kenneth Burke, literary theorist; Alfred Frankenstein, art critic; Robert Goldwater, art historian; Darius Milhaud, composer; Andrew C. Ritchie, director of the department of painting and sculpture at the Museum of Modern Art; Arnold Schoenberg, composer (by wire-tape recording only, because he was too ill to attend in person); and Mark Tobey, artist. The discussants sat around a table with small, color illustrations of various artworks acting as cues and examples for their dialogue. Parts of their conversation were published in "The Western Roundtable on Modern Art," ed. Robert Motherwell and Ad Reinhardt, in the series *Modern Artists in America* (New York: Wittenborn, Schultz, 1951).
18. Ibid., 30. Accompanying his dismissal of contemporary science, Wright makes some amazingly bigoted remarks against homosexuals and the purported homosexual conspiracy running the contemporary art and architectural worlds, and against nonwhites, whom he refers to as "primitives" and "darkies."
19. Ibid.

AFA Conference, Houston, 1957, left to right: Rudolf Arnheim and Gregory Bateson. American Federation of the Arts records, 1895–1993, Archives of American Art, Smithsonian Institution (photographer unknown, photograph provided by Archives of American Art, Smithsonian Institution)

reception of the viewer. First, Duchamp argues, most of what the artist communicates comes from the unconscious as instinctive, unconsidered, or indifferent acts that determine the work. Second, and more pointedly, what the artist thinks of her or his work or imagines it might express is worth little because, he says, the artist "will have to wait for the verdict of the spectator in order that his declarations take a social value and that, finally, posterity includes him in the primers of Art History."[20] Spectators receive works of art and must judge them good, bad, or indifferent, as they decode their meaning. The public "deciphers" and "interprets" the work of art and so "adds [its] contribution to the creative act."[21] The individual artist is no longer a singular genius; the artist's work is less important than the larger system that includes the unconscious and conscious minds of both artist and viewer along with the social context and reception of the work of art and its historical accounting; the artist is part of a larger system in which her or his conscious intention forms a small (even a vanishingly small) part. In deemphasizing the role of artistic individuality, Duchamp expands the field of artistic communication into a larger, contextual system of production and reception. Duchamp's argument was not cybernetic per se, but its implications are consonant with an understanding of communication that is much closer to that of Bateson than of Schapiro.

Following from his earlier work with Ruesch, Bateson's paper, "Creative Imagination," concerns the role of artistic creativity as a special means of communication and the ways in which it sheds light on communicative context.[22] He is broadly interested in an aesthetics of communication wherein communication moves from pragmatic to other orders of meaning. His paper is brief, amounting to a few pages that conclude with a highly compressed discussion of two paintings by William Blake. He suggests that the fine arts have accrued the kind of special cultural value that Schapiro ascribes to them because they act as a

20. Duchamp, 28.
21. Ibid., 29.
22. Gregory Bateson, "Creative Imagination" (1957), American Federation of Arts Papers, Archives of American Art, Smithsonian Institution, Washington DC.

means of self-consciously transmitting metalevel information. Art explicitly communicates about communicating, turning communication back on itself. During the discussion he argues that everyday communication is creative—as creative as making an abstract painting—but also instrumental inasmuch as it is largely directed toward the transmission of specific messages with clear content.[23] If there is value to be found in art it is not in its "inherent" creativity or its jamming of communication in favor of communion, but in its self-reflexivity. Art simultaneously includes content and knowingly comments on that content: it reflects the conditions of its own transmission in the very act of transmission. Bateson recognizes that multiple levels of communication are always present in any communicative act and that many of these also act as metacommunication, but only aesthetic acts present these both knowingly and playfully. They playfully (i.e., freely) comment on the movement between communicative levels, from the intrapersonal realm of unconscious and conscious thought to the interpersonal realm of shared beliefs and group dynamics.

After the war, Bateson and Ruesch had been at the forefront of developing group psychology using the tools of psychiatry. In *Communication* they discuss their attempt to rethink the production of the self. Whereas Sigmund Freud had developed a fairly comprehensive theory of intrapersonal communication by incorporating the Other into the psychic economy of the self, they wanted to move outside the individual self and into interpersonal relationships. "While in the past," they write, "theories of personality were concerned with one single individual, modern psychiatrists have come to the realization that such theories are of little use because it is necessary to see the individual in the context of a social situation."[24] They were working against both the disembodiment of information in the mathematical formulation of communication and the isolation of psychiatric patients in their relationships with their therapists. Bateson would later pithily sum up their work together, writing simply, "Without context there is no communication."[25]

Bateson's model of the self was diametrically opposed to the latent mind-body dualisms of Western thought. In his model, mind moves beyond the confines of the individual. The bearer of subjectivity and the self is no longer the transcendental "I" of the empirical "subject." Mind itself expands to become "immanent in the larger system [of] man plus environment."[26] Bateson uses the rather pointed example of a man cutting down a tree with an axe. The entire system changes over time as a whole, as each stroke of the axe is modified according to each cut: "The self-corrective (i.e., mental) process is brought about by a total system, tree-eyes-brain-muscles-axe-stroke-tree." In such a system, the self is not an individual who thinks and acts with purposive, rational thought in opposition to a world of external objects; it exceeds itself both through unconscious processes and as it connects to things in the world. The communicative movement of information throughout the system is given precedence over any particular part:

> The total self-corrective unit which processes information, or as I say, "thinks" and "acts" and "decides," is a system whose boundaries do not at all coincide with the boundaries either of the body or of what is popularly called the "self" or "consciousness." . . . The network is not bounded by the

23. See Gregory Bateson, "Style, Grace and Information in Primitive Art," in *Steps to an Ecology of Mind* (Chicago: University of Chicago Press, 1972); and "Panel Discussion: The Creative Act" (1957), Archives of American Art, American Federation of Arts Papers, Smithsonian Institution, Washington D.C.
24. Ruesch and Bateson, 3.
25. Bateson, *Steps to an Ecology of Mind*, 408.
26. Ibid., 317.

> skin but includes all external pathways along which information can travel. It also includes those effective differences which are immanent in the "objects" of such information. It includes the pathways of sound and light along which travel transforms of differences originally immanent in things and other people—and especially our own actions.[27]

For Bateson, communicative context is ecological. Communication is the substance of common being and includes both selves and technologies together as "transforms of differences" in an interwoven, contextual field that changes over time. Bateson emphasizes the intra- and intersubjective qualities of communicative systems as they both change and remain stable as determined by the flow of information through the system as a whole.

Bateson is interested in art inasmuch as it is a means of knowingly and self-reflexively acting on the movement of information between various levels of these expanded mental systems. Art is one way that the "rules of translation" (the "transforms of differences") governing communication can be revealed and played with.[28] Aesthetic acts generate their meaning not through their content but through their metacommentary on a given communicative ecology. Rather than allow for "thinking outside the box," art for Bateson self-reflexively produces thought about the box and even the very problem of boxing. Aesthetics is thus a form of what Bateson called "deutero-learning," or learning how to learn. In deutero-learning one learns not by acquiring specific bits of knowledge but by understanding the processes by which it becomes possible to acquire knowledge. Works of art can facilitate this learning-about-learning by presenting metacommentary on information as a contextual process. They can reveal the grounds of their own communicability by exposing the rules through which a communication system is framed, self-reflexively revealing their embeddedness in a particular social context by working from within that context in order to reveal its restraints.

The Artist as Media Ecologist

A former research assistant to McLuhan turned pioneer video artist and activist, Paul Ryan was the figure most responsible for introducing Bateson's thought to the art and activist worlds. Ryan was a member of the Raindance Corporation, a group of artists cum media activists, under whose auspices *Radical Software* was published. Raindance, whose core members included Beryl Korot, Frank Gillette, Michael Shamberg, Ryan, and Ira Schneider, had been established to do "R&D" in the emerging field of media ecology. Beginning in 1970 and published through 1974, *Radical Software* was Raindance's most visible public forum. The opening statement in the first issue summed up the magazine's ethos: "Power is no longer measured in land, labor, or capital, but by access to information and the means to disseminate it."[29] The magazine had originally been called *The Video Newsletter*; all of the people involved in its founding had been using portable video in opposition to broadcast television and the corporate monopoly running it. *Radical Software* published essays by a wide variety of artists, philosophers, and visionaries, all espousing an activist, community-based approach to the mass media, especially television. By embracing the hardware of television production

27. Ibid., 319.
28. "Panel Discussion: The Creative Act," 31–32. See also Bateson, "Style, Grace and Information in Primitive Art," 130–32.
29. Untitled introduction, *Radical Software* 1, no. 1 (1970): n.p.

Paul Ryan, *Everyman's Moebius Strip*, 1969, video installation, dimensions variable (artwork © Paul Ryan)

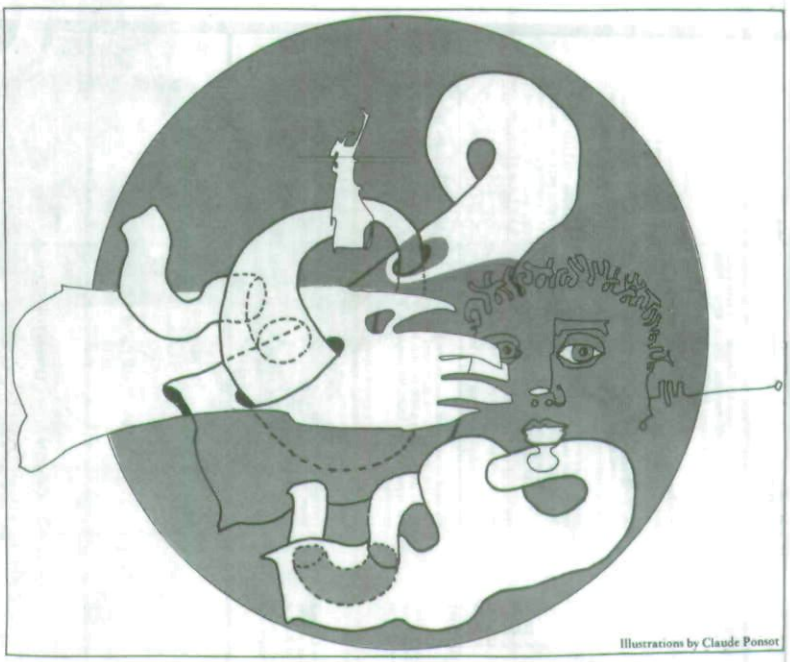
through newly available portable video equipment, the editors hoped that television's "software"—i.e., its content—could be radicalized. They wanted the apparatus of mass communication, and television in particular, to be converted from a spectacular wasteland into a means for producing more holistic forms of being together as people and as a public.

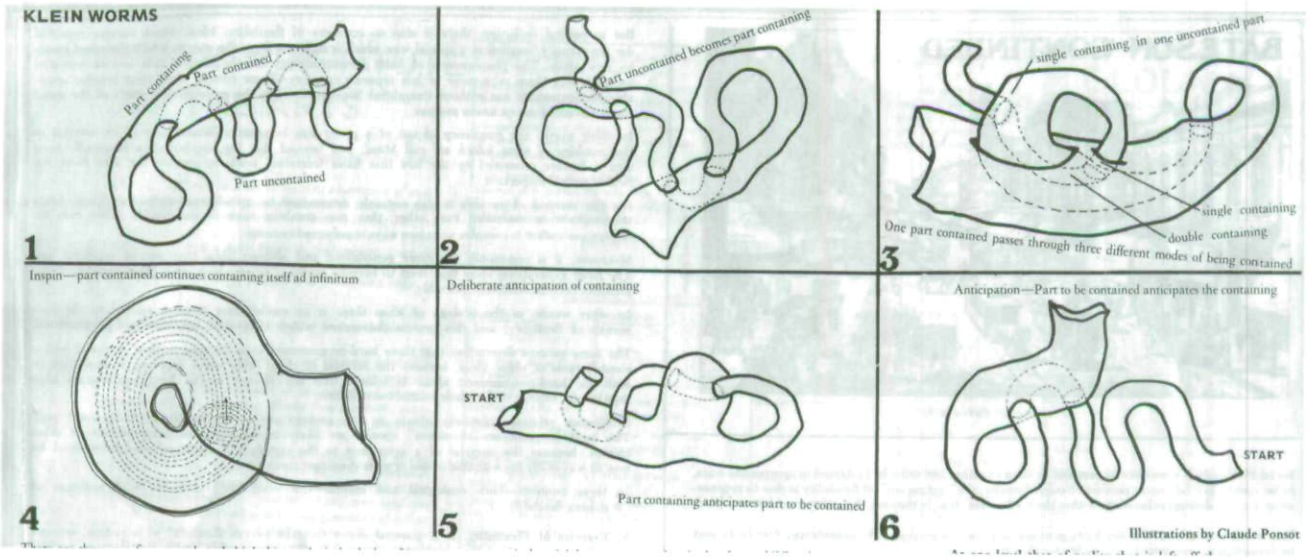
It was through Ryan that Bateson's writing appeared in *Radical Software*, and by the second issue, not long before Bateson rocketed from obscurity to widespread acclaim with the publication of his collected essays *Steps to an Ecology of Mind* in 1972, Ryan had begun to promote his work.[30] Parallel to a politics of media-activist community building, and in an attempt to find new means of collectively organizing the mass media, *Radical Software* presented a more Bateson-inflected exploration of communicative ecologies in relation to the formats of mass mediation and how they produce context. Influenced by Bateson—they had met at a conference in 1970 where Bateson distributed a prepublication draft of "The Cybernetics of 'Self,'" one of his most important essays—Ryan had set out to use video as a means to explore the links between intra- and interpersonal communication.

Ryan's article "Self-Processing" describes his video installation *Everyman's Moebius Strip*, citing Bateson as a source.[31] He takes the Moebius strip as a topological representation of Bateson's mental ecology, where inner and outer worlds meet as they are interconnected in a continuous loop. Setting out to create a similar circuit, he uses video to force the viewer to acknowledge her or his self-image as both an internal and an external phenomenon. In a twist on Duchamp's "creative act," the viewer's own response to her- or himself becomes the theme of the work. Ryan describes the piece as an activity that can be conducted at home, but as a gallery installation shown at the Howard Wise Gallery's groundbreaking 1969 exhibition *TV as a Creative Medium*, it consisted of a curtained booth capable of holding one person at a time, rather like a confessional.[32] The booth contained a stool with a camera pointing at it, and the sound of the artist's voice instructed the entering visitor to sit down and prepare to be recorded on video. Ryan had subjects undertake a few simple relaxation exercises and then asked them to respond naturally while thinking of the following people he named, in this order: "Joe Namath, Don Rickles, Spiro Agnew, your mother, Huey Newton, and you."[33] The subject's responses were then replayed for "analysis." Because they were neither aware of, nor in conscious control of the way their countenances reflected their responses to these figures, almost all the viewers had the same reaction: "Do I look like that?!" One reviewer said that it felt like she was the subject of a psychological experiment. Ryan told her that this very technique

30. Bateson is cited in various essays throughout the run of the magazine, and two of his own essays appeared: "Awake!," *Radical Software* 1, no. 5 (1972): 33; and "Restructuring the Ecology of a Great City," *Radical Software* 1, no. 3 (1971): 2–3.
31. Paul Ryan, "Self-Processing," *Radical Software* 1, no. 2 (1970): 15. For more on the use of the Moebius strip and topological thought in postwar art, see: Eric de Bruyn, "Topological Pathways of Post-Minimalism," *Grey Room* 25 (Fall 2006): 32–63.
32. The exhibition was held from May 17 to June 14, 1969, in New York.
33. Ryan, 15.

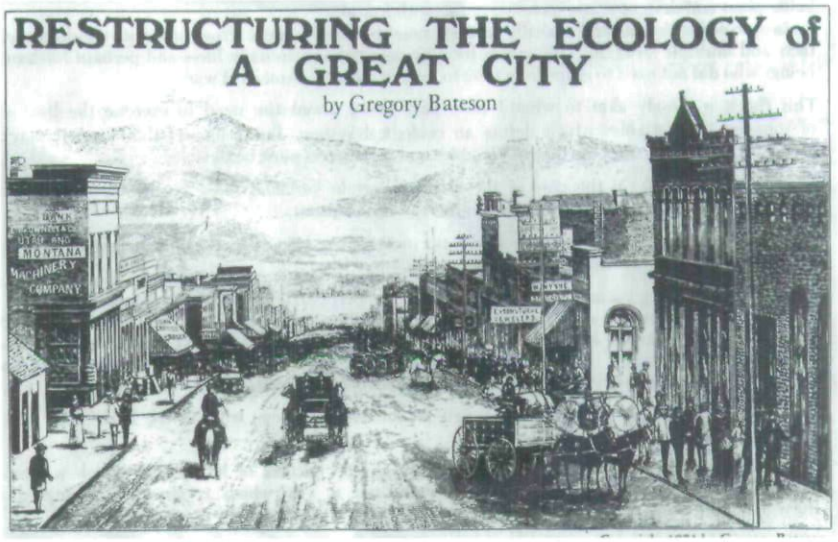
Claude Ponsot, *Klein Worms*, ca. 1971, illustrations for Paul Ryan's article "Cybernetic Guerrilla Warfare," *Radical Software*, vol. 1, no. 3 (artworks © Claude Ponsot)





was indeed being used in psychiatric treatment and that his goal, as with that of video-psychotherapy, was the healthier integration of the self through video. The idea was that the viewer would be able to see him- or herself at one remove on television and so could get some perspective. Ryan's ultimate desire was not necessarily to enact a psychic cure (as in video psychotherapy), but rather to have the viewer recognize that the self is an internal construction that unconsciously reflects the outside world. He made the viewer aware of her or his own body language as a form of unconscious communication with the world, as much a part of the "I" as the conscious mind.

In the next issue of *Radical Software*, Ryan called to task the kind of small-scale



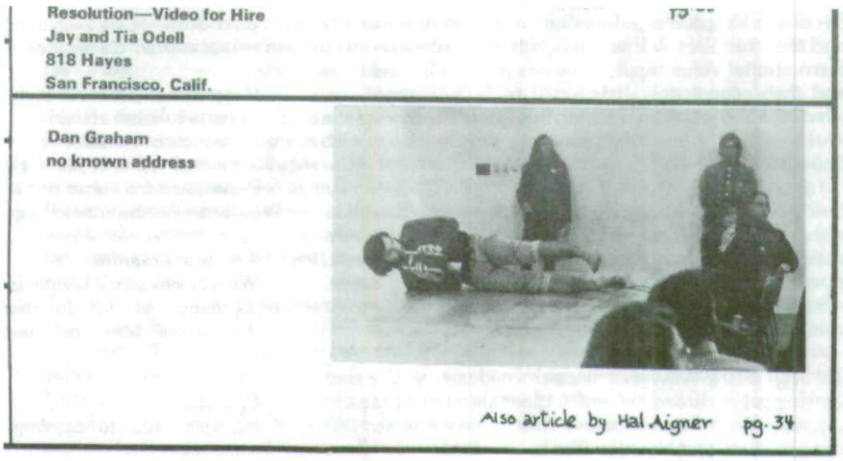
Frontispiece for Gregory Bateson, "Restructuring the Ecology of a Great City," *Radical Software*, vol. 1, no. 4

political violence then being enacted by New Left radicals such as the Weathermen, proposing instead the use of video for the political analysis of how power functions in the information society that had become the context of everyday life in the West.[34] Even so, the practical application of video detailed at the end of "Cybernetic Guerilla Warfare" remained as self-focused as *Everyman's Moebius Strip*. Ryan described a video project based on the "infolding" of the self using the topological figure of the Klein bottle as an extension of his earlier use of the Moebius strip. The repeated retaping of one's self-image and reaction to it on tape was supposed to produce further meta-analysis, but in this piece video once again acts as a mirror, and there is little reflection on how video—or, by extension, television—contextually shapes either the larger environment or social systems.

Bateson's article "Restructuring the Ecology of a Great City" followed Ryan's. Here, late in his career, Bateson began to engage with the politics of his theories. The essay was written for the office of New York City's Mayor John Lindsay as a means of considering how ecological thinking could be used in urban planning. The aim of the study and the root of his politics was the idea that a system could attain "ecological health."[35] Bateson calls for the use of renewable resources and the protection of nonrenewable ones, an idea that is conventional wisdom today, but of which he was a pioneer. Not simply an urban consideration, for Bateson this ecological concern is more general. As a resource becomes increasingly scarce, the possibilities for its use are severely limited and therefore inflexible. Against individual greed and short-term benefit, measures should be implemented to protect the long-term investment in resources such that they remain open to multiple possibilities of use. The problem, as he frames it, is one of "flexibility," by which he means the openness or uncommitted potential of a system for change. His solution is pragmatic: legislate control over these resources, tyrannically if necessary.

Inspired by Bateson, but also by and in touch with the larger ecological spirit of the times that Bateson's work was helping to foster, the editors and authors in *Radical Software* made similar claims about the mass media. At the same

34. Paul Ryan, "Cybernetic Guerilla Warfare," *Radical Software* 1, no. 3 (1971): 1–2.
35. Bateson, "Restructuring the Ecology of a Great City," 2. Bateson spent the last ten years of his career directly involved with the government, especially in California.



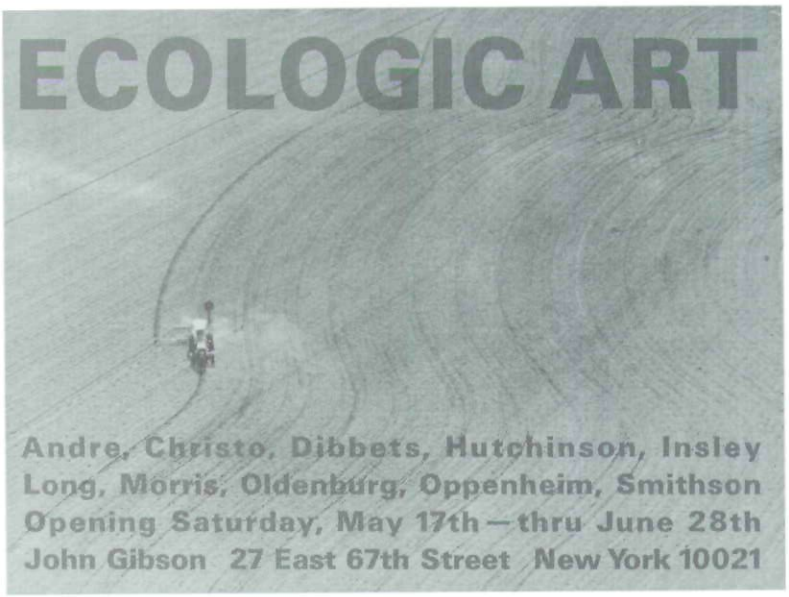
Dan Graham, in the "Access Index" of *Radical Software*, vol. 1, no. 4 (artwork © Dan Graham)

time that cybernetic thought was coalescing along with the green movement (the annual Earth Day began in 1970), they worked to transpose the theory of cybernetic ecology into "new media" theory. Once a scarce resource, television production had become possible for the general public with the introduction of portable video in the mid-1960s, but corporate control had limited its dissemination. One attempt to open television to a broader spectrum of use was undertaken in projects that, like Ryan's, used video as a medium which could work against television in order to construct new ways of interacting with one's self and environment. Another involved lobbying for the open use of cable television. Planning for the apportionment of cable was just beginning circa 1970, and it became a favorite cause of the less formalist, more activist writing found in *Radical Software*. Indeed, from the first issue to the last, the link was made between cable and community. But if open and free community access was the goal, consideration generally went no further than the pragmatics of the rights of use and content.

Following Ryan as well as Bateson, Dan Graham would unite these two areas of interest. Graham was familiar with Bateson through his own reading, *Radical Software*, and Ryan's book of collected essays, *Cybernetics of the Sacred*.[36] His video works put on display the formal construction of community through television as a context, using both closed-circuit monitoring and cable television. Rather than suggesting the opening of television to either an improved version of the self or to community access and improved content, his work would help to map the limits of televisual communication as a particular means of communicative interaction. His interest lay in how communicative context places constraints on community. He was intensely focused on the ways in which communication media shape and control—or as Bateson would say restrain—information.

A photograph of Graham performing his first video work, *TV Camera/Monitor Performance*, even appeared in *Radical Software*'s fourth issue (Summer 1971). With no explanation or explication he can be seen—just barely—rolling back and forth on a table, portable video camera in hand. The caption for the image reads "Dan Graham, no known address" and then references an article on another page that makes no mention of his work. He never appeared in the magazine again. Graham's picture was featured in the magazine's "Access Index." The index functioned like a newspaper's classified-advertising section, a place for artists and

36. Graham, interview with the author, April 13, 2002, New York. Paul Ryan, *Cybernetics of the Sacred* (New York: Anchor Press/Doubleday, 1974).



Card for the exhibition *Ecologic Art*, John Gibson Gallery, 1969, Lucy R. Lippard papers, ca. 1940–2006 (photograph provided by the Archives of American Art, Smithsonian Institution)

organizations to self-promote and network with others who were interested in video and in working against the existing systems of the mass media. This was in keeping with the editors' desire to increase access to the means of production through information exchange and community building. However, the lack of contact information in Graham's ad is conspicuous, standing out in opposition to all the other listings. Could this have been a simple mistake on the part of the editors? Did they accidentally throw away the envelope with Graham's return address? In previous magazine works such as *Homes for America*, Graham had slyly played on the context in which his work appeared by calling attention to the magazine itself as a framing format. Graham said of his early turn to magazine works, "My idea was to present art in-formed directly by the information media."[37] Was this another attempt to do the same in a subtle critique of *Radical Software*'s ethos of community openness?

In 1969 Graham was invited by John Gibson to write a book on "ecological art" for an exhibition of the same name that Gibson was organizing. The exhibition opened in May and featured the work of artists such as Christo, Jan Dibbets, Richard Long, and Dennis Oppenheim, among others. The book was never published, but by the end of the year Graham had transformed his essay into a section of his 1969 self-published book, *End Moments*. Entitled "Subject Matter," the essay took a radically novel perspective on the movement that was coming to be known as "earth art" or "earthworks." For Graham the concept had more to do with rethinking the relationship between subjects and objects as an extended field than with earth as material. Here Graham read the work of various artists such as Donald Judd, Carl Andre, Sol LeWitt, and Bruce Nauman as precisely upholding claims that Minimalist and Postminimalist art include the body of the viewer and the viewing space as an integral part of the work itself. Yet, unlike the critic Michael Fried's phenomenological reading, Graham said of this work, "Both the artist, the transported material . . . and the viewing subject are in-formation."[38] He linked his own work to this position in a one-sentence autobiography written around the same time: "My subject matter is in-formation."[39]

37. Dan Graham, *End Moments* (New York: Dan Graham, 1969), 42.
38. Ibid., 20.
39. Dan Graham, untitled biographical statement, *Aspen* 8 (1970–71): n.p.

This epigram is a double double-entendre, unfolding into a four-square set of positions: my art is information; my art is in formation, my self is information; my self is in formation. With one economical statement, Graham is able to expand himself (his self) into a media ecology. In work that followed, he went on to explore information as a process, calling attention to the ways in which communication systems form—"inform"—meaningful contexts. Rather than only infold the self as Ryan had, Graham's video work both infolds and "outfolds" the self so that the connections between the self and its environment would be on display as a total information system "in formation," as produced by the particular restraints of televisual communication.

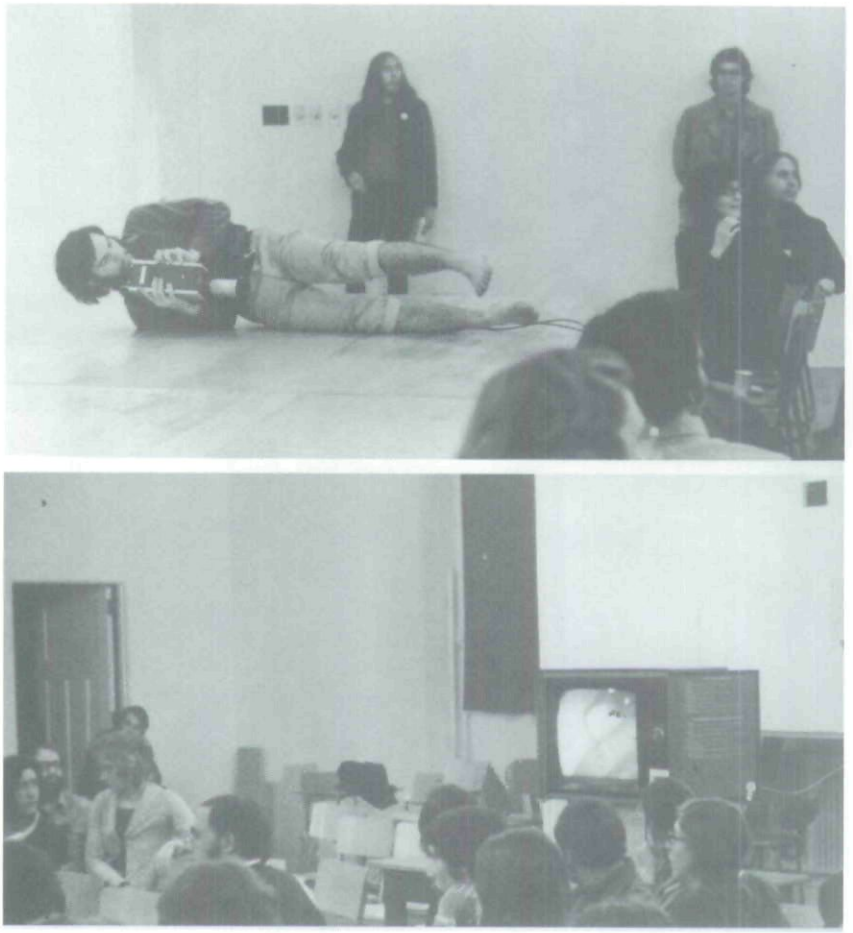
The concerns of Graham's early video work were quite close to those of Ryan and *Radical Software*. In 1971 Graham wrote a proposal for a book entitled *Video Cyberspace*.[40] The planned book would have been divided into two sections, "Entertainment Revolution" and "Alternate Media: Information Revolution," the former trumpeting the technology as inherently revolutionary and the latter the potential revolution of giving the consumer access to the means of television production. A subsection of part two seems to reference Bateson's ecological revision of anthropology. Labeled "anthropological 'media mediative' groups," it describes how selves connected to television form information systems, pointing to a theme that Graham would pursue as his video work developed: "Current use of video technology to define a community by issue, not by geography, to achieve through feedback and other means a meaningful definition of environment."[41]

It was at this point that Graham made *TV Camera/Monitor Performance* and sent documentation of the performance, originally staged at the Nova Scotia College of Art and Design in 1970, to *Radical Software*. For the piece, Graham lay on a stage at approximately the level of the tops of the heads of his audience. Holding in his hands a video camera that was patched to a monitor located behind the audience he rolled back and forth from one end of the stage to the other while looking through the viewfinder and attempting to keep the camera pointed at the monitor. Turning a surveillance technology into a game, he played with video feedback as an inherent part of closed-circuit monitoring. When his view was on target, video feedback was produced on the monitor; when off target, both his body and the audience appeared on screen. The audience had to decide whether to watch him directly at the front of the room or turn around and watch him (and perhaps themselves) reproduced onscreen. Recalling Bateson's deutero-learning, Graham called this setup a "learning machine."[42] It was designed to make the viewers aware, at one remove, of their own position relative to the total communicative context, including the artist, the work, its means of transmission, and the surrounding environment. It was also designed so the system itself would change over time in response to the interaction of its various parts. As Graham compels the members of his audience to shift their attention back and forth between the live event and its live-like reproduction on the monitor, they cannot help but become aware of the distance lurking in televisual immediacy as the screen either feeds back or frames the event. The event's immediacy is riven because viewers can only locate themselves in the closed circuit by switching between its opposed parts: if watching the live event they miss its monitoring, and if watching the monitor they see the event at one remove. Even more, it is only by watching the monitor that the audience can tell if Graham is on or off

40. Dan Graham, "Video Cyberspace (Antholgoy) [Sic]" (1971), Dan Graham Archives, New York. This is a remarkably early use of the term "cyberspace." The *Oxford English Dictionary* credits William Gibson as coining the term in 1982. Graham's book was eventually published in significantly different form as *Video-Architecture-Television* (Halifax: Press of the Nova Scotia College of Art and Design, 1979).

41. In the original document part of this statement is quoted from an uncited source. It reads in full, with quotes and ellipses in the original: "Current use of video technology to define a community 'by issue, not by geography,' to achieve through feedback and other means 'a meaningful definition of environment . . . people participate in . . . exposing their interests, their investments, their feelings, thoughts and confusions regarding life situations.'" Graham, "Video Cyberspace (Antholgoy) [Sic]."

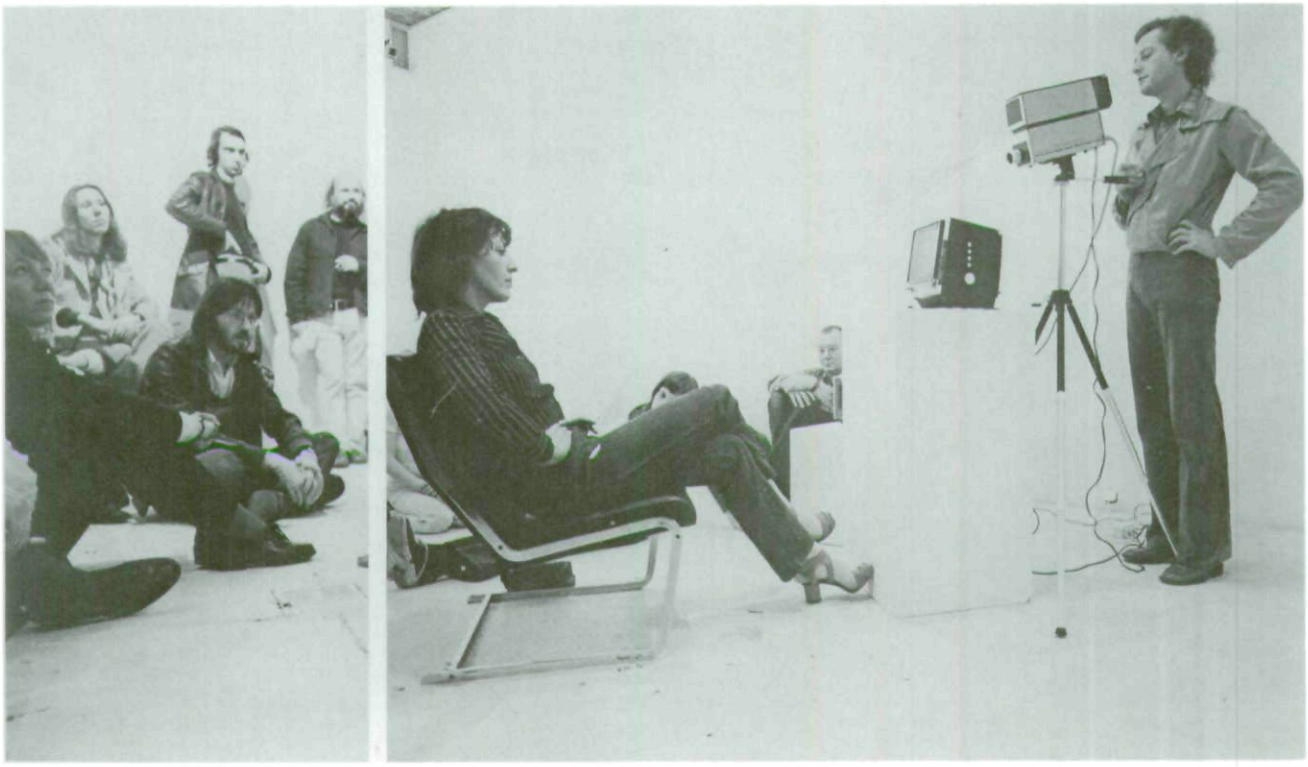
42. Graham also cites Bertolt Brecht's *Lehrstücke* as influences. Dan Graham, *Performance* (New York: John Gibson/Dan Graham, 1970), 10, 15–22.



Dan Graham, *TV Camera/Monitor Performance*, 1970, video installation, dimensions variable (artwork © Dan Graham)

target and so see the video feedback, but this view has been made difficult by the position of the monitor behind the audience. In turning to the monitor, the viewers can see themselves reproduced, but only from behind. Graham thus denies the mirror effect of Ryan's work; the audience cannot adequately surveil itself. *TV Camera/Monitor Performance* makes one of the general limit conditions of televisual liveness available to the audience: that even when live, what it represents is always at a virtual distance. On television, an event can appear in two places simultaneously but only in relation to a spatial and/or spatiotemporal delay. However much the live televisual image might exude presence and immediacy, it is nevertheless always framed by a process of monitoring and screening.

Another early video work by Graham, entitled *Two Consciousness Projection(s)* from 1972, moves beyond general surveillance. It calls further attention to the boundaries that television as a system places around selves in regard to gender. A man and a woman face off in front of an audience with a closed-circuit video system between them. The man stands behind the camera, looking through the camera at the woman. She sits facing the monitor, looking at her image transmitted in real time to the screen. The audience sits behind the woman, and it too is captured by the camera and appears on screen. The piece begins with the woman speaking aloud, as accurately as possible, the content of her consciousness. The man then describes the woman as objectively as possible, voicing his perceptions



Dan Graham, *Two Consciousness Projection(s)*, 1972, video installation, dimensions variable (artwork © Dan Graham)

Dan Graham, *Project for a Local Cable TV*, 1971, video installation, dimensions variable (artwork © Dan Graham)

about her. They alternate this way for an unspecified period of time, and, as Graham writes, their consciousnesses are projected outward, affecting each other and the audience, and so their further acts of description. The audience can compare what the performers are saying and how the performers' actual appearance coincides with or diverges from the audience's virtual representation on screen. Graham writes that as the audience watches, "A field is created in which audience and performers place reciprocal controls on the other."[43] The audience becomes a kind of externalized superego for the performers, the audience and performers melding into a larger mind, in Bateson's sense of the word when he describes the elision of self and world. *Two Consciousness Projection(s)* produces a community centered on television and at the same time makes the ways in which power flows through this community apparent. It does so by producing a situation in which all the participants, including the audience, become functions of its rules of translation as they feed back into the system. In this case, the objectification of women in the mass media is turned on its head. Because the woman is the only one in the whole setup who is in control of her own self-descriptions, rather than being objectified, she is both the subject and the object of the piece, and so is revealed as neither; she reclaims her "self" not as an individual, but precisely as the part around which the larger whole circulates—against a setup designed for her objectification.

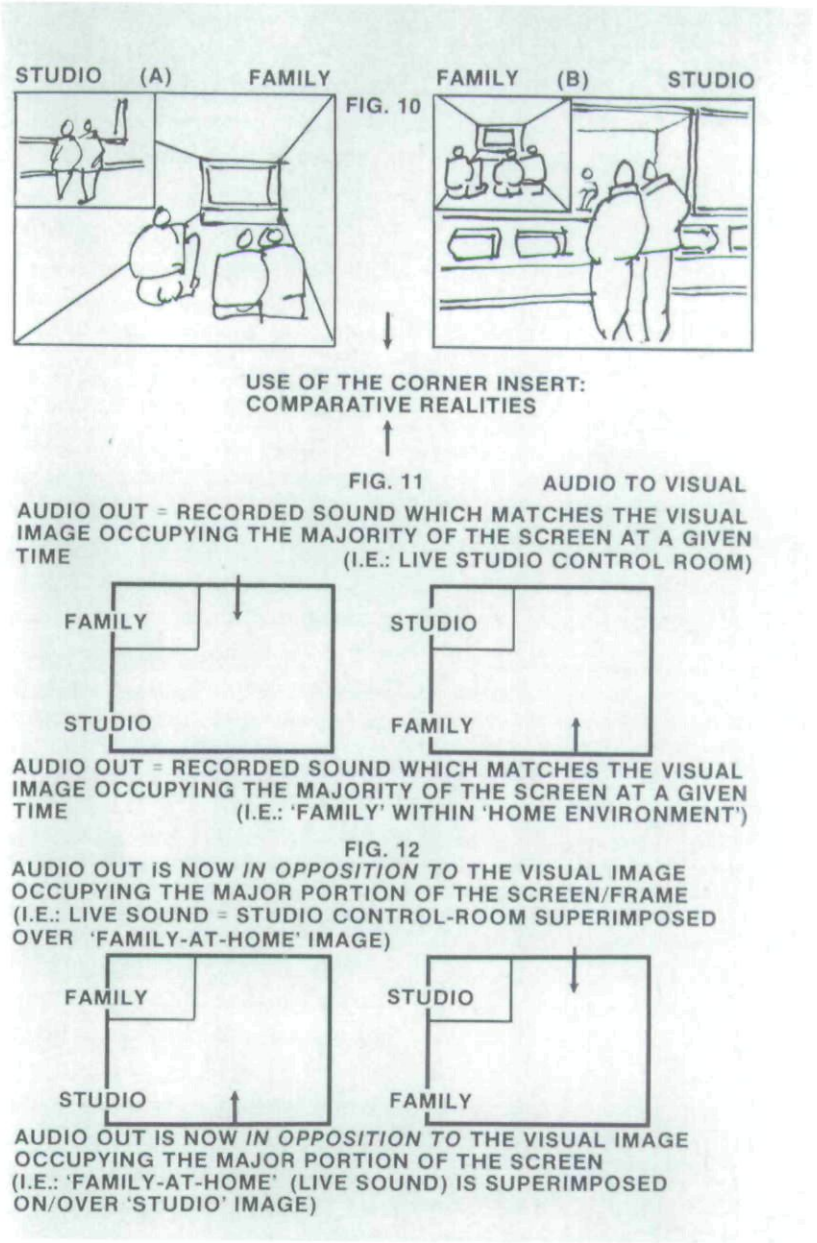
Picking up on *Radical Software*'s push to turn cable television into a means of improving democracy and public life, Graham made several works designed to allow home viewers to reflect on commercial television's communicative limits. In 1971 Graham staged a version of his piece *Project for a Local Cable TV* in a classroom at the Nova Scotia College of Art and Design. (It was intended for

43. Graham, *Video-Architecture-Television*, 4.

broadcast on cable, but never made it to TV screens.) Two people who hold opposing views on a particular subject are invited to the station to air their differences. Members of the audience become the "anchormen," the authority of the talking head seemingly bequeathed to representative viewers. The opponents face off, each looking through a camera pointed at the other while sitting in front of a monitor displaying the image shot by the other's camera, so that each can see both views simultaneously. They alternate describing their points of view on the given topic while the person not currently speaking zooms in or out in order, as Graham writes, to "reflect their feelings of subjective 'distance' from the other's 'position.'"[44] Here Graham equates the manipulation of the technical apparatus with affect. The monitor each speaker watches contains the view from the other's camera so that the speaker knows at any given time how the other feels about what they are saying. The zoom thus becomes a correlative for the emotional position of oneself in relation to the other, as the machinic image becomes formally keyed to the affective response flowing through the system. One person's position may or may not change—may or may not feed back—in relation to the other person's mediated response. After giving their own points of view, they reverse positions, and are forced to represent the other person's point of view, continuing the process of empathic zooming in or out on the other. During the first two parts of the piece, a director switches between the two views for the home audience, so that the scenes rotate through both views with both voices speaking. For the third and final part, keeping the cameras to their eyes, the participants discuss the relative merits of both points of view. A split-screen image appears on the monitors (which is what the home viewer also sees), each side of the screen presenting the view of one participant looking out at the other. In all three parts, as Graham would pun, the monitor self-reflexively shows an image of "I" becoming "eye" becoming "camera eye."[45]

Graham presents a parodic critique of both the normal television home-viewing experience and the kinds of electronic democracy promoted by *Radical Software*. His critique is based on two operations: the selection of the speakers as representative members of the viewing audience and the making visible of mental response through the technical apparatus of video. In the first place, the audience can purportedly recognize itself in the two debaters, apparently chosen from its ranks. Rather than being singled out for celebrity, they are there like audience members on game shows or talk shows, and thus trigger a feeling of recognition—of "that could be me"—in the home-viewing audience. They debate topics that are current for the viewing audience, as experts otherwise would, opening up television as a segment of the public sphere to the kind of democratic possibility imagined in the pages of *Radical Software*. But in *Project . . .* the means of transmission remains a one-way street. The home viewer may see the debaters reach rational and psychological consensus (or not), but they are as always only the recipients of the debate, unable to directly effect its outcome. Through the zooms and cutting, Graham formally puts on display the agonistic public sphere while calling attention to its limits under the regime of one-way, corporate broadcasting.[46] Home viewers watch as their "representatives" represent their own and each other's positions and what is purportedly but can never actually be the viewer's position. The home viewer is unable to alter the terms of the debate or suggest alternative positions. Viewers can only see "their" opinions

44. *Dan Graham: Works, 1965–2000* (Düsseldorf: Richter Verlag, 2001), 136.
45. See Dan Graham, *Films* (New York: Marian Goodman Gallery, 2001).
46. On agonism, antagonism, and the public sphere, see Ernesto Laclau and Chantal Mouffe, *Hegemony and Socialist Strategy: Towards a Radical Democratic Politics* (New York: Verso, 2001); and Chantal Mouffe, *On the Political* (New York: Routledge, 2005).



Dara Birnbaum, *Use of Corner Insert: Comparative Realities*, 1978, artist's drawing and concept rendering for Dara Birnbaum and Dan Graham, *Local Television News Program Analysis for Public Access Cable Television*, 1978, as printed in Dan Graham, *Video-Architecture-Television*, ed. Benjamin Buchloh and published by Press of the Nova Scotia School of Art and Design, 1979 (artwork © Dara Birnbaum)

reflected in the pulse of the zooms as the debaters continuously revise their estimations of their own and the other's opinion. As the private interior of each debater's mind is made visible—and so made public, especially since they appear on television—the screen becomes an ever-changing psychological Geiger counter, like an opinion poll or a television ratings system come to life. The viewer's participation is frustrated, despite any identification she or he might have with those on screen. Her or his mental map never feeds back into the system.

Graham's early work on television culminated in a project he undertook with Dara Birnbaum, *Local Television News Program Analysis for Public Access Cable Television*. Originally conceived in 1978, it was broadcast on cable on June 11 and 13, 1980, in Toronto. Graham and Birnbaum set out to analyze the conventions of local

news. Local news was specifically chosen because of its tendency to present reporters as a group of friends interacting in a way that mirrors the affability of the domestic setting of receivership. As Graham had turned audience members into anchors in his earlier piece, here Graham and Birnbaum turn their attention to the working conventions of the commercial public sphere in relation to home receivership. Broadcast live, anchors look into the camera and so out at the viewer, and then turn to banter with each other—as if the senders and receivers of the news were all part of one big, happy family. This "happy news format" is indicative of the look of the news and of television in general because it is predicated on a face-out that seems to say to the viewer that she or he is right there, connected with what is being viewed immediately and unmediated. Graham and Birnbaum set out to make visible the normally invisible spheres of production and reception that produce this affable immediacy. They recorded a segment of a local news broadcast, along with a view from a "typical" home where the same segment of the program was being watched, and a view of the control room shot as the segment was being produced. These "concurrent realities," as they called them, were then alternately inset against each other using a corner insert on the upper-left quadrant of the screen with the audio track shifting among the views.[47] The family on television distractedly watches a program called *City Pulse*. The parents sort mail and the children run around playing, while images of the Iran hostage crisis and other news items are largely ignored. The joviality of the newscasters almost perfectly mirrors the family in its relaxed leisure state, as unfolding historical events are framed in a way precisely designed to be either ignored or forgotten. There is no apparent investment in any particular news on the part of the home viewers, and certainly no agonism, let alone antagonism.

The conclusions the artists reach are forgone: despite the immediacy inherent in live television as a communication system, they write, "In the typical daily news program, unmediated immediacy is simply mythic."[48] This immediacy is partially due to reality being split into concurrent but displaced realities by the vagaries of broadcasting and its unidirectional flow. However much the news team seems part of any particular family's life, it is there only at a virtual distance and only for the masses, never for anyone in particular. To be there for the masses also means that what it reports is formulaic, designed to be easily digestible as dictated by the need to increase ratings and so the value of each advertising segment. In order to make news-watching palatable (even "happy") and generate revenue, the hosts must simultaneously present information of import to the viewers and discount its seriousness. They do so by moving quickly from one unrelated topic and affective tenor to another. However hot a given political topic, the flow of information is designed in its overall context to disturb the domestic sphere as little as possible. When *Local Television News . . .* was broadcast, home viewers saw a representative family onscreen, just as their representatives had appeared in Graham's earlier piece. Unlike the earlier piece, *Local Television News . . .* demonstrates the more typical, day-to-day use of television, wherein the television acts as a domesticated complement to private life rather than as a stage for a radical public sphere. In showing the broadcast from behind the scenes, the diffusion of strong affect is revealed as a product not only of the happy news team but also of the continual labor of switching and image manipulation engineered in real time.

47. Graham, *Video-Architecture-Television*, 58 and 77. On the use of the phatic function of communication in video, see my "Live on Tape: Video, Liveness and the Immediate," in *Moving Images: From Cinema to the Museum*, ed. Tanya Leighton (London: Afterall, 2008).
48. Graham, *Video-Architecture-Television*, 61.

Graham and Birnbaum end their description of the piece by asking: "Can an analytic, didactic de-construction of media, such as we propose, be of cultural and political value to the community?"[49] Inasmuch as they use cable as a communicative system that can self-reflexively reveal power structures otherwise hidden in plain sight, the answer is clearly yes. *Local Television News* . . . immanently critiques commercial television's everyday use from within. It offers its audience a cybernetic opportunity for deutero-learning about its aporias and closures in relation to the selves it frames through its particular rules of translation. It suggests that all forms of communication are mediated and dependent on context, and never immediate. While Graham and Birnbaum confirm Schapiro's criticism of the mass media as debased spectacle, they do so by turning the mass media—including its viewers—against itself ecologically. They take up the politics of the mass media through Bateson's communicative ecology, engaging not only with the psychic and phenomenological dimensions of technological mediation but also, simultaneously, with its economic and normative restraints.

William Kaizen is assistant professor of aesthetics and critical theory at the University of Massachusetts, Lowell. His current book project is *The Immediate* (Duke University Press), on early video art, telecommunication, and the critique of publicity. His writing has appeared in *Bomb, October, Grey Room, and Texte zur Kunst*. His essay "Computer Participator: Situating Nam June Paik's Work in Computing" is forthcoming in *Mainframe Experimentalism: The Experimental Arts and Early Digital Computing* (University of California Press).

49. Ibid.