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The Artist and the "Information" Machine: Conceptualism, Technology, and Design in 1970

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The Artist and the Information Machine: Conceptualism, Technology, and Design in 1970

by

Jeremiah William McCarthy

Submitted in partial fulfillment
of the requirements for the degree of
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Introduction

On July 7th, 1970, John B. Hightower, then-director of the Museum of Modern Art, wrote a letter to David Rockefeller, then-chairman of the museum’s board of trustees, outlining a growing concern:

There is a very real concern among contemporary artists...that we are collectively, systematically, and yet unwittingly destroying ourselves. There are others who are not artists that share this concern which surfaces through such issues as over-population, the automobile, pollution of every conceivable variety, drugs, poverty, crime, you-name-it. The war in Southeast Asia is the culmination of a whole pattern of cultural excess and the frustrating unwillingness of our society to correct, even to recognize, its own abuses. Focused against the Establishment...the artist feels that if the Establishment were really committed to correcting societal excess and ending the war, collectively it could...Through new technology the artist is expressing those concerns which are uppermost on his mind and most antithetical to what he considers art – or life.¹

Hightower’s words point to a fundamental ambiguity at the heart of the era’s understanding of technology: how could technology, the same technology that produced some of the most destructive forces of the day, be effectively utilized by an artist to envision a critique of these very processes? As Americans increasingly became aware of the financial ties linking cultural institutions, corporate-industrial technology, and the United States military, it was not uncommon for artists, writers, or critical theorists, to envision such connections as a “pattern” or “machine” affecting every level of society.² As a result, artists approached technology with an


ambivalent attitude. “Technology,” Richard Serra wrote at the time, “is simultaneous hope and hoax.”

In Hightower’s formulation, specificity – exactly what threads weave together to create society’s “pattern of cultural excess” – is forsaken for urgency, yet he instinctively understood technology’s role in society, and the need for art to visualize such connections through powerful metaphors.

This thesis, “The Artist and the Information Machine: Conceptualism, Technology, and Design in 1970” is an attempt to understand the complicated relationship of the artist to the institution and to technology in 1970. The choice of the co-ordinating conjunction “and” for the first part of this title qualifies the relationship between the two terms, although depending on the reader’s position in the present thesis, “and” could signify “or,” “against,” “within,” or the slash/oblique. In the end, “and” was chosen simply because whatever the former term’s position is in relation to the latter, it is taken as axiomatic that a dynamic energy charged the two concepts around the year 1970, a charge that remains forceful in the field of contemporary artistic production. In the following pages, the “information machine” refers to a single object: a film viewing apparatus designed by Ettore Sottsass, Jr., produced under the Olivetti Corporation. Understood broadly, the “Information machine” refers to the exhibition, Information, curated by Kynaston L. McShine, which was held at the Museum of Modern Art, New York (MoMA) from July 2nd to September 20th, 1970. In this larger context, it is employed for its associative potential to theorize a network of aesthetic concerns, corporate interests, and information technologies. As such, this Information machine will be viewed as both a product and

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constitutive element of the rise of the Information Society, a larger social shift to a “post-
industrial society” where information and service-sector employment displace the physicality of
goods and manual labor. Whereas in earlier decades technology largely signified industrial
machines, in 1970, information was the product of technology, as well as its means of progress.

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4 The term “post-industrial society” is most closely associated with the work of the American sociologist
Daniel Bell, outlined in his work *The Coming of the Post-Industrial Society: A Venture in Social
ideas gestated in earlier essays. French sociologist Alain Touraine utilized similar vocabulary in his
book, *The Post-Industrial Society: Tomorrow’s Social History: Classes, Conflicts, and Culture in the
was originally published in French as *La Société post-industrielle: naissance d’une société* (Paris:
Denoël, 1969). Neither Bell nor Touraine referenced one another’s usage of the term, but their
vocabulary indicates a shared intellectual climate and a common interest in theorizing a decisive break
with past processes of social change and the emergence of a new type of society. For one of the most
persuasive critiques of Bell, which stresses continuities between classic formulations of industrialism and
their intensifications in the present moment, see Krishan Kumar, *Prophecy and Progress: The Sociology
of Industrial and Post-Industrial Society* (New York: Penguin, 1978). The period Bell characterized as
post-industrial overlaps with Jürgen Habermas’s theorization of societal changes under advanced
capitalism, Frederic Jameson’s work on the cultural turn to postmodernism, and Debord’s view of the
spectacular society, yet is rarely engaged alongside critical theorists. See Jürgen Habermas, “Modernity –
An Incomplete Project” in Hal Foster, ed., *The Anti-Aesthetic: Essays on Postmodern Culture* (New
York: New Press, 1998) and *The Structural Transformation of the Public Sphere*, trans. Thomas Burger
and Frederick Laurence (Cambridge: MIT Press, 1989); Frederic Jameson, “Postmodernism and
Consumer Society,” in Foster, *The Anti-Aesthetic, and Postmodernism, or, The Cultural Logie of Late

5 Various terms have been used to characterize this period: “post-Fordism,” the “knowledge-based
economy,” the “network society or economy,” the “Information Society,” etc... Although there are
significant differences to each term, an overlapping theme is the speeding up of information and images,
and the primacy and efficiency of informational technologies in societal interactions and multinational
capitalism.

6 The writings of Reyner Banham outline the earlier instrumentalization of technological machines during
modernism, specifically his *Theory and Design in the First Machine Age*, 2nd. ed. (Cambridge: MIT
Press, 1980) and *A Concrete Atlantis: U.S. Industrial Building and European Modern Architecture 1900-
following pages, Banham served as an imagined interlocutor, and his work was a constant point of
reference.
In the words of Marshall McLuhan, one of its greatest champions: “information is the crucial commodity...solid products are merely incidental to information movement.”

One could criticize that such an approach runs the risk of building the information machine as a Machiavellian apparatus that affects all social relations by masterminding a single plan from its throne. Jacques Ellul, a theorist whose work *The Technological Society* loomed large on the year’s cultural horizon, argued that this teleological vision was patently not the case, although he did see technology’s effects as pervasive and all encompassing. Even if one could assure the outcome of a single technological apparatus, on the whole, technology had outgrown human control by the end of the 1940s. This led Ellul to boldly claim:

Technique elicits and conditions social, political, and economic change. It is the prime mover of all the rest, in spite of any appearance to the contrary and in spite of human pride, which pretends that man’s philosophical theories are still determining influences and man’s political regimes decisive factors in technical evolution. External necessities no longer determine technique. Technique’s own internal necessities are determinative. Technique has become a reality in itself, self-sufficient, with its special laws and its own determinations.

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8 The anxiety induced by this vision of technology and its manifestation in American literature of the 19th and 20th centuries is explored by Leo Marx in his *The Machine in the Garden: Technology and the Pastoral Ideal* (New York: Oxford University Press, 1964) 145-226.


Technique, for Ellul, refers to much more than simply technology or machines. He found the word technology misleading, and theorized technique as a technological ensemble – the systems of thought and mechanization that condition and maintain our “social relationships, political structures, and economic phenomena.” Ellul saw technology as imbricated with technique and organizing not from a single directive or the will of any single actor, but according to what he termed the “laws of development,” a complex set of factors immanent to technique. This thesis attempts to untangle some of these factors, but it purposefully retains something of the all-encompassing tone of the “information machine” to evoke the monumental range of vectors and interests that structured the global field of information technologies and artistic production in 1970, without collapsing into the fully deterministic stance defended by Ellul in his later works.

Explicitly or not, many of the artists in Information positioned their work for, against, or alongside such a stance, and The Technological Society is listed under the “Recommended Reading” bibliography of the Information exhibition catalog.

1970 was a watershed year for the intersection of art and technology. In addition to McShine’s Information exhibition, Jack Burnham organized Software at the Jewish Museum, a group exhibition focused on “the fastest growing area in culture: information-processing systems

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11 “In our technological society, technique is the totality of methods rationally arrived at and having absolute efficiency...Technique is not an isolated fact in society (as the term technology would have us believe) but is related to every factor in the life of modern man; it affects social facts as well as all others.” Ellul, The Technological Society, xxv-xxvi.


13 “Recommended Reading,” in Kynaston McShine, Information, exh. cat. (New York: Museum of Modern Art, 1970) 200-205. McShine acknowledged the Sisyphean task of assembling an artistic syllabus for the year from the deluge of printed information available: “This reading list is necessarily incomplete. It would be impossible to list all the material that relates to INFORMATION.”
Billy Klüver, under the aegis of E.A.T. (Experiments in Art and Technology), coordinated over sixty artists, engineers, and scientists to construct the Pepsi Pavilion of Expo ’70 in Osaka, Japan. In his words, the structure amounted to a monumental “living response environment” aimed at “demonstrating physically the variety and multiplicity of experiences that new technology can provide for the individual.”

Across the site, at the U.S. Pavilion, Claes Oldenburg and a team of Japanese technicians unveiled *Giant Icebag*, a dynamic, eighteen-foot soft sculpture of orange vinyl, produced through the Art and Technology Program of the Los Angeles County Museum of Art. It is estimated that over ten million people saw this work, and over sixty-four million people attended this international event. Gyorgy Kepes, founder of the Center for Advanced Visual Studies (CAVS) at the Massachusetts Institute of Technology (MIT), installed the technologically oriented world of *Explorations*, a group installation exhibition at the Smithsonian American Art Museum (formerly known as the National Collection of Fine Arts). The monumental *Olivetti concept and form* – which

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18 *Explorations* was originally intended to be the American pavilion of the São Paulo Biennale of 1969, but was cancelled by Kepes as participating artists withdrew their contributions in protest of the political
included everything from examples of product design and film to totally immersive environments – toured to six major cities: Paris, Barcelona, Madrid, Edinburgh, and London. This list illustrates that in 1970 the mutual interaction of art and corporate industrial technology reached something of a critical density, and it sets the year as the temporal center of this thesis.

A set of terms and concepts populate these primary sources: information, information society, technology, design, the global village, hardware, software, systems, dematerialization, and conceptualism. Such multivalent terms were skillfully employed by their uses, but this thesis aims for a definite understanding of each by narrowing in on specific contexts or intellectual trajectories. In this respect, information constituted very different things depending on whom you asked. Much of the work illustrated in the following pages is considered “Conceptual.”

Although McShine almost never used this term in his writing, he did acknowledge the movement, beginning in the late 1960s, of the dematerialization of the art object. This artistic strategy took wildly different appearances, yet what unified each of its practitioners was an urgent need to question the nature of the physical manifestations of the institution of “art,” and by extension, its existence within commodity and visual culture. Often, repression of artists and critics living in Brazil. Explorations ran at the NCFA from April 4th to May 10th, 1970. See Gyorgy Kepes, Explorations (Washington, D.C.: National Collection of Fine Arts, 1970).

when an absence of obvious visual content is assumed, a surfeit of words rush in to occupy its place, and this thesis turns to reading lists, opinions, polemics, and theories to outline artists’ preoccupations within the era’s discursive field.

Perhaps it is easiest to begin with some visual information. Whenever Hans Haacke’s now canonical MOMA-Poll of 1970 is published, it is almost always represented by one of two photographs. The first, a black and white image, captures a well-dressed, white female museum visitor entering a “YES” ballot into a clear Plexiglas box in response to the prompt above her head: “Question: Would the fact that Governor Rockefeller has not denounced President Nixon's Indochina policy be a reason for you not to vote for him in November? Answer: If ‘yes’ please cast your vote into the left box, if ‘no’ into the right box.” (Fig. 1) The photograph’s driving orthogonals and shallow picture plane push forward the imposing text, extending its seriousness to the woman’s solemn profile and the small pamphlets in her arms. A weighty male figure silhouetted by black closely views the scene. Their proximity is ambiguous; he appears to quite literally breathe down her neck in a compositional choice that resonates with the politically charged question asked of her, yet at the same time, their physical closeness could signify their familiarity or unified vote. Whatever adjectives qualify their relationship, the

photograph foregrounds its depicted action, and in doing so, it suggests that the importance of the work is this narrative, the act of voting, rather than the isolated art object without a spectator. With the photograph’s emphasis on a “YES” vote, the narrative constructed is one of opposition.

The second photograph documents a lone female subject standing in front of the work. (Fig. 2) The camera is now well below eye level and flush with the wall, in keeping with the conventions of documentary photography. Pictured from behind and no longer photographed in the act of voting, the individual serves an entirely different purpose. Her brightly colored yellow shirt draws the eye towards the color-coded ballots contained in the transparent receptacles. Each ballot hue signifies a different voter status: a full-paying visitor, a member of the museum, a holder of a courtesy pass, or a visitor attending admission-free Mondays.21 Taken later in the exhibition’s run than the first photograph, votes now appear to overflow the “yes” box and link each color indexically to a specific visitor allowing us to visually assess the demographics of the artist’s collected data. The work’s significance lies in its ability to make visible the unseen. The artist transforms the individual’s aesthetic experience into an analogy of her political position outside the museum’s walls, through the sign of political representation: the vote.

*Information* is significant for many reasons, most notably because it was one of the first attempts by a major American art institution to deal with the myriad and rapidly coalescing artistic strategies now gathered under the art historical categorization of Conceptualism.22 More

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21 Haacke’s proposal for the show included his fears of miscounting or voter fraud: “The number of ballots handed out, the number of tickets sold, the number of free pass entries and the number of free day visitors are entered into a chart with the ballot boxes every day. The museum instructs its personnel to make sure that no interference with the polling process occurs and that no more than one ballot will be cast by each visitor. The personnel and the visitors are requested to report any irregularities to Hans Haacke, c/o Howard Wise Gallery, 50 W 57th St., New York, N.Y. immediately.” CUR, Exh. #934. MoMA Archives, NY.

22 Other American exhibitions of Conceptual art taking place in 1970 include *Art in Process IV*, organized by Elayne Varian, which ran from December 11th, 1969 to January 26, 1970 at Finch College Museum of
specifically, with the installation of *MOMA-Poll*, it staged one of the first major instances of the subset of Conceptualism later termed “institutional critique.” This is one reading of the narrative proffered by the illustrations of *MOMA-Poll*. In this formulation, the artist (Haacke) alerts the viewer to a piece of pertinent information (the implied connection between the Rockefeller family, the museum’s Board of Trustees, and the United States involvement in the Vietnam war) which shatters the supposed autonomy of the museum as a disinterested framework beyond desires (through the machinations of politics and the paper trails of capitalism). Aesthetic participation is re-imagined as the viewer is both compelled to move beyond their spectatorial neutrality and made painfully aware of the limits of this participatory gesture.  

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23 Whether or not the open processes and unexpected outcomes initiated by the so-called first generation of institutional critique artists, processes which took aim at the space of the gallery, and more broadly, the museum as an institution, held any relevance and importance outside of its four walls, became one of the primary questions for the second generation of institutional critique artists (1980s onwards) who expanded the framework of the institution to include the subject of representation. On this transition, see Andrea Fraser, “From the Critique of Institutions to an Institution of Critique,” Artforum 44 (September 2005) 278-83, 332. On institutional critique as a group of thematic concerns and artistic strategies versus a historically-relegated moment of artistic production appearing in the late 1960s now known as Institutional Critique, see Blake Stimson, “What Was Institutional Critique?” in Institutional Critique: An
This brings us to the second reading of the photographs as an example of the dematerialization of the art object, the impulse to value a work’s concept, idea, location within a network more heavily than its form or object-status.24 We know this from the simple fact that in both photographs the object ensemble constituting *MOMA-Poll, in its entirety*, isn’t pictured in the photograph. In both, a horizontal tabulation chart as wide as the question placard, located directly to the left of Haacke’s voting boxes, is almost entirely cropped out. This chart recorded the count, entered daily by a museum official, of the electric tally machine inside each box and was crucial to the work’s internal logic and conceptual significance. As both photographs do not depict the work in its entirety, they are often used to stress that the importance of *MoMA Poll* is not its form, but its function as a star in a constellation of political, ideological, and financial interests.

Yet, whether one argues that the subject of each photograph of *MOMA-Poll* is the network briefly made visible by the artist’s “institutional critique” through the activation and limitations of its spectator, or the dream of dematerialization through, in this case, the subsumption of materials under the linguistic model, the object under study is not wholly addressed. For Benjamin Buchloh, one of conceptualism’s most influential theorists, it is only by attending to conceptualism’s non-visual aspects that one is able to preserve the moment of criticality (the historical moment of institutional critique) before conceptualism’s instant reification. He

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24 This definition of “dematerialization” is paraphrased from Lucy Lippard, *Six Years: The Dematerialization of the Art Object from 1966 to 1972*... (Berkeley: University of California Press, 1997) vii. Lippard often called dematerialized art “post-aesthetic” art.
explains:

Just as the modernist critique (and ultimate prohibition) of figurative representation had become the increasingly dogmatic law for pictorial production in the first decade of the twentieth century, so Conceptual Art now instated the prohibition of any and all visuality as the inescapable aesthetic rule for the end of the twentieth century. Buchloh influentially termed this new governing logic “the aesthetic of administration,” yet he was wary of attending to the formal and sensorial dimensions of conceptualism for their relationship to “the conditions of the spectacle,” i.e., “instant brand names and identifiable products…the mechanisms of advertising and marketing campaigns.” In this formulation, conceptualism’s practitioners were able to transcend, if only momentarily, the object status of art, but they were not able to overcome the ever-advancing technological and industrial logic of advanced capitalism. Such a reading asks that we look at the photographs of MOMA-Poll and overlook their sensorial dimension – for example, the sculptural forms of the ballot boxes, the typeface of the question, or the color-differentiated ballots and tabulation chart. This thesis suggests that in doing so, we fail to notice the aesthetic of information.

While it is certainly the case that conceptualism launched an attack on the autonomy of the art object and the authority of the artist’s position, in addition to reviving the avant-garde critique of the importance of skill as represented by traditional art-making techniques, the work of conceptualism is resolutely visual and material, frequently incorporating “non-art” objects. We only have to look at exhibitions of the time to find an explosion of objects, fonts, images, and sounds that begin to flood the spaces of the museum for the first time: whirring Telex machines, typewriters, plastic boxes, posters, typefaces, closed circuit television systems, spools and stacks

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26 Ibid., 140.
of papers, telephones, binders on plinths, books, and flickering film projectors. This is not to
suggest that paying attention to the sensorial dimension of conceptualism should repudiate its
criticality, but that one might expand on Buchloh’s reading by aiming for a model of
interpretation that can account for the visual and material, as well as, the non-visual and
discursive. Against Buchloh’s reading, we can place the position taken by Billy Klüver, the
founder of E.A.T. (Experiments in Art and Technology), who saw the visual dimension of
conceptualism heightened by technology rather than occluded.

For Klüver, although conceptualism posed a challenge to the art object, it initiated an
entirely new set of aesthetic preoccupations in terms of the spectator’s experience:

In the Twentieth Century efficient means of spreading technological information have
developed and now the emphasis is on the individual’s relationship to the environment.
This is a change in attitude away from the object – its engineering, operation and function,
towards aesthetics – human motivation and involvement, pleasure, interest, and
excitement.\textsuperscript{27}

Although such a reading would place conceptualism as the forerunner to our contemporary
culture of spectacular display, a dangerous proposition to many of conceptualism’s champions
and early theorists, Klüver’s emphasis on technology’s role in displacing the traditional art object
and his emphasis on spectatorial involvement are worth considering in terms of the present
argument. It is my claim that to understand these elements of conceptualism, we must return
technology to the history of conceptualism, and in order to truly look at conceptualism’s objects,
we must introduce a term into our discussion that the history of art so often elides: design.

At this point, we should turn to a third, unpublished photograph of MOMA-Poll that
situates the work in the entrance gallery of the Information exhibition. (Fig. 3) This photograph
finds MOMA-Poll set against a massive technological apparatus on the far left, Ettore Sottsass’s

\textsuperscript{27} Klüver, Martin, Rose, eds., Pavilion by Experiments in Art and Technology, x.
contribution to Information, what he termed the “information machine.” Designed for the Olivetti Corporation (with the assistance of Hans von Klier), the machine was not a singular, “original” art object per se, but rather an easily-mounted, industrially-fabricated, corporate promotional device designed for use in the company’s showrooms, exhibitions, and international fairs to display multiple Olivetti films at the same time. Within Information, the Olivetti machine constituted both Sottsass’s contribution to the exhibition (he is listed as an artist in all the existent checklists, and like each of the exhibition’s included artists, he is allocated a page in the Information catalog) as well as a technology used to display the work of avant-garde filmmakers.

Scholars have read Information in myriad ways: as one of the first examples of a highly visible program of corporate sponsorship (Mary Ann Staniszewski), as indicative of a widespread interest in structuralist concerns circa 1970 (Eve Meltzer), as emerging from a fraught political moment in the museum’s history (Ken Allan), or for its novel curatorial strategy (Adam Lauder), yet little to no critical attention has been paid to the machine.\(^{28}\) By returning the Olivetti machine to its original exhibition context, this thesis offers a new reading of Information, and a point of comparison for Haacke’s much-studied MOMA-Poll. Located directly across from MOMA-Poll, at the exhibition’s entrance, the Olivetti machine was one of

the most, if not the most visually dominating element in the entire exhibition. Almost every contemporary review, regardless of their critical position regarding the exhibition’s thesis, mentions the machine directly, and accompanying photographs of the machine were reproduced more than any other object in the exhibition. Brilliantly mirrored, over seven feet tall, and featuring a blinking “Olivetti” logo across its brim, the machine could be seen as literally embodying the corporate presence within the museum that MOMA-Poll addressed.

What sort of consumer did the “information machine” demand that MOMA-Poll attempted to expose? It is a fundamental claim of this thesis that design often points to the significant overlaps between the space of the museumgoer and the space of the consumer, and within Information, design often foregrounded the tension between the increasingly differentiated and abstracted target of corporate technology and the museum subject of conceptualism. This was a period of rapid consumerism and increased visibility for the American corporation, evidenced within the exhibition by an overt program of corporate sponsorship from J. C. Penny Co., Inc., ITT World Communications Inc., and Atelier International, among others. As artists increasingly became aware of the financial and industrial connections of the Rockefeller family, Standard Oil, and the country’s continued involvement in the Vietnam War, the museum became another “corporation” whose interests needed parsing. Both within and without the museum, the terms “information” and “technology” took on newly assigned connotations in this period.

Before beginning to outline some of these changes and their relationship to MoMA’s

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29 I cannot claim that the machine was the first work a visitor encountered, as Information featured multiple entry points/exits, but the Olivetti machine was located at the only entrance with the exhibition’s title, marking it as a beginning of sorts, and lending it more importance that the others.

30 Carl Andre summed up this perceived inseparability of the political positions of corporations and the interests of museums: “The board of trustees are exactly the same people who devised American foreign policy over the last 25 years.” Quoted in Jeanne Siegel, “Carl Andre: Artworker,” in Artwords: Discourse on the 60s and 70s (New York: De Capo, 1985) 132.
presentation of design, it is necessary to understand something of their pre-history, beginning in the early 1930s in America, then the most advanced country regarding engineering and manufacturing, with the marriage of aesthetically-conscious design and state-of-the-art technology. Within MoMA, the growing aesthetic significance of design was recognized in 1935 with the transition of the Department of Architecture to the newly christened Department of Architecture and Industrial Design, both under the directorship of Philip C. Johnson. Johnson’s vision for a “machine art” aesthetic isolated industrial objects – for example, self-aligning ball bearings and boat propellers – from their functional contexts. By emphasizing each object’s shared “quality” and form, Johnson was responsible for promoting a European modernist design ideology that drew heavily on Bauhaus philosophy. Johnson’s self-proclaimed “propaganda,” was targeted directly towards the cultural edification of the “modern” consumer. Edgar Kaufmann Jr.’s Good Design exhibitions at MoMA espoused a similar viewpoint well into the mid 1950s. Partnering with Chicago Merchandise Mart, Good Design was held yearly in New

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31 One could attempt to locate these changes in earlier periods of industrialization as the historian John F. Klasson does in Civilizing the Machine: Technology and Republican Values in America, 1776-1900 (New York: Hill & Wang, 1999), but I would argue that the proliferation of goods that accompanied the transition of semi-manual production to mass-production in the early 1930s initiates a new period where the consumer starts to associate subjectivity with purchasing power in a profound way. This shift was spurred by differentiated and customizable categories of mass-produced goods, such as the automobile and ready-to-wear clothing, being offered to purchasers for the first time. On the relationship between artistic innovation and industrial production, specifically Fordism, see Terry Smith, Making the Modern: Industry, Art, and Design in America (Chicago: University of Chicago Press, 1964) 15-158. On the relationship between modernism and ready-to-wear, see Marc Wigley, White Walls, Designer Dress: The Fashioning of Modern Architecture (Cambridge: MIT Press, 2001) 60-83, 302-362.


York and bi-annually in Chicago throughout the first half of the decade.

By the 1950s, the modern consumer was understood by corporate interests – especially television executives and designers of office equipment and domestic appliances – as an abstracted body of information waiting to be recorded, analyzed, and polled. As multinational corporations began to develop and expand their corporate identity, design became an in-house element of business strategy. Through their individual choice and purchasing power, “modern” consumers were assured they could nullify some of the alienating effects of standardization, the assembly line, and the corporation.

Yet this conflation of a consumer subject’s choice and their subjectivity went unnoticed by many critical theorists of the time, most noticeably William H. Whyte, Jr., writer of the immensely successful book of popular sociology, *The Organization Man.* Although Whyte’s book is an insightful critique of the way in which the “organization man” internalizes the conditioning mechanisms of the American corporation, he held onto the belief of the rebellious individual, for example, by endorsing chicanery against the personality tests administered by human relations departments. The myth of a society which could tolerate an autonomous free-willed individual at the same time as it could cohere in a social body was already debunked by

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Horkheimer and Adorno decades earlier, who saw it as nothing more than the fantasy of redemption offered to the consumer who comes to identify their “individuality” with pre-packaged designs and stereotypes perpetuated by the culture industry.\(^{37}\)

By the end of the 1960s, Herbert Marcuse’s “one-dimensional man” stood as the ultimate symbol for the mind-numbing effects of modern consumerism. Marcuse’s central point, which is worth restating, is that the exponential growth in the size and visibility of industrial corporations had integrated into most aspects of daily life – through media and technology – to such a degree that this domination not only neutralized an individual’s critical thinking through an artificially comfortable life, but also effectively contained any and all opposition through the adoption of “repressive tolerance.”\(^{38}\) For Marcuse, writing in 1964, there was one arena which nurtured the seeds of revolutionary thought: “the aesthetic dimension still retains a freedom of expression which enables the writer and artist to call men and things by their name – to name the otherwise unnamable.”\(^{39}\)

At the time of Information’s unveiling, the museum was a contested space. For some, the revolutionary potential championed by Marcuse was nothing more than a once polished fantasy now dull and waning, fully disabused by unscrupulous politics and fraught social issues. For

\(^{37}\)“The most intimate reactions of human beings have become so entirely reified, even to themselves, that the idea of anything peculiar to them survives only in extreme abstraction: personality means hardly more than dazzling white teeth and freedom from body odor and emotions. That is the triumph of advertising in the culture industry: the compulsive imitation by consumers of cultural commodities which, at the same time, they recognize as false.” Max Horkheimer and Theodore W. Adorno, *Dialectic of Enlightenment: Philosophical Fragments*, trans. Edmund Jephcott (Stanford: Stanford University Press, 2002) 136. For Guy Debord’s critique of Whyte, see *The Society of the Spectacle*, trans. Donald Nicholson-Smith (New York: Zone Books, 1995) 136-139.


others, this process of untangling the connections of the corporation, the consumer, and the museum, was precisely the point. In addition to the almost non-existent support among the public for continued involvement in the Vietnam War, an efflorescence of civic groups and movements – Black power, feminist liberation, gay rights – wanted to bring their identity to the forefront as anything but consumers. Although ultimately identities would be differentiated into just another abstracted set of interests for the potential products of advanced capitalism, it is important for the sake of understanding the artistic strategies of this period to recapture the moment when this wasn’t a foregone conclusion – one of utopian promise mixed with violent revolt, peaceful rebellion, and above all, the desire to re-conceptualize social relations and the role of commodities and art in American society. 40 This mix of contradictions problematizes any easy assessment of the relationship between aesthetics and “information/technology.” As technology and information are increasingly aligned with corporate malfeasance, techniques of surveillance, and consumer alienation and self-estrangement, the artists in Information could reposition these terms to both critique and highlight this process. Yet, just as conceptualism utilized the language of industrial design and the forms of corporate technology, Olivetti filtered the design of their products through the aesthetic of conceptualism.

Chapter I

McShine’s Information Machine

Upon opening July 2\textsuperscript{nd}, 1970, \textit{Information} was the most ambitious exhibition of Kynaston L. McShine’s career. McShine had returned to MoMA as associate curator in the Department of Painting and Sculpture only two years before, after previously working at the Jewish Museum for three years.\textsuperscript{41} While at the Jewish Museum, McShine directed his attention toward contemporary art, resulting in the impressive group exhibition, \textit{Primary Structures: Younger American and British Sculptors} (1966), yet in terms of both scale and scope, \textit{Information} would dwarf this previous curatorial endeavor.\textsuperscript{42} Although \textit{Information} would revisit many of the questions that \textit{Primary Structures} first raised, particularly dealing with the impact of technological and industrial innovation on aesthetic content, the most significant difference between the two exhibitions would revolve around McShine’s understanding of the relationship between an artist and their artistic medium.

In his introduction to \textit{Primary Structures}, McShine lays out a medium-based concern:

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\textsuperscript{41} Kynaston McShine was first hired in 1958 by Porter McCray to work for MoMA’s Department of Circulating Exhibitions, the branch of the museum devoted to arranging domestic exhibition tours. McCray joined the museum in 1947 with the support of Nelson Rockefeller, then Chairman, as director of Circulating Exhibitions. McShine would work in the department for seven years, then move to the Jewish Museum, where he would be the curator of painting and sculpture from 1965 to 1968, and as acting director of the institution from 1967 to 1968.

\textsuperscript{42} \textit{Primary Structures: Younger American and British Sculptors} ran from April 27\textsuperscript{th} through June 12, 1966 at the Jewish Museum, New York.
\end{flushright}
“Today many painters are challenging and questioning the traditional rectilinear shape of the canvas, the edge, surface color, conventional means of achieving form, and even the space outside the canvas...Similarly, some sculptors question in their work the function of the pedestal, the relationship of spectator and sculptural space, and the choice of materials.”

While his points of reference for these investigations are wide-ranging – Gestalt psychology, the engineering and architectural progress of the “Space Age,” the writings of Marshall McLuhan, and the theories of Buckminster Fuller – McShine is careful to position them against a series of familiar art historical touchstones – Kazimir Malevich, Naum Gabo, Piet Mondrian, Ferdinand Léger, Barnett Newman, and Constantin Brancusi. For McShine, any questioning of the traditional boundaries of either painting or sculpture, would lead contemporary artists deeper into the category of sculpture, distilling it to its concept and philosophical content, and throughout his essay, he tellingly refers to the forty-two artists included in Primary Structures as “sculptors.”

His later essay for Information is significantly different in this regard; he exclusively employs the term “artist.” How are we to account for this transition in McShine’s thinking without recourse to a generalization on the shift from a medium-based, modernist interrogation of the category of art to the postmodern symptoms of what has more recently been diagnosed as the post-medium condition? This is a complicated question, but we can begin by outlining

43 From Kynaston McShine’s unpaginated introduction to Primary Structures: Younger American and British Sculptors (New York: Jewish Museum, 1966).

44 Many artists chosen by McShine at the time of the exhibition – Ellsworth Kelly, Daniel Gorski, and Peter Phillips, to name a few – weren’t sculptors per se, but made sculptures alongside their primary practice of painting.

Information and its genesis, set against the background of a turbulent American political landscape.

McShine conducted the majority of his curatorial research for Information during a trip to Europe at the end of the summer of 1969. While travelling, McShine was struck by the dearth of exceptional painting, and more generally, the push toward work he considered “environmental in character.” As a result, Information was conceived as a multi-departmental effort for the museum encompassing architecture and design, film, photography, and prints and drawings. In addition to the approval and cooperation of each of these separate museum departments, and because of its heavy emphasis on the international avant-garde, McShine also sought the support of the museum’s International Council, a membership group of art patrons and collectors sponsoring the content of the International Program, in funding the exhibition’s catalog. McShine’s effort to gain such widespread institutional support was a preemptive maneuver as Information’s success would rest on the diplomatic communication of many museum department heads, but more generally, it was absolutely necessary at a time when the museum was undergoing numerous internal changes and galvanizing protesters who appeared to assail the museum from every conceivable direction.

Staff changes began when museum trustees forced Bates Lowry, the museum’s third director, to step down in May 1969 after holding the position for only ten months. Stepping in

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47 The International Program was founded in July of 1952 with funding from a five-year grant from the Rockefeller Brothers Foundation and the support of René d'Harnoncourt, then-director of the museum. MoMA’s International Program is responsible for generating, in consultation with the museum’s curatorial staff, the content of the international touring exhibition program. Porter McCray served as the International Program’s first director. During Information, Waldo Rasmussen was the director of the International Program. Rasmussen joined the museum in 1953 and assumed control of the International Program in 1969.
after an intense power vacuum, John Hightower was hired by the museum on May 1st, 1970. Hightower’s embattled two-year tenure was one of the most difficult periods in the museum’s institutional history. Hightower recollects:

> It was a Friday, I think. That weekend Cambodia was bombed. The Tuesday thereafter the Kent State shootings occurred. The Friday or the Saturday of the following weekend was the huge march on Washington. And, of course, at the time, The Museum of Modern Art was the focal point for all the angst and agony and frustration of the artists’ community in the city about the war in Vietnam. 48

Additionally, Hightower saw the museum’s first internal strike and the creation of the museum worker’s union, the Professional and Administrative Staff Association (PASTAMoMA). Hightower was young, sympathetic, and idealistic, and he approached the position with great confidence in his ability to deal with both left-leaning artists and fiscally conservative museum trustees. He witnessed the birth of the Art Workers’ Coalition (AWC), a diverse group of art world participants who shared a common belief in political change with the country’s New Left but were disappointed with the movement’s rate of progress. 49 Eventually, the AWC would spawn a series of factions targeted directly at MoMA for its perceived lack of diversity and questions over the integrity of its board members in light of their financial ties to the Vietnam War.

In the months preceding Information, protests within or outside MoMA were the norm. On the afternoon of Tuesday, November 18, 1969, four members of Guerilla Art Action Group (GAAG) – Silviana, Poppy Johnson, Jean Toche, and Jon Hendricks – calmly entered MoMA’s lobby and executed what has come to be known as Blood Bath (1970). (Fig. 4) Smartly dressed

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and at first unassuming, each participant began screaming “Rape!” and without warning tore at one another’s clothes, ripping hidden bags underneath containing two gallons of beef blood. As they sank down into a writhing mass of blood-stained bodies on the floor of the museum, they dropped close to one hundred flyers titled *A Call for the Immediate Resignation of All the Rockefellers from the Board of Trustees of the Museum of Modern Art*, which presented a damning selection of information that linked the museum’s board to the “the war business.”

This event provided a model for activist art groups to transform citations of journalistic information into politically inclined performance art.

In May of the following year, New York artists organized the New York Art Strike Against Racism, War, and Repression, demanding “all museums, galleries, art schools, and institutions in New York to close for a day in a general strike…as an expression of shame and outrage at our government’s policies.” MoMA allowed free admission, but would not concede to closing, which triggered the movement’s outrage. Additionally that month, members of the Black Emergency Cultural Coalition picketed the museum for a more inclusive program alongside the Puerto Rican Art Workers’ Coalition, a subset of the AWC. Much of this was the culmination of a gradual political actualization on the part of the museum’s underserved audiences, as well as their dissatisfaction with what they perceived as the AWC’s unfocused aims and lack of success from previous political protest. In Thomas Crow’s words, “the inner

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complexities of [the previous decade’s] dissenting politics were multiplying at an exponential rate.”53

Although McShine billed his exhibition to the museum as a survey of the new avant-garde, *Information*’s attempted international scope, which included many artists from countries never before represented within the museum, as well as members of the AWC and various protest organizations, meant that the museum’s Office of Public Information could undo some of the recent damage done to their image through a positive public relations campaign. *Information* was appealing to the museum as an opportunity to develop its own auto-critique to supplant recent protesters’ narratives of exclusion, racism, sexism, and prudishness. While it is tempting to view *Information* in this way as a consolatory gesture made by the museum towards the AWC and other groups demanding a pluralist exhibition program, I would like to problematize this assessment by situating it in the context of an emerging global economy based on a form of highly-regimented, yet decentralized organization of managerial labor.54 Although this transition begins in America in the 1950s, it wasn’t until much later that the impact of such a profound shift permeated the American discursive horizon, particularly in the revolutionary leanings of Herbert Marcuse, the futurological fantasies of John C. McHale, and the media theorizations of Marshall McLuhan.55 McShine’s decentered curatorial method, which invited

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54 For this shift’s impact on artistic practice and studio labor, see Helen Molesworth (ed.), *Work Ethic* (University Park: Pennsylvania State University Press, 2003).

55 Each writer is cited in *Information*’s “Recommended Reading” bibliography. McShine presciently summed up the era’s discursive horizon as “an intellectual climate that embraces Marcel Duchamp, Ad Reinhardt, Buckminster Fuller, Marshall McLuhan, the *I Ching*, the Beatles, Claude Lévi-Strauss, John Cage, Yves Klien, Herbert Marcuse, Ludwig Wittgenstein, and theories of information and leisure…even more enriched by the implications, for example of Dada, and more recently happenings and Pop and ‘minimal’ art.” *Information*, 139-140.
artist proposals (oftentimes to be carried out by museum staff) in lieu of tangible artworks, set in motion an exhibition machinery built from information that made it impossible for any single individual to fully control Information’s outcome and interpretation. In what follows, this process is outlined along with its political ramifications.

Firstly, as mentioned previously, McShine transferred the focus of any single medium-based categorization such as painter, sculptor, drawer, filmmaker, architect, or designer, to the more abstracted and all encompassing placeholder “artist.” This shift in curatorial language was imbued with renewed political significance, with painting representing the most retardataire mode of art making. “Considering the general social, political, and economic crises that are almost universal phenomena of 1970,” McShine empathized in his catalog essay, “…it may seem too inappropriate, if not absurd, to get up in the morning, walk into a room, and apply dabs of paint from a little tube to a square of canvas. What can you as a young artist do that seems relevant and meaningful?” By extending their phenomenological investigations into their lived environment, interrogating the category of the documentary, mining the body as a medium of sensation, or embracing the impact of systems – whether conceptual, communication, economic, industrial – on art making, “artists” could ultimately go where “painters” could not.

Secondly, through an emphasis on communicative technologies, some of the artworks in Information created an open circuit that extended beyond the frame of the museum in unforeseeable ways. Stanley Brouwn’s Untitled consisted of a single card displayed on the wall, printed with the artist’s name, current address in Amsterdam, and telephone number. Some of

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56 Information, 138.

57 The original card, slightly smaller than a business card, is located in the Information archive, along with a photocopy. McShine considered Brouwn “one of the most important participants in the exhibition.” It is unknown whether Brouwn intended his pithy contribution to be the only one to the exhibition and catalog, as both his and McShine’s letters kept crossing paths, particularly at the end of April, due to the
Information’s critics wrote off such gestures as aloof or even condescending, but Brouwn saw this serious offering as one of generosity, as the “potential bearer of millions of other projects.”

For Brouwn and many of Information’s artists, their exhibited work was less a static object than a proposition to the viewer with no clearly identified purpose or conclusion. In some cases, such open works were not only unpredictable and challenging, but had the power to activate unforeseen museum publics. While exhibition histories of Information largely credit Haacke’s MoMA Poll with creating the greatest controversy, Giorno Poetry System’s Dial-a-Poem was the project that received the most hostile criticism at the time and illustrates the high stakes of McShine’s curatorial gambit.

By dialing 956-7032 during Information’s run, anyone could access one of twelve lines connected to an automated answering service that would randomly select one poem from a national postal strike. The US postal strike of 1970 was the first major strike of federal government workers. Commencing on March 18th from thirty cities, it lasting approximately two weeks, but the impact of lost correspondence and disorganized mail service lasted for months. On the strike and its context, see Jeremy Brecher, Strike! (San Francisco: Straight Arrow Books, 1972) 264-294.

58 Information press release, CUR, Exh. #934. MoMA Archives, NY.

59 Christopher Cook’s contribution to the Information catalog is a visual metaphor of the potentiality of the printed word. It consists of a photograph of a small and unadorned pamphlet with a single word typewritten on its title page: “POSSIBLES.” Benign on its own, this catalog contribution takes on a threatening potentiality when viewed against Cook’s contribution to Information, Assassination Times, which consisted of nine sheets of paper, located at random intervals within the galleries, printed with the month, day, year, and time of an assassination between 1935 and 1968. Assassination Times loosely followed the logic of Cook’s previous work, Actuals, a replica of the room where Czar Nicholas and his family were shot, which was exhibited nine months before Information at the University of New Hampshire. Cook explained the connection of objects and words: “In general, I have been interested in objects or fragments (“actuals”) supported with words (labels) to produce a mini-event…the object-reinforced statement (mini-event) acts as a catalyst to refocus the viewer’s mind on a major event.” Cited in Lippard, Six Years, 126.

selection of twelve that changed daily.\footnote{Dial-a-Poem was reactivated from October 19th, 2015 to January 10, 2016 for UGO RONDINONE: I LOVE JOHN GIORNO, Giorno’s first museum retrospective, which was curated by Florence Ostende and held at Palais de Tokyo, Paris.} Four telephones were set on a table within the exhibition to provide a space for visitors to access this content. (Fig. 5) John Giorno’s selection of poets touched on a wide range of issues, but nearly half explicitly dealt with political issues faced by a polarized America, such as the visibility of gay, black, and feminist liberation, as well as what seemed like a never-ending conflict in Southeast Asia. Dial-a-Poem’s open-ended structure and randomized elements left the museum open to unforeseen criticism from conservative critics. Whereas the AWC had previously taken aim at the museum for aligning itself with the war-machine, conservatives now saw the institution as too progressive, as not only supporting the incendiary speech of revolutionary poets, but also recruiting listeners to their cause. In the words of one reviewer: “…this telephone information…is utilized by those whose purpose it is to overthrow the government, to bomb private property, and to assassinate police and anyone else who stands in the way of the Revolution.”\footnote{Alan Dale, “Museum of Modern Art Finances Revolutionary Messages!” Brooklyn Spectator, September 13, 1970. Press clippings and documents relating to Dial-A-Poem can be found in Department of Public Information Records, II.B.815. The Museum of Modern Art Archives, New York. Clipping and reviews of Information, more generally, can be found in the PI, II.A.441-442. MoMA Archives, NY. Also cited in Allan, 161.} The artwork created a national scandal, with TIME magazine capitalizing on the story by running an article on the artwork juxtaposed with an unrelated picture of a dead cop shot in Philadelphia, slumped over a telephone.\footnote{“Nation: Dial-a-Radical,” TIME, September 14th, 1970. PI.B.815. MoMA Archives, NY.} Shortly after, the F.B.I. paid a visit to the exhibition under suspicion of domestic terrorism.

Finally, McShine productively shifted the role of a curator by delegating his responsibilities and submitting a survey to each selected artist and asking them to outline both
their proposal for the show and a separate contribution to the accompanying publication.

Resembling a business contract that was to be signed and dated by each artist, the proposal mimics the language and format of official government or corporate surveys, yet suffers the same fundamental flaw of the genre: the surveyor’s quest for specific data is often undermined by the survey’s generalized language and uniform structure. *Information*’s artists capitalized on this aspect. Some artists sidestepped the entire selection process. Jan Dibbets’s response to McShine’s prompt, “How do you want to be represented in the catalogue?” was a terse handwritten phrase: “By this paper.” Other artists gamed the system. Hans Haacke’s original proposal for *MoMA Poll* simply states he will ask “an either-or question referring to a current socio-political issue.” The directional content of the work’s provocative question was not revealed until the work was installed in the gallery.

Still others responded to this decentered selection process by questioning their role as contributors to the process of intellectual labor. Lucy Lippard’s heady, three-part

\[ A_1B_2S_19E_5N_{14}T_{20}E_5E_5I_9N_{14}F_6O_{15}R_{18}M_{13}A_1T_{20}I_9O_{15}N_{14}A_1N_{14}D_4O_{15}R_{18}C_3R_{18}I_9T_{20}I_9C_3I_9S_{19}M_{13} \]

takes the form of a complicated art-historical game assigned to McShine. Following Lippard’s strict instructions – whereby chance elements are combined with exhibition facts – McShine was led by the nose, beginning with the exhibition’s artists, through the museum’s archives, directly to its Board of Trustees, in an attempt to rethink the relationship between the museum and society at large. Lippard’s resistance to contribute anything that could be perceived as productive labor to the publication takes on a political significance in the context of the war, paralleling the tactic of draft avoidance.\(^64\) This association is broached again as she closes her essay with the injunction to McShine to “ask the American artists in the exhibition to join those

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\(^64\) McShine’s original task for Lippard was for a publication index.
willing on the Museum staff in compiling and signing a letter that states the necessity to go A.W.O.L. from the unconstitutional war in Vietnam and Cambodia.”\textsuperscript{65} McShine, rather than following Lippard’s directions and printing the result in the catalogue (Lippard’s intention), chose to print the directions themselves, placing her demand directly onto the reader.

Put simply, such tactics amounted to a wholesale out-sourcing of McShine’s role as curator of objects with the job of manager of information. In “Understanding Information,” Ken R. Allan positions McShine’s practice alongside Lucy Lippard, Marcel Broodthears, Michael Asher, and Seth Seigelaub to argue that McShine “adopted the position of curator as managing artist.”\textsuperscript{66} Rather than viewing McShine’s role in \textit{Information} in the same vein as the “artist as curator” model that has seen a contemporary resurgence, McShine’s largely decentralized and “international” organization of exhibition labor should be situated alongside paradigms of an emerging information-based economy that stress the shift from national to multinational corporations and vertical to horizontal organizations of management personnel.

Alongside this shift in McShine’s conceptualization of the role of the curator, where traditionally, selection processes are based on connoisseurship and expertise, we should take note of his emphasis on \textit{Information} as total design environment whereby technology is seamlessly integrated into the overall experience of museum visitors. In his proposal for the exhibition, McShine credited this new sensitivity to his travel through Milan.\textsuperscript{67} McShine’s letter to Arthur Drexler, then-director of the Department of Architecture and Design, is worth quoting at length:

\textsuperscript{65} \textit{Information}, 81.


\textsuperscript{67} Letter from Kynaston McShine to William Lieberman, dated October 6\textsuperscript{th}, 1969; CUR, Exh. #934. MoMA Archives, NY.
As you know my exhibition ‘Information’ is primarily concerned with the strongest international art movement or ‘style’ of the moment…The exhibition will demonstrate the non-object quality of this work and the fact that it transcends the traditional categories of painting, sculpture, photograph, film, drawing, prints, etc.…In order to emphasize this ‘dematerialization’ I thought that I could make the point in the galleries in a very subtle visual way by using some new designs in furniture instead of the usual museum benches in the galleries of my exhibition. The selection is based on pieces that come directly from some recent major sculptural concerns. For example, the “sacco” and its relevance to the work of Claes Oldenberg or Barry Flanagan. None of these would be labeled, but only present according to function.68

In McShine’s formulation, the “non-object” quality of the artwork under consideration – what he also termed, its “dematerialization” – amounted to design; in other words, for McShine the “non-object” equals design. This conflation between art and design wasn’t so much a conflation of the aesthetic with the anti-aesthetic, but rather the autonomous art object with the non-autonomous object, i.e. the commodity. The Sacco was designed by Piero Gatti, Cesare Paolini, and Franco Teodoro, and entered mass-production by Zanotta in 1968. By thinking of the recently debuted Sacco “bean bag” chair alongside the soft sculptures of Claes Oldenberg and the early work of Barry Flanagan, McShine was able to attend to both sides of what is typically presented as the opposition of “art” and “life.” Only hinted at with this proposal, McShine’s placement of the Sacco furniture within the galleries of Information was anything but arbitrary.

An installation photograph captures three unidentified individuals on white Sacco chairs in the central exhibition space. (Fig. 6) Addressing the viewer, they proudly sit in front of four works by Joseph Kosuth: three works from the Titled (Art as Idea as Art) series from 1966-1968 – Water, The N Object, and Meaning – and the artist’s now canonical, One and Three Chairs

Only months before this participation in Information, Kosuth published his polemical three-part essay, “Art after Philosophy,” in the pages of Studio International, where he outlined his understanding of Conceptual Art:

Works of art are analytical propositions. That is, if viewed within their context – as art – they provide no information [italics added] what-so-ever about any matter of fact. A work of art is a tautology in that it is a presentation of the artist’s intention, that is, he is saying that a particular work of art is art, which means, is a definition of art…In other words, the propositions of art are not factual, but linguistic in character – that is, they do not describe the behavior of physical, or even mental objects; they express the definitions of art, or the formal consequences of definitions of art.70

For Kosuth, conceptualism draws our attention to the enunciative function common to all art – the idea that any work of art smuggles in a model for a philosophy of art – yet visualized in the artist’s linguistic tautologies, most obviously in Titled (Art as Idea as Idea) [meaning] (ca. 1967), this reading amounts to a wholesale revival of the modernist logic of self-reflectivity and aesthetic autonomy. (Fig. 7)

Kosuth’s definition of conceptualism stresses language’s ahistorical dimension ignoring its deeply ideological character, historical context, referentiality, and social function. In Kosuth’s own vocabulary, an emphasis on the “linguistic” disavows “information.” This interpretation of the Titled (Art as Idea as Idea) series overlooks its standardized typeface and graphic design, or its structural similarity to billboards or advertisements. Yet McShine chose to highlight precisely this sign slippage between art and industry by replacing the museum’s usually

69 Kosuth’s Titled (Art as Idea as Art) [radical] (ca. 1967), which consists of a photographic enlargement of the dictionary definition of the word “radical,” is listed in each of the exhibition’s checklists, but missing from the existent installation photographs. There is no record stating the work’s fate during the exhibition, but in light of the museum’s recent protests, the word’s associative potential is interesting to contemplate against the presumed neutrality of Kosuth’s brand of linguistic conceptualism.

inconspicuous gallery benches with then-state-of-the-art Sacco beanbags, and in his curatorial decision to set them directly in front of Kosuth’s *One and Three Chairs*.

The contrast between Kosuth’s wooden folding chair, the accompanying text and image, and the playful blobs, couldn’t be starker. Pliable and amorphous, the white sacs bend to conform to the changing positions of their sitters. Assuming forms indexically linked to the presence of a human body, they serve as a rejoinder to the abstracted subject of Kosuth’s hard-lined tautological conceptualism, the absent sitter of *One and Three Chairs*. At the same time, once placed alongside these amorphous symbols of hippie counter-culture, Kosuth’s conceptual investigations extend from the artist’s rarefied ideals, into the space of commerce, a world where consumer choice and purchasing power is often suspiciously aligned with individual freedom.

This fantasy is driven home by the inclusion of a Sacco advertisement from the March 1969 issue of *Domus* in the pages of the *Information* catalog. (Fig. 8) In the editorial’s nine photos, a female model displays the chair’s possible positions and available range of colorways, transforming the design showroom into a ludic playground for the “liberated” consumer. Just as the Sacco beanbags foreground issues of Kosuth’s artistic practice that his own interpretation downplays – its presentation of competing alternatives that mimics the logic of capitalism, its inclusion of industrially produced objects, and its serial rationality – his work questions any easy assessment of the relationship between representation and the material conditions of production. Between the Olivetti jukebox and Haacke’s *MoMA Poll*, Kosuth’s *One and Three Chairs* and their Sacco counterparts: McShine’s curatorial gestures illustrate the dialectic at the heart of conceptualism’s relationship to design culture.

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71 The original name give to the Sacco chair by its designers was “Made By You,” and original Zanotta advertisements frequently feature the tagline, “Shaped By You!”
Chapter II

Sottsass’s Information Machine

As McShine travelled through Europe in the summer of 1969, he made note of the overwhelming use of film and photography by almost all of the artists he visited, as well as both medium’s increased visibility within European exhibitions and design fairs. More broadly, McShine’s concern with dematerialization was, quite paradoxically, realized in the materiality of film. As William Lieberman, then-director of the Department of Painting and Sculpture, explains: “The conceptual nature of the art with which [McShine] is dealing in is certainly best documented by film; indeed much of the best work in this area is actually created on film.”72 In this seemingly straightforward statement, Lieberman adumbrates the dual ontological nature of film. Film not only has the ability to record events in real time, in this case documenting the production of artworks, but also can exist as a work of conceptual art instead of simply recording its making.73

After establishing the importance of the exhibition’s film component, McShine approached Lieberman with two possibilities for display. Frist, the museum could solicit Eventstructure Research Group to construct a freestanding venue, “a structure in the garden which would not only be their contribution to the show but also completely useful inside for the

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72 Letter from William Lieberman to Gianluigi Gabetti, dated April 13th, 1970; CUR, Exh. #934. MoMA Archives, NY.

exhibition of films.” The Eventstructure Research Group (ERG) was a forward-thinking artist collective founded by Jeffrey Shaw, Theo Botschuijver, and Sean Wellesley-Miller. Based out of London and Amsterdam, ERG produced an expanded cinema; their unique style of projecting films on pavilion-like architectures, often inflatable or consisting of dynamic parts, created multi-media events that blurred the boundaries between film, sculpture, public art, performance, and theater. Second, the museum could acquire an Olivetti “visual jukebox,” a circular structure with peepshow-style viewing stations where up to forty people could stand under futuristic helmets and view films with an audio component. Ultimately, McShine went with this option as the jukebox had the potential to reach many museum visitors and display multiple films at once. A total of forty stations played up to ten films at a time, one film per four stations.

It is difficult to know with certainty exactly which films were screened on the information machine during Information’s run for many reasons. As many of the exhibition’s 

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75 The ERG was founded in 1968. Jeffrey Shaw was also a co-founder with John Latham of the Artist’s Placement Group in 1967. John Latham was included in Information.

76 For a theorization of “expanded cinema” see Gene Youngblood, Expanded Cinema (New York: Dutton, 1970).

77 No archival evidence explicitly states why McShine never went with the ERG, but McShine’s letter to Lieberman, dated October 6th, 1969, provides a clue: “I [McShine] do not want the exhibition to be another version of SPACES…I am focusing on the idea that the exhibition…should be the work that seems more to be the beginning of something but by that I do not plan ‘jazz in the garden.’” This last phrase is most obviously a reference to the museum’s concert series in the sculpture garden, but the mention in the previous paragraph, of Spaces – an exhibition curated by Jennifer Licht which ran from December 30th, 1969 to March 8th, 1970 – suggests another valence. As Spaces also featured a similar curatorial premise whereby the museum commissioned individual artist installations for the galleries, perhaps McShine thought any work by the ERG installed in the garden would be too similar to the Pulsa group’s contribution to Spaces, installed in the garden only four months before Information opened. Pulsa’s installation translated a visitor’s motion through the garden, by means of a complex computer program, into a light, heat, and sound immersive environment.
films had runtimes longer than any single film reel the machine’s projectors could accommodate – for example, Gregory Markopoulos’s epic documentary *Galaxie* and Joyce Wieland’s structuralist masterpiece *La raison avant la passion* clock in at around ninety minutes – it was decided early on that there would be an additional film series screened in the museum’s auditorium running concomitantly with the Olivetti film program. No record remains of which films were shown specifically in the auditorium and which films were screened on the machine. Additionally, as the machine would be screening the films all day, for the entire length of the exhibition, if the museum wanted to ensure that a copy of each film acquired for *Information* would survive to enter the permanent collection, they would have to make an additional print copy. Again, the museum’s International Council was called upon to help offset this enormous cost, but the final approval for the project wasn’t granted until the middle of May. With the exhibition’s opening looming less than two months away, this hurried timeframe, combined with a pressing catalog deadline, led McShine to submit for publication a list of films that amounts to more of a wish list than a historical document. Furthermore, a letter from Richard L. Palmer, then-coordinator of exhibitions for the International Program, to McShine dated August 17, 1970, confirms that more than halfway into the exhibition’s run many of the films were still on order and hadn’t yet arrived at the museum.

McShine’s list provides a historical snapshot of these two main directions for avant-garde film in 1970. The list of filmmakers included in the *Information* catalog generally falls into two

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78 “The films were shown continuously or hourly throughout the long duration of the exhibition with the end result that many were simply consumed or so badly scratched that they could not be used further in any case.” Letter from Richard L. Palmer to Erik Lazar of The Hotchkiss School, dated October 7th, 1970; CUR, Exh. #934. MoMA Archives, NY.

79 Palmer proposed cancelling any orders for films still due to the museum, aside from cases where the filmmakers had already incurred the expense of the print. Letter from Richard Palmer to Kynaston McShine, dated August 17th, 1970. CUR, Exh. #934. MoMA Archives, NY.
categories. On the one hand, a viewer finds conceptual artists like Siah Armajani or David Lamelas utilizing film primarily as a means to distribute visual information or eschew commodification, whereas on the other hand, a viewer encounters Michael Snow, George Landow, or Hollis Frampton, all structuralist filmmakers focusing on the mechanical underpinnings of the cinema through a relentless, yet often poetic, investigation of the projected image.

Avant-garde film was very different from the original purpose Olivetti outlined when they approached Sottsass with the project in 1969. As the corporation planned their monumental 
*Concept and form* exhibition, and as Olivetti’s product roster grew, they concluded that film was one of the easiest ways to display the variety, history, and quality of their products. Olivetti tasked Sottsass with producing a machine that could display such films, as well as highlight the medium’s creative potential under Olivetti’s direction. Sottsass, a technically skilled and incredibly creative product designer at this point in his career, realized that the machine had potential aside from the immediate exhibition context. The corporation had long sought a way to showcase as many products as possible to potential business partners and technologically savvy clients at company salons, showrooms, trade expositions, or promotional exhibitions.

Sottsass proposed what he termed the “jukebox of the imagination.” The machine’s design grouped ten trapezoid-shaped metal structures into a circle; structurally, this metal skeleton cantilevered the ten separate modules against the central load-bearing drum.\(^80\) Each part was to be outfitted with four individual viewing windows that looked onto a center screen surrounded by speakers. Ten angled film projectors located directly under each screen reflected

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their images off the center post to the screens above. Constructed from reinforced polyester and fiberglass, the machine cut a zoomorphic, formidable presence. Hovering on its mirrored base, the machine was equal parts futuristic spaceship and nostalgic carnival exhibit.

Invented for the *Concept and form* exhibition, the Olivetti machine was born out of the corporate need for a modular, transportable way of showing newly invented products and emerging technologies to an audience drawn together by their shared interest in art, architecture, and design. Its emphasis on interchangeable, mobile, and easy manufactured parts ensured that the machine could be constructed on-site. This design ethos was reiterated by the itinerant and inflatable structures built to house the travelling exhibition. Gae Aulenti, a polymath whose work for Olivetti spanned exhibition architecture and product design, is credited with designing the exhibition structure and its interior permutations, as *Concept and form* took different forms and titles as it travelled across the globe from November 1969 to October 1971. Two blueprints depict the exhibition as it was installed in Paris (Fig. 10), and as it was subsequently realized in London (Fig. 11). Like objects in one of Olivetti’s showroom displays, each of the individualized exhibition components could be arranged depending on the site plan and desired effect. *Concept and form* was the ultimate promotional product of global technology, and the job of the Olivetti machine was to substantiate this public relations initiative through film.

Mary Anne Staniszewski has suggested that the information machine can trace its form to the viewing apparatus utilized by El Lissitzky in the Soviet pavilion he designed for the 1929...

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82 The exhibition took the following titles: *Formes et Recherches* at the Musée des Arts Décoratifs in Paris, *Investigación y Diseño* at the Pabellón Italiano de la Feria de Muestras in Barcelona and the Palacio de Cristal in the Parque del Retiro in Madrid, and *Concept and Form* at the Waverley Market Hall in Edinburgh and the Euston Station Plaza in London. A special iteration would later be presented in the Prince Hotel in Tokyo.
International Film and Photo Exhibition of the Deutscher Werkbund, used to screen the films of Sergi Eisenstein. 83 (Fig. 12) Since both machines are attempts to project film outside of the traditional space of the cinema theater and each utilized individualized hood-like structures, Staniszewski’s comparison holds weight, but what if we extend the machine’s genealogy farther back in time. At the end of the nineteenth century, monumental changes in the conditioning of vision created a new societal body of trained observers. 84 The habituated and learned behaviors that accompanied such a transition are formative practices for understanding the emerging technologies of sustained attention that become popular in the nineteenth century, such as the telephone, the cinema, and the panorama.

I propose such a product, the Kaiserpanorama, as the conceptual precedent for the Olivetti machine. (Fig 13) Born from an optical entrepreneur’s desire to bring his collection of glass stereoscope photographs to a mass audience, the Kaiserpanorama used a play of transparent and color-tinted glass stereoscope slides to achieve an illusory three-dimensional experience. August Fuhrmann opened the prototype in 1883 in the city of Berlin, and shortly after, the Kaiser-panorama was a booming business with over 250 in operation across Germany and Austria. 85 The first machine could accommodate up to 25 spectators. A motor moved the slides

83 The Internationale Ausstellung des Deutschen Werkbundes Film und Foto took place from May 18th to July 7th, 1929 at the Städtischen Ausstellungshallen in Stuttgart. The Soviet Pavillion was designed by El Lissitzky and travelled from Germany to Austria, Japan, and Switzerland.


from viewer to viewer at two-minute intervals, the entire experience lasting up to fifty minutes.
The formal similarities between the two apparatuses are obvious, but I want to suggest that a latent connection exists between the two. (Fig. 14) As film technology evolved, a viewer’s scopic autonomy became the focus of evermore all-encompassing modes of spectatorship -- in this respect, the Kaiserpanorama and the Olivetti machine are two chapters in the history of this changing field of visual perception.

The Kaiserpanorama posed an immediate issue: how could attention be sustained if the views offered to spectators changed so frequently? Jonathan Crary has suggested that the importance of the Kaiserpanorama lay in the way in which it mechanized attention for a newly emerging spectator class. 86 By spinning at regular intervals sounded off by a bell, the machine presented radically different scenes as normal, successive iterations, training an observer to expect the next scene, even if they could not anticipate the content. This attempted naturalization of perception is one of the hallmarks of pre-cinematic and cinematic apparatuses – a response to and a product of the increasing fragmentation of visual stimuli encountered in modern culture.

As sustained attention became one of the goals of film technology and cinematic experiences, the suturing of the viewer to the projected image became the primary aim. More frequently, cinematic apparatuses and film installations strove to delimit the perceptual field of the viewer, training the viewer’s interaction with the projected image into one of silent, rapt attention. In its role in Concept and form, the Olivetti jukebox succeeded in intriguing peripatetic spectators as it was designed to show films up to ten minutes in length. Sottsass reasoned that this was long enough to reward a viewer’s sustained attention, but short enough for

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86 Crary, Suspensions of Perception, 134-138.
a standing audience. Responding to the sometimes apprehensive, sometimes enthusiastic relationship between a consumer and technology, Olivetti’s “visual jukebox” strove to create a space for autonomous visual experience among competing exhibition stimuli. Bent at the waist, partially engulfed by the shiny apparatus, and devoid of peripheral vision, visitors entered the machine only to find their visual horizon distilled to a tightly focused screen playing a single looped film. (Fig. 15) By relegating each visitor to his or her own station but displaying the same film on multiple stations, the machine rendered palpable the oscillation between the individual and the communal experience inherently obscured by the cinema.

Within Information, McShine repurposed the Olivetti machine from showcasing promotional films of Olivetti typewriters, calculators, and other “forms of the future” to exhibiting the work of avant-garde filmmakers, such as Denis Oppenheim and David Lamelas.87 As museums visitors approached the machine, the space between consumer and viewer collapsed, producing an uncomfortable tension foregrounding the connection between the corporation and the museum. This was underscored by the fact that the company logo was visible across the entire machine in a perforated aluminum band of lights, the machine was located at the entrance of the exhibition, and the exhibition’s title, “Information,” was written on a nearby transparent wall picturing various Olivetti products. (Fig. 9) From a certain angle, the exhibition’s title appeared as if it were written on the machine itself, suggesting that the Olivetti machine was the one source for all information.

In Sottsass’s understanding, once approached by the viewer, the Olivetti machine was structured into its “hardware” and “software.” The “hardware” of the apparatus comprised “hammers, pliers, screwdrivers, electronic components, micrological circuits, magnetic tapes

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players, etc.,” whereas the “software” were “all the things that happen inside the brain that are not physical actions or products…but are impulses and positions, memories and programs.”

Through its corporate rhetoric, Olivetti projects a technological metaphor of “hardware” and “software” onto the body. “Information is transmitted through the cinema and through the audio, and it manifests itself inside the great jukebox not outside: the life is inside, and it is as if it were the life of the brain.” According to official descriptions, as the machine begins to hum with artificial life, the mind/body and the mechanical are conflated.

Olivetti credits their machine with “producing the possibility of creating software…new types of impulses or of positioning consciousness…new ways of collecting and holding memories.” Many conceptual artists opposed such claims, understanding them as social conditioning. The following is taken from artist Les Levine’s substantial review of Information:

There are two kinds of software; one, the very technical term…a computer programmer needs to know, and the other is social software…the kind of information in the environment which make us behave the way we do. The media environment is telling your brain how to operate; it is telling your body how to operate; it is telling you how to behave…what to look at…Art now reads out as social software: information. Once we know that the purpose is to influence the social software we can do away with the art and start influencing the social software directly.

For both the corporation and the artist, affecting the “software” – in Levine’s case, making the media’s influence understandable to all, and in Olivetti’s case, inspiring consumer creativity – was the expressed goal of employing technology. Similar “software” led to very different results.

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89 Ibid., emphasis my own.

90 Ibid.

for the corporation and the conceptual artist. If conceptualism embodied this dual interest in technology as well as a resistance to technology’s dominating tendency, the artist could highlight this friction. The controlled, prescribed relationship between technology and art, manifested by the Olivetti machine, was anathema to most of Information’s artists.

Another point of useful comparison within the exhibition is Brazilian artist Hélio Oiticica’s little known plan for a potential film “site” within the galleries. Whereas the Olivetti machine mandated individual viewer experience, Oiticica’s work embraced sensorial collectivity; whereas the technology of the jukebox represented the corporation, Oiticica espoused “creleisure,” a neologism he coined to connote the mythic convergence of belief, creation, leisure, and pleasure.92 For his contribution to Information, Oiticica created a leisure-structure installation, titled Nests (1970). (Fig. 16) Consisting of three tiers of individual and communal wooden cells draped in burlap, Nests (1970) offered spaces for the recovery of sensory desire. Writing to McShine in 1970, Oiticica described this work as “the complete transformation of the object-environment into the exploration of leisure-behavior structures.”93

The genesis of Nests is well known; what is less known is Oiticica’s first, rejected proposal for a film-viewing environment within the exhibition.

In this proposal, Oiticica suggested making a film with the American artist Lee Jaffe, who was at the time visiting Rio de Janeiro. The film would be an hour long and take as its subject a “direct, dry instant alive information: not about anyone’s works etc., but a ‘state of

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93 Letter from Hélio Oiticica to Kynaston McShine, dated April 27th, 1970; Information, IV.64.b. MoMA Archives, NY.
being’ in itself.”

The aim would be to make the technology of film present for the viewer, to make the viewer aware of the constructions of film by turning the camera back on itself. (Fig. 17) His drawing for the project consists of a few lines. It indicates the film would be screened in a dark room, the floor covered with sloped mats that “have a height at the position of heads, so people can lie and see the screen at once.”

Having viewers lie down was a way of both prompting internal dialogue and escaping the traditional relationship of viewer and art object. For Oiticica, this work represented “in the idea of the Information show, the INFORMATION itself, with no aesthetic mannerisms.”

By aping certain conventions of the cinema – the darkened room, the single projected film, the communal experience – but inverting others through the sloped position of the viewer’s body, the self-reflexive content of the film, and the heightened relations of the environment, this work echoed Oiticica’s familiar strategy, evident in his Tropicália and Bólides series, of enlivening rational and familiar objects by unlocking their irrational or quasi-mystical powers. Oiticica’s proposition to generate an “intentional opened visual-spectator act” through the technology of film suggests that the medium still possessed subversive potential, modeling how to resist the totalizing Olivetti machine of the future.

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95 Ibid.

96 Ibid., emphasis in original.

97 Ibid.
Conclusion

In 1971, while reflecting on the art of the previous year, Gyorgy Kepes laid out a program for art’s future. In “Toward Civic Art,” he writes:

No doubt, we are approaching an epic age in which the emphasis will be placed on major common obligations. There is a need for those who have the imaginative power to discern the essential common denominators of this complex late twentieth-century life.  

At the opening of the 1970s, fears of “major common obligations” abounded: overpopulation, ecological disaster, nuclear annihilation, race wars, and chemical warfare. Concepts such as the Information Society, the global village, systems theory, and cybernetics dominated discussions during this period in an attempt to understand the interconnectedness of society’s progresses and ills. A “dynamic complementarity” began to unite what had previously seemed like unrelated aspects of modern life. The only way of realizing the “essential common denominators,” Kepes proposed, was through an art infused with civic mindedness.

In 1970, theorist Annette Michelson turned her focus to the trajectory of present art:

[Contemporary] art tends increasingly to posit ‘formal statements’ which are positive and non-ambiguous, their reductive or nonrelational character resisting denial, debate, qualification…The utopian idea of this century is…the construction of a sign system on a single level of articulation. It is the dream of absolute immediacy pervading our culture and our art, which replaces, in a secular age, a theology of absolute presence.”


99 Ibid.

For Michelson, modernism responded to the abstraction of all social experiences and technological processes caused by the increasing rationalization of industry. But just as messages sped up and societal distances were bridged, at the same time, inequality, violence, and conflict appeared to punctuate every advance. As the system came to replace the subject, Michelson suggests, art now offered an unsentimental interrogation of the structure. In her final analysis, the theorist is wary of replacing modernism’s redemptive drive with the aims of structuralism, viewing this as the wholesale substitution of one form of transcendence with another.

Both writers – the first, articulating his hope for art’s future, the second, attempting to make sense of the art of her present – acknowledge the need for a single language to expose the interconnectedness of the processes which structure the means of cultural and industrial production. Donald Burgy’s proposal for Information literalizes this aim. His Time-Information Idea #5 (1970) was to be composed of a single printed statement and 15,000 printed index cards available to museum audiences. The proposal follows:

The total state of our physical and cultural context is causal for our present ideas. If you wish to participate in focusing ideas from this context, select any of your present ideas. Record the idea on an information card and put it in the information storage area. All the ideas on the accumulated information cards will compose this work. At the end of the exhibition, the artist will de-compose this work by thinking each idea and reducing it until only one general idea remains. The artist will complete the reduction by recording the final idea and then forgetting it. The total state of our physical and cultural context will be causal for our subsequent ideas.101

Burgy’s directions simultaneously acknowledge the cultural pressures of Kepes’s “obligations,” while echoing Michelson’s theorization of the century’s dream of a single organizing principle to emerge from the random and chaotic flow of ideas. Whereas Michelson cautiously qualified this desire as utopic, Burgy’s formulation is much more direct, pushing the goal past its critical limit.

101 Information press packet, CUR, Exh. #934. MoMA Archives, NY.
to the point of endless absurdity. His conclusion of “forgetting” is uncertain; the action is at once meaningless and necessary in order to propose viable alternatives to the present.

For Kynaston McShine, information was the greatest common denominator. Conceptualism developed largely as a critical mode of interrogating this interconnectedness, yet until now, the role design has played in providing artists with the tools to visualize this critique has largely been ignored. Perhaps the best illustration of this principle of interconnectedness is the outside of the Information catalog itself. (Fig. 19) Writing from the vantage point of the present, it is difficult to conjure up the cultural associations imagined in the term “information,” written in incarnadine block text across the top of the paperback book. As many of the political events of the year, most notably the My Lai Massacre and the public dissemination of the Pentagon Papers, circled around the suppression, circulation, leak, or exposure of information, Americans approached the term with a suspicion that is quite different from the instant and continuously refreshed feeds of 2016. Design, perhaps even more than semantics, is a field responsive to its historical context, and the Information catalog addressed an audience sensitive to the growing awareness that war was not only a political matter, but understood alongside other vectors, such as financial and corporate-industrial interests, advances in technology, and the aims of educational, cultural, and research institutions.

One of the central issues articulated by the Information cover is the growing role of communication technology and media in shaping the future of societal interactions, and one of the most pressing artistic problems of the 1970s was the role art and design would play in imagining this near future. Composed from an irregular grid of images running continuously across the front and back cover, the Information catalog is rendered in a very specific design format. Michael Lauretano, the designer of the offset-printed color cover, intentionally blew up,
almost at the microscopic level, the printing grid of dots traditionally used to achieve tonal modulations in photomechanical printing. He then laid this grid over rows of uncaptioned images, which imperceptibly utilize the same single value printing method. In terms of contributing to the visibility of the products peppered across the catalog’s surface, there is no functional purpose for the dot overlay to exist. Rather, the choice is entirely aesthetic, intended to highlight an altogether different conclusion.

Again and again, this dot matrix pattern appears in artworks of the year 1970 to suggest that an irreducible connection existed between all objects, information, and images.\textsuperscript{102} Compare one of Stan Vanderbeek’s collages for \textit{The History of Violence in America} (1970). (Fig. 19) While Vanderbeek was a participating artist of the Rockefeller Artists-in-Television program, he was paired with WGBH, a public television station in Boston. As his contribution, the artist produced a broadcast the station aired on December 31\textsuperscript{st}, 1969. The transmission featured a provocative juxtaposition of archival footage – from race riots and public speeches to televised space missions – eventually speaking directly to the viewer, presenting them with an urgent question: “Can man communicate?” Alongside this project, Vanderbeek created a series of collages. An abstracted, halftone human eye dominates the collage under discussion as it frontally addresses the viewer. Cropped and disembodied, the human head is reduced to an eye, this printed eye enlarged to reveal its underlying pattern. Vanderbeek’s text offers a startling thought:

\begin{quote}
THE IMPLIED POSSIBILITY OF MASS ACCESS TO MEDIA AND MASS MEDIA TO THE INDIVIDUAL IS ASTONISHING_WE WILL SOON ALL BE ABLE TO
\end{quote}

\textsuperscript{102} The dot matrix printer, rather than using specific keys like a typewriter, built fonts from a matrix of dots. Images are created from a print head composed of pins that strike an ink ribbon, pressing it against a paper fed through the machine. The machine’s cheap cost, speed, durability, and ability to make carbon copies led to its popularity and widespread commercial success in the first half of the 1970s.
In Vanderbeek’s juxtaposition, the relationship of the visual to the informational – what the artist terms “LOOKING AND SEEING” in a pointed arrow between the two forms – is never as simple as the promise of an underlying structure first suggests. Vanderbeek’s collage articulates the intrinsic risks of constituting the world as information, the threat of miscalculation.

A second useful point of comparison for the Information cover is an image drawn from The Marshall McLuhan DEW-LINE newsletter, contained within McShine’s exhibition research archive.103 (Fig. 19) Presented as the most pertinent information of its time, as well as a corrective to mainstream media, McLuhan’s publication was issued monthly from 1968-1969, and bimonthly from 1969-1970. Design was of fundamental importance in realizing the writer’s aims, as the newsletter took wildly different forms for each installment. One issue comprised a series of pamphlets, another, a grouping of posters; its initial issue came in the form of a “high school term paper,” a stack of papers covered in plastic vinyl, held together by a plastic spine.104 This black and white offset print features two images of the same painting, successive details of a bucolic landscape, enlarged to reveal the underlying pattern of halftone dots. The phrase “information overload or pattern recognition” hovers alongside the two images. The images are meant to provide a visual analogue for the newsletter’s text: “When any situation becomes over-charged with data, the details fall away and the pattern of interrelationships that they provide

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103 The newsletter’s title references the “Early Warning Detection” radar network operated by the United States and Canada over North American airspace, which intended to detect hostile aircraft or missiles during the Cold War. The word association implied that information was essential for both prediction and critical resistance.

emerges starkly.” Not unlike Burgy’s *Time-Information Idea #5* (1970), the image presents two related notions. Firstly, that an underlying structure of information – in this case, visual – provides the key to understanding material reality, and secondly, that design could provide a way of awakening the criticality dormant in this relationship.

As the network became the dominant metaphor for social systems, artists and industrial designers placed more and more emphasis on manipulating information believing this would concomitantly affect material existence; indeed, it seemed as if information could reorder material reality. Looking again at the *Information* catalog, it is now easy to “recognize the pattern” of technocratic oppression – the ways in which communicative technologies fundamentally restructure daily existence, in the process, leveling human interaction to its “common denominator” in information and rendering once vital communal relationships ineffective. At the same time, another pattern takes shape – the way in which these same technological achievements could provide sites of resistance, imagined and virtual communities, possibilities for new subjectivities, and a powerful metaphor for a novel egalitarian social order.

McLuhan’s influence makes a second appearance within the pages of the *Information* catalog. Within the catalog’s third section – a collage of re-photographed and uncaptioned pictures, printouts, posters, postcards, and newspaper articles – lies a small reproduction of the second poster, designed by the graphic artist Marshall Henrichs, of Maurice Stein and Larry Miller’s *Blueprint for a Counter Education*. (Fig. 21) The *Blueprint* operated somewhere between activism and education; it comprised a publication and three accompanying foldout posters that could be assembled to create a portable classroom.¹⁰⁵ Henrichs’s extraordinary

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¹⁰⁵ An accompanying “shooting script” and sixty-nine page reading list were designed to take the learner through a pedagogy committed to “radical innovation in both meditation about modernist environments and participation in post-modernist environments.” Maurice Stein and Larry Miller, *Blueprint for Counter Education* (New York: Doubleday & Company, Inc., 1970) unpaginated introduction.
posters solved the authors’ fundamental quandary. How is one to understand, let alone visualize, the enormous role information played in structuring contemporary life? The designer envisions the present moment as a giant magnet created from the two forces of “MARCUSE” and “MCLUHAN,” superstar theorists representing industry and media, respectively, which ground three terms hovering inside: art, design, and politics. The *Blueprint* was published only months before *Information*, and copies were sold in the MoMA bookstore. Additionally, the poster’s inclusion within the pages of *Information* suggests the third section of the catalog is McShine’s attempt at pattern recognition. It reframes the previous pages of artist proposals as an address to these cultural avatars of the *Information* machine.

The front and back of the *Information* catalog is a visual essay to technology. In the upper register, a telephone stands to the left of the Olivetti information machine. Along the second, a Volkswagen Beetle points to an Olivetti Praxis 48 typewriter. In the final row, a portable television faces off with a Kodak Instamatic 124. Many of the represented products, such as the Boeing 747, represented the most advanced technology of the day, as it had taken its first commercial flight only a year before. It is easy to assume this cover represents a matrix of the most advanced communication technologies of the day. Upon closer inspection, a viewer begins to differentiate the outmoded from the state-of-the-art.

At the left corner of the back cover, the image of a carrier pigeon supports a Picturephone above. After almost two decades of research, Bell Telephone Labs unveiled the first Picturephone in 1964, at the World’s Fair held in New York. Marketed mainly towards corporate executives, the device transmitted visual images as well as sound. Astronomical cost, a subscription service where corporations had to “buy” airtime, and poor service led to the Picturephone’s almost immediate commercial failure. This “flop” is all the more crushing when
we return the image to its original context, an advertisement from Western Electric, Bell Labs’s primary supplier. (Fig. 22) Here, a cord stretches from the telephone receiver directly into the space of the advertisement’s viewer like a technological umbilical. Draw closely to the device, the viewer is presented with the promise of Warhol’s fifteen minutes of fame: “Someday you’ll be a star!” Situated within Information’s grid, removed from its original context, this combination of the then-outmoded device, with the carrier pigeon below, creates a telling commentary. Information’s products now seem like an almost obsessive compiling of cluttered junk, permanently fixed within the grid in an attempt to stave off technology’s planned obsolesce. The once vital lifeline of the advertisement’s telephone cord now appears more like the viewer’s chain.

This observation touches upon one of the most prescient suggestions of the worldview espoused by the Information machine: there is nothing inherently liberatory about technology or radical design. Nowhere is this more evident than with the Olivetti Praxis 48 typewriter designed by Ettore Sottsass, Jr. pictured on the front cover of the catalog. The Praxis 48 represented the typewriter of the moment, having just won the Compasso d’Oro, Italy’s highest design award, in 1970. The major breakthrough of Sottsass’s typewriters in the second half of the 1960s is their unification of form and functionality, specifically their portability. For Sottsass, this meant that poets could now write poetry in the forest, using the typewriter’s case as a travelling seat, but from the point of view of the corporation, this amounted to new locations increased productivity. In many ways, Information literalized this ambivalent stance towards

technology. In this formulation, *Information* is a corrective to the technophile fantasies of an earlier period adopted by MoMA in such exhibitions as Leo Lionni’s *Olivetti: Design in Industry* of 1952 and K. G. Pontus Hultén *The Machine: As Seen at the End of the Mechanical Age* of 1968.

As the New Left and countercultural movements directly implicated corporate-industrial technology in the Vietnam conflict, opinions toward technology took on a sinister air, and artists became wary of any direct connection to or support from industry. At the same time, many artists – “the antenna of society” – anticipating this changing tide, aimed to speed up the process.  

Maurice Tuchman, the curator of modern art at LACMA responsible for the genesis of the Art and Technology program, sums up this transformation in public opinion:

> I 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 military 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 [1971] instead of in 1967, in a climate of increased polarization and organized determination to protest against the policies supported by so many American business interests and so violently opposed by much of the art community, many of the same artists would not have participated.

Tuchman’s perceived shift in the position available to “the politically conscious artist,” from “a Trotsky writing for the Hearst Empire” – the artistic analogy here would be the A+T artist who uses the corporation in which he is placed for the increased visibility of his own agenda – to an

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“organized determination to protest,” foregrounds the location of an artist’s critique. Within the system or without, Tuchman’s options seem to suggest, but by 1971, not both.

This thesis has illustrated, through specific case studies, that this familiar binary of critique or complicity is no longer a viable interpretation for the art under discussion, and that the mutual interaction of artists, museums, and corporate-industrial technology is oftentimes not as simple as Tuchman suggests. As this analysis of Information illustrates, conceptual artists utilized industrial technology to open up an ambivalent, yet critical, space within the museum that allowed a viewer to make the leap from the role of technology within the exhibition to its role in everyday life, in both its oppressive and liberatory capacitates. Within this context, we can understand McShine’s curatorial decision to place a mammoth symbol of corporate technology such as the Olivetti machine directly across from MoMA Poll, a work implying the all-encompassing reach of corporate interests.

In 1970, conceptualism and design created a productive tension, if only for a brief moment, before the connections between the museum and industry were codified in sponsorship agreements, relegated to separate departments within the museum, and controlled by clearly defined institutional policies. At stake in 1970 was the idea that technology could, on the one hand, provide an artist with the tools for demystification through critical and instant visual feedback, and on the other hand provide the corporation with the conditioning mechanism of the Olivetti machine. That such a critical position today is no longer tenable is beside the point. Only by acknowledging the role design played in building the Information machine, can we clarify the vicissitudes, and eventual demise, of this position within the history of conceptualism.
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Illustrations

Figure 3. James Mathews, Installation view of *Information* exhibition, held at the Museum of Modern Art, New York from July 2nd to Sept 20th, 1970, photograph; from the Photographic Archives of the Museum of Modern Art Archives, New York.
Figure 5. James Mathews, Unidentified visitors at the *Information* exhibition, held at the Museum of Modern Art, New York from July 2nd to Sept 20th, 1970, photograph; from the Photographic Archives of the Museum of Modern Art Archives, New York.
Figure 6. James Mathews, Unidentified visitors at the Information exhibition, held at the Museum of Modern Art, New York from July 2\textsuperscript{nd} to Sept 20\textsuperscript{th}, 1970, photograph; from the Photographic Archives of the Museum of Modern Art Archives, New York.
Figure 7. Joseph Kosuth, *Titled (Art as Idea as Idea) [meaning]*, ca. 1967, Photostat mounted on board, 47 x 47 inches, Menil Collection, Houston, Texas.
Figure 9. James Mathews, Installation view of the *Information* exhibition, held at the Museum of Modern Art, New York from July 2nd to Sept 20th, 1970, photograph; from the Photographic Archives of the Museum of Modern Art Archives, New York.
Figure 11. London blueprint of *Olivetti concept and Form* exhibition; from Giovanni Giudici. ed., *Olivetti concept and form* (Ivrea: Olivetti, 1970) unpaginated catalog.
Figure 12. Installation photograph of Soviet Pavillion designed by El Lissitzky, of the International Film und Photo Exhibition of the Deutscher Werkbund, Stuttgart, May 18th to July 7th, 1929; from Jorge Ribalta, ed., *Public Photographic Spaces: Exhibitions of Propaganda, from 'Pressa' to 'The Family of Man' 1928-1955* (Barcelona: Museu d’Art Contemporani de Barcelona, 2008) 111.
Figure 13. View of the original Kaiserpanorama, Berlin, 1880s; from Jonathan Crary, *Suspensions of Perception: Attention, Spectacle, and Modern Culture* (Cambridge: MIT Press, 1999) 135.
Figure 16. James Mathews, Installation view of the *Information* exhibition, held at the Museum of Modern Art, New York from July 2nd to Sept 20th, 1970, photograph; from the Photographic Archives of the Museum of Modern Art Archives, New York.
Figure 17. Hélio Oiticica’s drawing from letter to Kynaston McShine, dated April 4th, 1970; from Kynaston McShine “Information” Exhibition Research, IV.64.a. Museum of Modern Art Archives, New York.
Figure 18. Front and back cover of *Information* exhibition catalog, black and white copy; from Kynaston McShine, *Information* (New York: Museum of Modern Art, 1970).
Figure 19. Stan Vanderbeek, *The History of Violence in America* (detail), ca. 1970, collage on paper, thirteen works, 11 x 14 inches; from the Estate of Stan Vanderbeek.
information overload or pattern recognition

When our attention becomes overloaded with data, the details fall away and the pattern of interrelationships that they provide emerges clearly. This is one aspect of the dynamics of "breakdown as breakthrough."

Figure 22. Western Electric Picturephone Advertisement, January 1<sup>st</sup>, 1968; from the Underwood Archives.