

---

Edward A. Shanken (U.S.A.)

GIRWRAP@AC.PUB.OUKE.EDU

**Gemini Rising, Moon in Apollo:  
Attitudes on the Relationship between Art and Technology  
in the US, 1966-71**

*•In the history of human thinking the most fruitful developments frequently take place at those points where two different lines of thought meet.*

-Werner Heisenberg<sup>2</sup>

My research examines the complex and often conflicted attitudes towards the relationship between art and technology held by artists, engineers, and art historians in the 1960's, a time of intensive artistic experimentation with technology. In what follows, I shall analyze statements by artists John Cage and Robert Rauschenberg, engineer Billy Kluver, and art historian/curator Pontus Hulten (using philosopher Martin Heidegger's *The Question Concerning Technology* as a critical foil) in order to better understand what technology signified, and what signified technology, during this culturally, socially, and politically volatile period.<sup>3</sup> Statements by Jack Burnham and Maurice Tuchman, who curated major art and technology events during this time, will also be considered for their insight into the potential conflicts between artists using technology and the corporations that sponsored exhibitions including their work. By exhuming the hidden presumptions buried in the 1960's discourses about art and technology, I hope to increase awareness of the historical, ideological underpinnings of *these* practices. The rhetoric of art and technology in the 1960's tends to be bifurcated into binary oppositions of reason and belief, so this paper slides between the same poles, revealing the limits of this critical method.<sup>4</sup>

**John Cage**

According to Cage, since the artist is the progenitor of a revolutionary heritage, then through collaborations between artists and engineers, this revolutionary element will be transferred to the technical servants of commerce and industry, resulting in a transformation of the social order. Even while claiming to want to remove the separation between artists and engineers, this particular formulation oversimplifies the categorical distinctions between them and reduces the characteristics of each to a predictable caricature. Cage unabashedly celebrates the artists while condescending to the engineers, and never explains *how* this transfer of revolutionary spirit from the one to the other would come about

To his credit, Cage does express a common *sentiment* of the time that the world was out of balance, and that revolution was eminent. The perpetual threat of nuclear annihilation during the Cold War, exacerbated by the Bay of Pigs conflict, the unpopular war being fought in Viet Nam, the space race, and increasing concern about the deterioration of the Earth's ecology by industry, all weighed heavily on the minds of artists and intellectuals in the 1960's. And all fingers pointed to technology as the culprit: not technology, itself, but technology as the product of the growing "military-industrial complex" that President Eisenhower had warned of in his 1961 farewell address. Something had to be done to control the technologies which, it appeared, were beginning to control us.<sup>5</sup>

Lest one should imagine that Cage's beliefs are restricted to the rarefied domain of art, electrical engineer Dr. Billy Kluver agrees with Cage's position, but considers it "tame" compared to his own.<sup>6</sup> Kluver has stated that, "Art and technology go well together in a world run by people who consider boredom the greatest virtue."<sup>7</sup> The Bell Labs laser researcher explained that, as a result of their training, engineers are "locked into a very restricted way of looking at the world," which prevents them from "using their brains to change the environment, to make a more human environment, as they should."<sup>8</sup> He maintains, however, that artist-engineer collaborations can yield "technology (that) is for pleasure, variety, change, respect for individual choice and human relationships."<sup>9</sup> By organizing such collaborations, Kluver came to believe that he "could change technology, and that art was a vehicle for that."<sup>10</sup> He felt that there was an important role that he could play as an intermediary between artists and engineers, and ultimately left his job at Bell Labs in order to do just that – a move which testifies to Kluver's vision, commitment, and guts.

Theoretically, one might find it difficult to accept Kluver's assertions regarding the tunnel-vision that characterizes the engineering profession. Regardless of the similarity of their training, there are so many different types of engineers from so many diverse backgrounds that these individuals inevitably bring a great array of perspectives and creative strengths to their varied tasks. It may be hard to argue with the desirability of creating a more human environment: But there would be little consensus of what would constitute that. The qualities that Kluver suggests – "pleasure, variety, change [and] respect for individuals" – are far from universal, even amongst the citizens of western democracies. One might question, as well, Kluver's assertion that engineers "should" use their brains in any particular way. It remains unclear here, as it was in Cage's statement, why artists are qualified to assume, or desirable in, the role of cultural model.<sup>11</sup>

The program notes for *Nine Evenings* emphasized the importance of "feedback to industry from the interaction between artists and engineers."<sup>12</sup> Such ideas motivated the founding in 1966 of the group *Experiments in Art and Technology, Inc.* (E.A.T.) by Kluver and artist Robert Rauschenberg. For the November 1, 1967 issue of *E.A.T. News*, together they wrote the following manifesto – itself a collaboration between an engineer and an artist. This particular formulation expresses the "urgency we feel about the need for a new awareness and sense of responsibility" regarding the relationship between art and technology, and the long-range goals of E.A.T.:

MAINTAIN A CONSTRUCTIVE CLIMATE FOR THE RECOGNITION OF THE NEW TECHNOLOGY AND THE ARTS BY A CIVILIZED COLLABORATION BETWEEN GROUPS UNREALISTICALLY DEVELOPING IN ISOLATION.

ELIMINATE THE SEPARATION OF THE INDIVIDUAL FROM TECHNOLOGICAL CHANGE AND EXPAND AND ENRICH TECHNOLOGY TO GIVE THE INDIVIDUAL VARIETY, PLEASURE AND AVENUES FOR EXPLORATION AND INVOLVEMENT IN CONTEMPORARY LIFE.

ENCOURAGE INDUSTRIAL INITIATIVE IN GENERATING ORIGINAL FORETHOUGHT INSTEAD OF A COMPROMISE IN AFTERMATH, AND PRECIPITATE A MUTUAL AGREEMENT IN ORDER TO AVOID THE WASTE OF A CULTURAL REVOLUTION.<sup>13</sup>

The authors assert that it is unrealistic for art and technology to develop separately. But is it? These fields, if they can be called that, developed separately at least from the Renaissance, becoming increasingly specialized as a result of that autonomy. If their isolated development is no longer realistic in the mid-twentieth century, is that because that specialization has created a "less human environment"? But then what would that mean? What, moreover, would characterize a "civilized collaboration"? Perhaps an uncivilized collaboration would provide more of the "variety, pleasure, and avenues for exploration..." that Rauschenberg and Kluver sought. As Jasja Reichardt, curator of *Cybernetic Serendipity* (1968) argued, "artists like Takis, Tinguefy, ... Paik [and others] ... have consistently made use of technology without the help of any specific organization."<sup>14</sup> What is so striking in Kluver and Rauschenberg's final sentence, is their belief, or veiled threat, that if industry did not change its ways, there would inevitably be a revolution, and that would be – pariah of efficient engineering – "wasteful." In *this sense*, Cage's idea of the artist as revolutionary has become transformed into the idea of the artist as the key to efficiency and the prevention of revolution.

If *Nine Evenings* represents the more free-wheeling, self-organizing, and independent end of the art and technology spectrum, *The Machine: As Seen at the End of the Mechanical Age*, represents its measured, institutional, and domesticated end. K.G. Pontus Hulten's large-scale, trans-historical exhibition

of art and technology, including work by some one hundred artists, opened at the Museum of Modern Art (MOMA) in New York in 1968.<sup>15</sup> *The Machine* broadly surveyed the historical intersections of art and technology, ranging from Leonardo Da Vinci's drawings of visionary flying machines (c. 1485-90) to a commissioned competition amongst contemporary artist-engineer collaborations, publicized and overseen by E.A.T.<sup>16</sup> By endorsing this interdependent history with MOMA's seal of approval, Hulten sought, in part, to overcome popular prejudices against the use of technological media in art as threatening the humanist values of originality and beauty.

Hulten's introductory essay in the distinctive, steel-clad catalogue, offers an example of the complex and "conflicted" [his word] views regarding the relationship between art, technology, and the human that are characteristic of the late 1960s. On the last page Hulten writes:

"From the mid-fifties on, they [artists] have devoted themselves to an attempt to establish better relations with technology. Standing astonished and enchanted amid a world of machines, these artists are determined not to allow themselves to be duped by them. Their art expresses an optimistic view toward man, the creator of machines, rather than toward technology as such. They lead us to believe that in the future we may be able to achieve other, more worthy relations with machines. They have shown that while different aspects of our relations to machines may conflict, they are not necessarily contradictory. Not technology, but our misuse of it, is to blame for our present predicament."<sup>17</sup>

If Hulten's text appears naïve today because of its faith in human control over technology, it is equally remarkable for the self-consciousness of the author's "conflicted" relations with machines,<sup>18</sup> and the sincerity of his endeavor, which pushes him to the boundaries of his own belief system. Several paragraphs later, Hulten considers and dismisses the "frightening ... notion that modern technology has an evolution of its own, which is uncontrollable and independent of human will." In these passages Hulten takes a position at odds with the pessimistic technological determinism characteristic of, say, Martin Heidegger. The philosopher wrote that "Man stands so decisively in subservience to the challenging-forth of [technological] enframing that he fails to see himself as the one spoken to." He continues, "The threat has already afflicted man in his essence."<sup>18</sup> But just when the fate and free will of humankind appear to be reduced to "standing reserve," by a technological way of ordering the world, it turns out according to Heidegger, that *techné* always has embodied art, and that *poiesis* offers an alternative way of knowing and being. Thus, by a mystical feat of etymological association (that ironically recalls the classical stage device of *deus ex machina*) Heidegger concludes that art offers salvation from the "darkening world" of technological enframing.<sup>19</sup> It must be noted that, by blaming the loss of human control over technology on a perverse and pervasive system of knowledge, Heidegger, a Nazi sympathizer, might allay German guilt over the holocaust. At the same time, given the elevation of art to the quasi-spiritual level of philosophy and religion in the German philosophical tradition of Kant and Hegel, Heidegger could have faith in art when there was little else in which to believe.

Anticipating McLuhan, Heidegger believed that the technological had infected humanity at its "essence," becoming part of, and inseparable from, *human* consciousness. In contrast, for Hulten, the human and the technological remain more highly autonomous entities, with the former being firmly in control of the latter. Though earlier in his essay the art historian enumerated many of the historically and potentially destructive aspects of machines, ultimately he believed that the artist's (and curator's) "unduped" use of technology supported progressive concerns, and provided inspiration for loftier human-machine relations. But by failing to rigorously examine the ways in which technology might very subtly delude those who use it – Hulten's position rests on a hopeful handshake that the strength of human will is incorruptible by it.<sup>20</sup>

Hulten's exhibition also included examples of early photographic and cinematic cameras, as well as photographs and films, which he claimed "provided the basis for much of our way of seeing."<sup>21</sup> Thus while he acknowledged the significance of the proliferation and dissemination of mechanical reproduction – which was rare at that time in a museum context – Hulten did not question the nature of that impact, such as the loss of aura, availability to the masses, and political potential, that Walter Benjamin considered. Like Cage, Rauschenberg, and Kluver, Hulten urged that the decisions that shape our society in the future must be based on the same criteria of respect and appreciation for human capacities, freedom, and responsibility that prevail in art.<sup>22</sup> Hulten argued further that "we must attain a society based on other values than buying and selling," though he does not go so far as to question art's complicity in the "culture industry" and its promotion of commodity capitalism, as Horkheimer and Adorno suggested. Neither is it surprising that Hulten does not discuss the spectacle of art and technology manufactured by major art institutions as a consumable commodity, as Guy Debord would have insisted upon.<sup>22</sup>

Hulten's catalog dedication offers a final example of his complex relation with technology.<sup>23</sup> For the curator dedicated the exhibition not to a family member, but to the mechanical machine, the great creator and destroyer, at a difficult moment in its life when, for the first time, its reign is threatened by other tools.<sup>24</sup> Thus, not only is the mechanical machine eulogized as a sentient being endowed

with the properties of life; and subject to an implied demise, but it is deemed worthy of praise and honor for its contribution to the author's life and work. Ironically, Hulten daimed that 'art expresses an optimistic view toward man, the creator of machines, rather than toward technology as such: but he nonetheless dedicated the catalog to technology as such, and not to the men and women who design and use it.

Hulter's dictum that 'different aspects of our relations to machines may conflict' applies well to the art discourse on technology in the 1960s. John Cage believed that the revolutionary heritage of artists could be transferred to engineers with whom they worked, giving rise to changes in the social structure. Billy Kliver and Robert Rauschenberg maintained that collaborations between artists and engineers would 'create a more human environment,' and that technology could offer greater pleasure, variety, and involvement in ... life, 'thus averting the waste of a cultural revolution.' Pontus Hulten held that technology itself was benign, but not the misuse of it; yet he had faith in the human ability to control technology, and not be duped by it. Martin Heidegger thought that technology had duped humankind and taken control of consciousness, but that this condition contained the seeds of its own undoing; for art could provide alternative cognitive methods, and rescue humanity from the 'darkening world' of technological enframing.<sup>1</sup>

I have introduced all of these assertions in order to examine their assumptions and claims, and provide a historical background for understanding the relationship between art and technology at a particular moment. When subjected to such analysis these positions appear variously naive, pompous, and like so much wishful thinking. One might ask why these very brilliant men all believed that art possesses special and redemptive powers vis-a-vis technology, even though they could not identify in completely rational ways what that redemptive power might be. Why is it, moreover, that so many people, from all walks of life, still believe, or want to believe, in art as a force for benevolent change? Why, also, did a number of the engineers who worked with Kliver on *Nine Evenings* recently say of their interaction with artists that it did open their eyes and change their lives?<sup>22</sup> The answer must be that to some degree this hope may be justified. Art is indeed a special category of human imagination and labor. Art does function according to different rules than engineering. Art can and does open people's eyes and minds, and change people's lives. So does engineering in its way ...

Perhaps Heidegger was keenly insightful when he suggested that technology holds art within it. And, like the process of technological enframing, so art enters into and transforms humanity at its essence, on the level of consciousness. And this unfolding of art occurs in mysterious ways, over great expanses of time and place, as British artist and self-proclaimed 'concept engineer,' John Latham has theorized in his concept of 'time base.' This theory postulates the long-term integration of aesthetic concepts into consciousness as different from the short term ways in which other types of learning become incorporated into behavior. With this philosophy in mind, Latham, along with Barbara Steveni, Jeffrey Shaw, and Barry Flanagan, founded the Artists Placement Group (APG) in 1966, the mission of which was to place artists as observers, and consultants within large corporations, where their unique vision and problem-solving capabilities could contribute to the transformation of industry.<sup>24</sup>

Clearly artists have a crucial role to play in creatively giving form and meaning to technology and society. And while it may be difficult to understand exactly why and how that is so, it is obvious why it is so important for artists to be critical of technology and its relationship to art. For the goals of artists and industry are not always commensurable, sometimes precluding the possibility of collaboration, and necessitating opposition to the institutions that support art.

In 1969, the same year that French artist Jean Toche ridiculed and protested the exhibition *New York Painting and Sculpture: 1940-1970* in an action in front of the Metropolitan Museum of Art, art historian Jack Burnham invited him to exhibit a work of art in the *Software* exhibition at the Jewish Museum. Art critic Grace Glueck reported that the piece was to have been comprised of a walk-in tunnel of air contaminated by noxious - but non-poisonous - gas, whose daily pollution level would tally with the city's.<sup>25</sup> When Toche was informed that a major US automobile manufacturer was the primary sponsor of the exhibition, he withdrew from it, claiming, according to Glueck that it would be hypocritical for him to contribute a work condemning air pollution when the show's chief backer, American Motors, is [in Toche's words] 'one of the major contributors to air pollution.'<sup>26</sup> Burnham replied that 'all progressive things are accomplished with the aid of the System, whether it likes it or not. If Toche withdraws from the show, he's missing a big opportunity to use the inherent energy of the system - American Motors and the Museum - to make his point.'<sup>27</sup> Later, in an interview with artist Willoughby Sharp, a founder of the Art Worker's Coalition of which Toche was a member, Burnham noted that during this period, a number of curators made explicit their sources of exhibition funding, so that,

"... the artist is put in the compromising position of making pieces with money whose source he knows. Somehow the fact that the Guggenheim Foundation's grant come[s] from the copper mines of South America doesn't bother artists half so much as openly working with American Motors money."<sup>28</sup>

Similarly, Maurice Tuchman, who initiated the remarkably ambitious Art and Technology Program at

the Los Angeles Museum of Art - explained that he had,

"... expected resistance from artists ... on 'moral' grounds - opposition, that is, to collaborating in any way with the temples of Capitalism, or, more particularly, with militarily involved industry. This issue never became consequential in terms of our program, perhaps because the politically conscious artist saw himself, to speak metaphorically, as a Trotsky writing for the Hearst Empire. However, I suspect that if Art and Technology were beginning now [in 1971] instead of 1967, many of the same artists would not have participated."<sup>29</sup>

While art as a form of protest, and protests by artists against the institutional constraints that bore down upon their practice, were not uncommon, Toche was rare in boycotting an exhibition on "moral grounds."<sup>30</sup> But his example raises many important questions. Would it have been possible for Toche's piece to function, as Tuchman suggested, like "Trotsky writing for the Hearst Empire" in an American Motors-sponsored exhibition? Or would its critical message have benefited the sponsor, by making automobile manufacturer appear to be concerned not only with art, but with the problem of pollution? Are, as Burnham claimed, 'all progressive things accomplished with the aid of the system?' Or do things accomplished with the aid of the system merely reify and reinforce it?

Because the public reception of *Software* is difficult to ascertain (in part because of several controversies surrounding the show, ongoing technical difficulties, and other factors) it is unclear to what degree American Motors (AMC) benefited - or suffered - from its association with the exhibition. The *New York Times* reported that AMC was honored by the New York Board of Trade with an award "for its support of an experimental exhibition, *Software* ..."<sup>31</sup> Certainly the automobile manufacturer exhibited remarkable vision in bravely funding a challenging, if not risky, venture, and arguably deserved the award as much as any corporate sponsor. But it also turns out that David Finn, principal of Ruder & Finn, the fine art consulting firm that helped secure funding for, organize, and publicize *Software*, was on the boards of both the Jewish Museum and the Business and the Arts Advisory Council of the New York Board of Trade.<sup>32</sup> It is no surprise that in art-business partnerships one hand proverbially washes the other. Such a revelation does suggest how 'the system' benefits as a result of its support of culturally progressive events, aided in part through its behind-the-scenes connections.<sup>33</sup>

Finally, in the *Software* show, a young artist named Ted Victoria exhibited *Solar Audio Window Transmission* (1969-70).<sup>34</sup> Solar panels powered ten transistor radios, which were connected to contact sound reproducers placed on the windows of the building, turning the Jewish Museum into a giant, faintly audible speaker that could be heard only by placing one's ear very close to or against a window. The performance of the piece varied with the weather, an ironic element especially when listening to a weather broadcast, since only clear weather reports could be heard. In a recent interview, Victoria confessed that at the time he was not especially concerned with pollution, or with advocating the use of renewable energy sources.<sup>35</sup> On the contrary, his work was based on the idea of transforming the energy of the sun into information, making the museum itself an active component in the piece, and engaging the audience to interact in new ways with the physical structure of the museum. *Solar Audio Window Transmission* was not especially high-tech and was assembled from pre-manufactured components. It was not politically engaged in any particular or conscious way, though in the context of the AMC-sponsored exhibition, it could not help but take on a resonance of opposition and resistance. It stands out, moreover, as a remarkably subtle and sophisticated use of technology for art, an art that knows its own value as a powerful, transformative force in society that gives form to the invisible shapes of energy, information, and intelligence all about us.

- t, This paper constitutes a portion of the author's dissertation research, undertaken in the Department of Art & Art History, Duke University. It was originally presented at the ISEA97 conference at the Art Institute of Chicago on September 25, 1997. I would like to thank: my wonderful father, Mayor Shan Ken, for materializing unexpectedly in Chicago to attend my presentation; Dr. Kristine Stiles for her constant faith in me and my work, and for her superb editing which was indispensable to giving shape to this essay; Billy Kliver and Julie Martin for generously sharing their time, archives, and other resources with me during a fascinating and lengthy interview; Karl Katz, for two very interesting and insightful telephone conversations; Ted Victoria for a delightful telephone interview; Willoughby Sharp for being Willoughby Sharp, and for graciously sharing his experiences, archives, and insights with me; The Jewish Museum for permitting me access to their excellent archives; and Peter, Julie, and Winslow Ziv for their friendship and generous hospitality during numerous (and sometimes extended!) visits to Chicago.
2. Werner Heisenberg, *Physics and Philosophy: The Revolution in Modern Science* (London: Allen & Unwin, 1959): 161. See also Walker, fn. 24.
3. I recognize that this small sampling of attitudes does not represent the variety of feelings about the relationship between art and technology at the time, but suspect that it does at least give an indication of some important tendencies in the field of art.
4. *Experiments in Art and Technology*, "Trailer introducing Ten Documentary Films from *Nine Evenings: Theatre & Engineering*, October 13-23, 1966. VHS. Produced by Billy Kliver and Julie Martin. Author's transcription of Cage's oral statement.

5. A more thorough investigation of these historical circumstances and their relationship to the application of technology to art during this time comprises a key component of my dissertation research.
6. Interview with Kliiver, September 19, 1997.
7. Douglas Davis, "Art and Technology Conversations. Billy Kluver: The Engineer as a Work of Art." *Artin America* 56:1 (Jan - Feb, 1968):42.
8. Interview with Kliiver, September 19, 1997.
9. Davis, *Art and Technology*:42.
10. Interview with Kliiver, September 19, 1997.
11. Just as there are many different types of engineers, there are many different types of artists. Some of those artists might make the world more boring and less human from Kluver's perspective.
12. Billy Kluver: "Nine Evenings: Theatre and Engineering" *Performance Program*, 1966, no page numbers.
13. Robert Rauschenberg and Billy Kluver, (untitled) *E.A.T. News* 1:3 (November 1, 1967): 5. Reproduced in all-caps, as it originally appeared.
14. Jasia Reichardt, "E.A.T. and after" *Studio International* 175:900 (May 68): 237. Tinguely, in fact, collaborated with Kliiver, but such individual collaborations are not really the issue. The need for a "specific organization" arises, presumably, when a more widespread desire for artists for engineering expertise exceeds the ability of the handful of engineers (who, like Kliiver were willing to work with them) to satisfy the increase in demand.
15. The show later traveled to the San Francisco Museum of Modern Art, and the Institute for the Arts at Rice University, Houston, Texas. The catalog indicates that the exhibition was scheduled to travel to the University of St. Thomas in Houston, Texas, where Dominique de Menil was Chairman of the Art Department. In fact, it traveled to Rice University, where de Menil had become Director of the new Institute for the Arts.
16. Hulten wanted approximately ten such works. The response was so enthusiastic, resulting in 137 submissions, that E.A.T. organized an independent exhibition. Some *More Beginnings*, which was shown at the Brooklyn Museum of Art concurrently with *Machines as Seen*. See "Experiments in Art and Technology, Some More Beginnings." New York: *Experiment in Art and Technology, Inc.*, 1968. Kluver had collaborated with Hulten before, bringing American works to Stockholm for the latter's exhibition *Art in Motion* at the Moderna Museet in 1960. See Billy Kluver, "What Are You Working on Now? A Pictorial Memoir of the 60s." *New York Experiments in Art and Technology*, 1983.
17. K.G. Pontus Hulten, *The Machines as Seen at the End of the Machine Age*. (New York: Museum of Modern Art, 1968): 13. Unless otherwise noted, all other quotes are from this page of Hulten's catalog.
18. Martin Heidegger, "The Question Concerning Technology;" *Basic Writings*. David Farrell Krell, Ed. (New York: HarperCollins, 1977, 1993): 332-3.
19. Heidegger's move bears similarity to Marx's theory that historical economic systems contain the seeds of revolution that ultimately did, or would, overthrow them.
20. Though his resolution is unconvincing, Heidegger, to his credit, did seriously consider this question.
21. Hulten, *The Machine as Seen*:3.
22. See Walter Benjamin, "The Work of Art in the Age of Mechanical Reproduction" in *Illuminations*. Ed., Hannah Arendt. (New York: Schocken, 1969): 217-251, and Max Horkheimer and Theodore W. Adorno, "The Culture Industry: Enlightenment as Mass Deception" in *Dialectic of Enlightenment* (New York: Continuum, 1993). 120-167, and Guy Debord, *Society of the Spectacle*. Detroit: Editions Champ Libre, 1970.
23. Interview with Kluver, September 19, 1997. I am paraphrasing Kliiver's description of the engineers' accounts.
24. See John A. Walker. John Latham: *The Incidental Person - His Art and Ideas*. Middlesex: Middlesex University Press, 1995. See especially pp. 97-101 on APG. The quote from Heisenberg is also cited in Walker's text, p.19.
25. Grace Glueck: "Art Notes: Wares" *New York Times*, December 21, 1969.
26. *Ibid.*
27. *Ibid.*
28. Willoughby Sharp. "Willoughby Sharp Interviews Jack Burnham." *Art* 45:2 (Nov., 1970): 21. Sharp, who had organized several exhibitions of, and written about, kinetic, air, and light art, might have disagreed. Along with Liza Behr and John Perrault, he accompanied artist Takis to MOMA on January 4, 1969, and removed the Greek artist's work from Hulten's *The Machine* exhibition. The new works the museum had promised to show were not included, but instead - and without Takis' consent - MOMA displayed an older work from its collection. This act of resistance led to the formation of the Art Worker's Coalition. Author's interview with Willoughby Sharp, October 1, 1997. The Takis work exhibited, *Tele-Sculpture* (1960) was donated by John and Dominique de Menil, who played an important role in bringing *The Machine* to Houston. See fn.
- 15.
29. Maurice Tuchman, *A Report on the Art and Technology Program at the Los Angeles County Museum of Art: 1967-1971* (Los Angeles: Los Angeles County Museum of Art): 17. My emphasis.
30. For example, Oyvind Fahlstrom's performance *Kisses Sweeter than Wine* at Nine Evenings and Carolee Schneemann's performance *Snow that E.A.T. engineered* at the Martinique Theater (1967) both incorporated relatively complex technology, in artistic protests against the war in Viet Nam.
31. George Gent, "Board of Trade Honors Businesses' Aid to Arts." *New York Times*, November 20, 1970.
32. I discovered Finn's association both with the Jewish Museum and the New York Board of Trade while working in the archives of the Jewish Museum.
33. It is arguable that museums benefit from the acclaim received by their corporate patrons for supporting culture, increasing the likelihood of further support. In this light, David Finn succeeded at helping both the Jewish Museum and American Motors achieve their individual goals. But this "win-win" scenario is muddied by the burden of association that particular corporate sponsors bring to bear on works of art exhibited under their aegis. In other words, just as a corporation's public image is affected by its association with the arts, so the reception and meaning of an artwork is not separable from the institutional context - including the sponsorship - in which it appears. By bringing this association into the gallery, the museum influences the interpretive context for its exhibitions. Toche was keenly aware of this problem.
34. Jack Burnham, Software. *Information Technology! New Meaning for Art*. (New York: The Jewish Museum, 1970): 40-1. This exhibition catalog was never distributed at the museum because the trustees of the Jewish Theological Seminary did not approve of the full-frontal nude picture on page 48, of artist Don Burgy's *Selected Mental & Physical Characteristics of Donald Burgy*. Interview with Karl Katz, September 19, 1997. It is ironic that in such a theoretically and technologically challenging exhibition (including the first public display of a hypertext system, by Ted Nelson) the most traditional subject - the male nude - should cause such controversy.
35. Author's interview with the artist. Victoria said that he wished that he could take credit for a greater environmental awareness, but that in honesty, it was not his primary concern. This work grew out of the artist's earlier experiments with solar energy, c. 1964-5, when popular awareness of environmental issues was substantially less prevalent.