The following individuals certify that they have read, and recommend to the Faculty of Graduate and Postdoctoral Studies for acceptance, a thesis entitled:

COLLABORATION AS CAMOUFLAGE: THE MOBILIZATION OF ART DURING COLD WAR SCIENTIFIC EXCEPTIONALISM

submitted by Alice Ruo Ran Wang in partial fulfillment of the requirements for the degree of Master of Arts in Art History

Examining Committee:

Saygin Salgirli
Supervisor

Robert Brain
Supervisory Committee Member
Abstract

The proliferation of art-science collaboration in contemporary art necessitates a critical history. This paper is an attempt to do so. One of the first places in which this genre of art was cultivated was at the Center for Advanced Visual Studies founded by Gyorgy Kepes at MIT in the late 1960s. However, this essay is not an examination of what Kepes did—but what was achieved through him.

Cold War ideologies from the late 1940s was marked by what Audra Wolfe characterizes as a “scientific exceptionalism” that sought to place science above and beyond the reaches of politics. The parameters structuring art-science collaboration at MIT were in conformity of this exceptionalism: displacing issues of value onto the arts; locating democratic participation downstream of technoscience, in its application, not its epistemology. These parameters in turn contributed to the propagandist engines at large that worked to dissipate efforts to examine the sociopolitical dimensions of science, such as those by the Vienna Circle expatriate Philipp Frank in Kepes’ vicinity.

The proliferation of any genre of art suggests vested interest in its saliency. In seeking to understand the science politics in which the Center for Advanced Visual Studies was situated, I contend that art-science was never a collaboration between the artists and the scientists—but a public engagement effort for technoscience through the arts. The distinction drawn between art and science was predicated on, and in servitude of, an exceptionalism that depressed the sociopolitical understanding of science and curtailed its democratic engagement. If we understand how scientific exceptionalism operated through Kepes, we can understand how art was mobilized to help configure the relationship between science and democracy.

That art and science exist as distinct entities is irrelevant; that they are entities so profoundly distinct that they need to be reconciled to bring about social betterment is the misattribution of Cold War propaganda.
Lay Summary

In contemporary art, there is a proliferating phenomenon where artists collaborate with scientists to produce works. I look at the history of how this started. In particular, I focus on the works of Gyorgy Kepes and his founding of the Center for Advanced Visual Studies at the Massachusetts Institute of Technology in the late 1960s. That art-science collaboration emerged out of a military-industrial complex was no coincidence. By examining the institutional parameters that structured how this genre of art emerged in light of Cold War science politics, I argue that this was a genre of art mobilized to help configure the relationship between science and democracy. The proliferation of any genre of art suggests vested interest in its saliency. My examination of its history demonstrates that art-science collaboration was never a collaboration between artists and scientists—it was a public engagement effort for technoscience through the arts.
Preface

This dissertation is original, unpublished, independent work by the author, Alice Ruo Ran Wang.
Table of Contents

Abstract........................................................................................................................................... iii
Lay Summary ....................................................................................................................................... iv
Preface................................................................................................................................................ v
Table of Contents ................................................................................................................................. vi
List of Figures....................................................................................................................................... vii
List of Abbreviations ........................................................................................................................... viii
Acknowledgements ............................................................................................................................... ix
Dedication ............................................................................................................................................. xi
INTRODUCTION................................................................................................................................. 1
SECTION I: MODUS OPERANDI ........................................................................................................ 8
SECTION II: APPLICATION AND EPISTEMOLOGY .................................................................. 13
SECTION III: DEMOCRATIC PARTICIPATION ........................................................................... 21
CONCLUSION: A SENSE OF PLACE .............................................................................................. 28
Bibliography ......................................................................................................................................... 34
List of Figures

Figure 1. Edwin Howland Bashfield and Vincent Aderent, *Alma Mater*, 1923. North Wall Mural (center), Morss Hall, Walker Memorial, Massachusetts Institute of Technology. Photo by Author. .......................................................... 29

Figure 2. Edwin Howland Bashfield and Vincent Aderent, *Ye Shall Be As Gods Knowing Good and Evil*, 1930. South Wall Mural (left), Morss Hall, Walker Memorial, Massachusetts Institute of Technology. Photo by author.......................................................... 31
List of Abbreviations

AAA: Archives of American Art, Smithsonian Institute, Washington, DC
BU: Howard Gotlieb Archival Research Center, Boston University, Cambridge, MA
CAVS: Center for Advanced Visual Studies Special Collections, MIT, Cambridge, MA
DC: Distinctive Collections, MIT, Cambridge, MA
HUA: Harvard University Archives, Harvard University, Cambridge, MA
HL: Houghton Library, Harvard University, Cambridge, MA
JKF: John F. Kennedy Presidential Library and Museum, MA
MIT: MIT Museum Archives, MIT, Cambridge, MA
NARA: National Archives and Records Administration, College Park, MD
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Finally, I dedicate this story to my first-generation immigrant parents, knowing that they are also proxies for my immediate and extended families. Our roots run deep, and through the matrix of you all, I become what I stand for.
For my mother, who sustains

and my father, who upholds
INTRODUCTION

The proliferation of art-science collaboration in contemporary art necessitates a critical understanding of its history.¹ This story is an attempt to do so. One of the most prominent places which galvanized this “idiom of collaboration” was through Gyorgy Kepes at the Massachusetts Institute of Technology in the late 1960s.² Here I am deliberately using the word “through” to emphasize that this essay is not an analysis of Kepes’ personal artistic oeuvres but how Cold War science politics operated through Kepes in his capacity as the founding director of the MIT Center for Advanced Visual Studies (CAVS) to engender a highly structured form of art-science collaboration.³ As such, I draw on robust art historical monographs on Kepes to take the liberty of focusing centrally on understanding how the parameters structuring artistic collaboration with scientists emerged in the military-industrial complex.⁴ In doing so I hope to elucidate the

¹ For one of many, many surveys of such collaborations see for example, Anna Orrghen, “Surveying the Literature on Technoscience Art: from Pioneer Stories to Collaborations Between Artists, Scientists and Engineers as the Object of Study,” Digital Creativity 28, no. 2 (2017): 157-176.

² The phrase, “idiom of collaboration” permeated Kepes’ writing from the late 1950s onwards. It was his characterization for the raison d’être of the MIT Center for Advanced Visual Studies. The Center was unique for cultivating art-science collaboration at an academic institution and is “largely unacknowledged as a precursor to such institutions as Ars Electronica in Linz, Austria” (1979) and MIT’s Media Lab (1980). See Elizabeth Finch, “Languages of Vision: Gyorgy Kepes and the ‘New Landscape’ of Art and Science” (PhD diss., The City University of New York, 2005), 45.

³ Other art-science-technology programs emerged around this time include the NASA Art Program (1962), Experiments in Art and Technology (1966), and the “Art and Technology” exhibition at the Los Angeles County Museum (1971). See Anne Collins Goodyear, “The Relationship of Art to Science to Technology in the United States, 1957-1971: Five Case Studies” (PhD diss., The University of Texas at Austin, 2002).


power structure vested in this genre of art. The emergence of art-science collaboration at MIT during the mounting political tensions of the Sixties was not a poorly timed coincidence, nor was it simply an attempt to celebrate technocracy. In its mobilization of art, something else was achieved that went to the core of configuring the relationship between science and democracy.

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The Center for Advanced Visual Studies did not open in the 1967 without controversy. Its mission, according to its founding director, was to cultivate technoscientifically literate artists who can provide a “new formats in art.” The critiques accused Kepes for subverting art as the “handmaiden” of science, for conjuring a “shot-gun wedding” that domesticated art from its real purpose of attacking the technocrats. Yet I would argue that the politics of CAVS laid deeper than its overt espousal of technoscientific art. Freely interspersed in the rhetoric of its raison d’être was the expectation that these new formats in art would provide “new scales of human values.” This, I contend, was not only an argumentative turn that attempted to legitimize the important of art but conformed to the Cold War propagandist current at large that sought to paint science as apolitical.

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5 That CAVS sought to create “new formats in art” is Kepes quoted in “Press Release,” December 13, 1971, Box 29, Folder “Kepes’ Notes,” Gyorgy Kepes Papers, CAVS. For the goal of reshaping the man-made environment see Gyorgy Kepes, The Center for Advanced Visual Studies, Box 1, Folder “CAVS Initial Publication 1966,” Gyorgy Kepes Papers, CAVS.
7 Gyorgy Kepes, “Proposal for the Center for Advanced Visual Studies,” December 1965, Box 1, Folder “CAVS Proposal,” CAVS.
In *Freedom’s Laboratory*, Audra Wolfe argues that the ideological tension between the United States and the Soviet Union during the Cold War saw American propagandist engine turned towards the fabrication and maintenance of an illusion of a “scientific freedom.”8 Best defined through its foil—a Communist science practiced in adherence to dogma—American science was to be free, transcending politics through its espousal of objectivity and international alliance.9 This ideal of a “scientific exceptionalism” sough to place science above and beyond the reaches of values, exemplifying the ideology of no ideology.10 By asserting that art will provide value to the scientists, the rhetoric at CAVS further galvanized the supposed distinction between art and science in conformity with Cold War scientific exceptionalism.

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Gyorgy Kepes was born in 1906 in the village of Selyp, Hungary.11 He attended the elite Faosir Luteran Secondary School in Budapest where other luminary alumni included polymath John von Neumann, physicist Eugene Paul Wigner, and political writer Theodor Herzl. Edward Teller, who would go on to advocate for the construction of hydrogen bombs in America, studied nearby at the Minta Gimnazium.12 His young adult years were spent studying painting at the Academy of Art where he joined the Marxist leaning group of painters and poets called *Munka* gathered

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9 The international alliances, of course, was tightly coupled with US foreign policy. Ibid., 1.


around Lajos Kassák during the regime of Miklós Horthy.\textsuperscript{13} Finding the medium of painting too limited for “social message communication,” Kepes turned to collage and photomontage, producing an homage to Rosa Luxemburg entitled \textit{In Memory of L. R.}, 1929.\textsuperscript{14} Kepes aspired to make films. Yet lacking the budget to produce a film script he had written about the Hungary peasant revolutionary Rozsa Sandor, he contacted László Moholy-Nagy whom he had met during his student days in \textit{Munka}.\textsuperscript{15} Kepes followed Moholy from Berlin to London, working together on film, stage set, and commercial advertising.\textsuperscript{16} In 1937, Moholy invited Kepes to join him in Chicago to head the light and color department at the New Bauhaus.

Following the attack on Pearl Harbor in 1941 the New Bauhaus began offering “National Defense Courses.” This included Kepes’ “Principles of Camouflage.”\textsuperscript{17} Unlike its military counterpart, civilian camouflage was intended to protect the home front. The concealment of cities from aerial bombers drew on unprecedent confluence of “scientific theories with artisanal practice.”\textsuperscript{18} The newspaper coverage at the time fluidly associated camouflage as both a science and an art.\textsuperscript{19} When the US War Department granted the Office for Civilian Defense (OCD) at Fort Belvoir, Virginia permission to invite select university representatives to partake

\textsuperscript{14} Gyorgy Kepes cited in Ibid. Though later he would revert his stance on the medium of painting, claiming that “I’m not a photographer. I made excursions into photography because its exciting—maybe the most potent exploration in visual art in the last 30, 40, or 50 years—but my heart was never really in photography. I was always dreaming of painting.” See Robert C. Morgan, “Sermon for Tranquility: An Interview with Gyorgy Kepes,” \textit{Afterimage} 10, no. 6 (January 1983): 6.
\textsuperscript{15} Ibid., 2
\textsuperscript{16} Ibid., 2-3.
\textsuperscript{17} Blakinger, \textit{Gyorgy Kepes}, 47.
\textsuperscript{18} Hanna Rose Shell, \textit{Hide and Seek: Camouflage, Photography, and the Media of Reconnaissance} (New York: Zone Books, 2012), 15. The newspaper coverage at the time also fluidly associated camouflage as both the science and the art of concealment.
\textsuperscript{19} See for example, Folder “Camouflage Clippings,” Box 7, Entry 116, Record Group 171, NARA.
camouflage training alongside military officers in 1942, Kepes was the representative for the New Bauhaus.20

Yet the confluence of art and science Kepes experienced during World War II camouflage research was very different than what MIT sought to establish in the late 1960s.21 In this three-part essay, I first examine how CAVS operated, how its parameters of collaboration adopted the modus operandi of military-industrial complex to externalized issues of value from scientific epistemology in light of its exceptionalism. I then demonstrate how this scientific exceptionalism stymied inquiries on the sociopolitical dimensions of that individuals in Kepes’ immediate vicinity sought to reinstate. Lecturing at Harvard, for example, was Philipp Frank, an expatriate of the Vienna Circle whose attempt to advocate for the criticality of the Viennese unification of knowledge, Wissenchaft, failed to ascertain prominence. While Kepes was aware of the unity of science movement and has sometimes been characterized in art historical scholarship as an extension of the Wissenchaft, my revisit to Frank demonstrate that the

20 By then the school was renamed the Chicago School of Design. Moholy-Nagy initially offered to send two delegates to Fort Belvoir in response to their invitation. He likely received a request to narrow his choice down to one candidate, as was the case with all the other schools. See Moholy-Nagy, telegram, June 7, 1942 and July 17, 194, Box 1, Folder “Correspondence Connected with Four Courses at Fort Belvoir,” Entry 116, Record group 171, NARA.

A significant portion of the attendees at Fort Belvoir came from design colleges or fine arts departments of universities. Other institutions included: the Rhode Island School of Design, the Cleveland Museum of Art, and Cranbrook Academy of Art. At other institutions, such as Harvard, letters for nomination was redirected to the fine arts department under which camouflage training was administered. At Yale, the art history department also partook in camouflage work. The representative from the Pratt Institute of Art and Design attended the first installment of the courses at Fort Belvoir and its representative became the chairman of a committee that determined the sixteen-lecture curriculum to be rolled out in regional courses on camouflage. See Folder “Correspondence Connected with Four Courses at Ft. Belvoir,” Box 1, Entry 116, Record group 171, NARA. For a history of civilian training at Fort Belvoir, Virginia, see Gerville Rickard, “History of the Engineer Section,” March 8, 1944, p. 16. Box 1, folder “History of Engineering Section and Camouflage Unity,” entry 116, record group 171, NARA.

Kepesian and the Frankian unities bore two different politics.\textsuperscript{22} The Viennese scientific world conception aimed to transform rational socioeconomic planning; the unification of art and science at MIT was a camouflaged for the sociopolitical dimensions of scientific epistemology.\textsuperscript{23}

In contributing to the Cold War scientific exceptionalism, the highly curtailed form of art-science collaboration at MIT exemplified the democratic participation with respect to technoscience that excluded forms of engagement such as protest and activism. In the third section therefore I discuss two instances in which Kepes was situated at the nexus of art, science, and democracy and found the himself categorically distinguished from democratic participation with respect to technoscience when art was understood for its destabilizing potential. The art-science collaboration cultivated at CAVS exemplified a very strategic awareness of art that betrayed its institutional rhetoric. I therefore conclude by considering two murals at MIT installed during the interwar period two decades prior to Kepes’ arrival.\textsuperscript{24} The murals by Edwin Howland Bashfield offer an opportunity to examine the role of the art at MIT. Contrary to the rhetoric of CAVS that proclaimed an urgent need to reconcile art and science, the murals

\textsuperscript{22} In his interview with Robert Brown, Kepes recalled that his New Bauhaus colleague, University of Chicago philosopher Charles Morris as associated with the “unity in science movement.” Almost all art historical scholarships (Anna Vallye, Leigh Roach, John Blakinger, Reinhold Martin, Elizabeth Finch) on Kepes posits an interpretation on his relation to the unity of science movement. One that I am most directly engaging with is that by Elizabeth Finch which attributes the demise of the Movement in Cambridge to Philipp Frank broadening its logical-empirical focus to include psychological-sociological dimensions. This, as I will discuss later, is not entirely accurate. I contend that it is rather the intellectual milieu of Cambridge and the sociopolitical current of science at large that contributed to Frank’s loss of influence. See Finch, “Languages of Vision,” 215-217.
\textsuperscript{24} Kepes was hired as an Associate Professor in the School of Architecture sixteen days after the end of World War II. The conditions of his hiring were: four years; two terms per year; $5,000 in salary. He had asked for five but upon negotiation, they met in the middle. Internal letter suggests that the Institute was once prepared to offer him $5,300. The maximum salary for an Assistant Professor at the time was $4,250 so Kepes necessarily had to be hired as an Associate. For final offer made to Kepes, see William Wurster to Gyorgy Kepes, August 30, 1945, Reel 5305, AAA. For internal negotiations, see Killian to Wurster, July 16, 1945 and other letters in Box 241, Folder 10, AC 4, DC.
demonstrate that there have always been a keen understanding of the role of representation at the technical institute. Yet the continual proliferation of art-science collaboration in contemporary art suggest a vested interest in its saliency. My recourse to its history demonstrates that art-science collaboration as it was galvanized during Cold War scientific exceptionalism was never a collaboration between artists and scientists—but a demonstration of appropriate democratic participation with respect to technoscience through the arts.25

SECTION I: MODUS OPERANDI

In this section, I examine how CAVS operated. Or rather, how it was conceived to operate. I argue that the Center sought to adopt the modus operandi of interdisciplinary scientific research by insisting that artists collaborate not only with scientists and engineers, but with each other as well to execute group projects. For their first communal endeavor, Kepes proposed the creation of a monumental light tower entitled the Boston Harbor Project. The civic intervention would provide “a focal hearth, a monumental gateway matched to the age of glith” and in doing so, exemplify a new form of art that pioneered constructive application of technoscience.26

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CAVS envisioned itself to be a laboratory. Founded at an institute that prized science and engineering, Kepes’ center sought to adopt the modus operandi of interdisciplinary collaboration. The artists not only had to collaborate with the rest of the Institute’s faculty, but among themselves as well.27 The Boston Harbor Project was going to be the first group project dedicated to fostering a communal work ethics amount the artist Fellows. This was not an easy imposition. By 1971, Kepes issued a stern memorandum to his Fellows admitting that “after almost four years of difficult experiences, it had to be recognized that the hope that all the

26 Kepes, The Center for Advanced Visual Studies, Box 1, Folder “CAVS Initial Publication 1966,” Gyorgy Kepes Papers, CAVS.
27 For how technoscientific research became increasing interdisciplinary, see Galison, “Americanization of Unity.”
fellows’ creative interest could be channeled into some major cooperative task was unrealistic.” Kepes attributed this to both financial and egotistical reasons, vowing that the Center must be more selective in the future, choosing artists who “have already resolved within themselves the conflicting attitudes of personal and common tasks” prior to coming to the Center so that they can devote to collaborative projects “without inner sacrifice.” However, from the perspective of one Fellow, Jack Burnham, it seemed that the Boston Harbor Project was unfeasible from the outset. As he recalled, the Fellows were deeply confused about the purpose of the light tower: “It seemed so civic minded and absolutely beneficial, but who wanted it?”

Moreover, when pressed about the financial, legal, and technical possibilities for the light tower, Kepes also provided no satisfying answers. As a result, little materialized for the projected group work with the exception of Kepes’ own photographic experimentation for it and the artists worked preferentially on their own personal practice.

Individual practice was allowed at the Center—even supported to a degree with private studios and solo exhibitions—but privately despised by Kepes. Though he invited the artists under the condition that as much as half of their time could be spent on private practice, the

28 Gyorgy Kepes, memorandum to CAVS Fellows, September 10, 1971, pages 4-5, Box 1, Folder “CAVS Initial Publication 1966,” CAVS.
29 Ibid. This insistence on mandatory teamwork caused some to characterize Kepes as authoritarian. Robert Smithson, in reference to Kepes’ intention of removing labels to create a group unison at what would have been the Center’s first group exhibition at the Sao Paulo Biennial, proclaimed that “If one wants teamwork he should join the army.” For Kepes 1971 memorandum, see Kepes, memorandum to CAVS Fellows, September 19, 1971, Box 1, Folder “CAVS Initial Publication 1966,” CAVS. For Robert Smithson’s critique of Kepes, see Robert Smithson to Gyorgy Kepes, July 3, 1969, Box 193, Folder 3, AC 8, DC. The letter was first discussed in Caroline A. Jones, Machine in the Studio (Chicago: University of Chicago Press, 1996), 330.
30 Burnham, Interview transcript, no box, untitled folder, Gyorgy Kepes Papers, CAVS.
personal pursuit was seen largely as a “safety valves” to ensure that there would be eventual, compromising group work.\textsuperscript{32} As Kepes’ private notes reflect:

“Bringing a group of gifted people together with the intention of fusing their creative interest involves inevitable risks. Creative people, in general, and artists, in particular, are endowed with strong egos. Their creative strength, as well as, often, their personal weaknesses, lie in their conviction that their own way of seeing and their unique way of shaping things is the only authentic and valid way. A closely-knit work community of such egos could lead to destructive explosions and conflicts [sic.]. To avoid this danger, safety valves much be provided for releasing tensions.”\textsuperscript{33}

Two reasons may have impelled this managerial need for safety valves. First, his experience teaching at the New Bauhaus with Moholy-Nagy where he witnessed “revolutions, and complaints, and, oh, plottings [sic.]” between students and staffs during the height of creative energies at the school.\textsuperscript{34} Moreover, I would like to contend that Kepes’ desperation to make group project succeed at CAVS suggest an attempt to adopt the methodology of scientific and engineering research at an Institute to augment the legitimacy of artistic pursuit in the eyes of a technical institute that consistently questioned the merit of art.

Institutional publications from MIT at this time focused overwhelmingly on what CAVS can offer to the sciences. A 1968 \textit{Report on Research} at MIT announced that the newly founded Center was “a laboratory for testing the applicability of advanced technological tools to artistic tasks.”\textsuperscript{35} As such, “obviously, the artists has much to gain from such a liaison. But how will the industry gain from the partnership?”\textsuperscript{36} Kepes was certainly attentive of this perceived imbalance

\textsuperscript{32} Untitled and undated type script, Box 1, Folder “CAVS Initial Publication 1966,” CAVS.
\textsuperscript{33} Ibid.
\textsuperscript{35} “Illuminating Image,” MIT Reports on Research, April 1968, Box 1, Folder “MIT Reports on Research, 1968,” Gyorgy Kepes Papers, CAVS.
\textsuperscript{36} Ibid.
and devoted a section of the CAVS 1968 dedication book to addressing the question, “What benefits…would accrue to scientists and engineers?” According to him, “artists have the job of defining our inner world, discovering and elucidating the human values available to us.” These values are “interfacing properties of the outer world of nature, which scientists discover, define, and elucidate.” Through their collaboration, the scientists will gain a deeper awareness of humanistic ideas while the artists will provide us with the foundation through which “we derive our system of values.”

By choice and by necessity, the founding of CAVS was contingent on the rhetoric that art will rectify the misapplication of science by providing human values. In his draft letter to the then Institute President Julius Stratton, Kepes insisted that it was the artists “whose work should provide us with deep insight into the wholeness of the world”—how indignant of them to be “withdrawn, inward-looking and hostile to the contemporary world” of science and technology. His proposal for CAVS sought to reassure the Institute that at the interface of art-science collaboration, the artists will be expected to “give at least as much back to the MIT community” by offering it “a new scale of values.” In doing so, the military-industrial complex appropriated the vanguardism as the moralists, channeling revolutionary impulse into corrective measures for worldly woes. This not only infuriated the staunchest supporters of the bohemian avant-garde, prompting the Cambridge chapter of the Situationist International to write “you, Gyorgy Kepes

37 Kepes, The Center for Advanced Visual Studies, Box 1, Folder “CAVS Initial Publication 1966,” Gyorgy Kepes Papers, CAVS.
38 Ibid.
39 Ibid.
40 Ibid.
41 Gyorgy Kepes to Julius Stratton, undated draft letter, Box 1, Folder “Proposal for Founding CAVS 1965 with Budgets and Correspondence,” CAVS.
42 Gyorgy Kepes, “Proposal for the Center for Advanced Visual Studies,” December 1965, Box 1, Folder “CAVS Proposal,” CAVS.
whose dream it was to gather this scum, fuck you”\textsuperscript{43}—but reinforced the scientific exceptionalism that sought to stymie inquiries of value intrinsic to science. Indeed, in the immediate intellectual milieu of Cambridge was Vienna Circle expatriate Philipp Frank whose earnest attempts to examine the “human values...intrinsic in science itself” failed to ascertain influence.\textsuperscript{44}

\textsuperscript{43} The Situationists had similarly scorching critique for two of the artist Fellows at the Center. To Otto Piene, who would later succeed Kepes as CAVS’ director in 1977, they wrote: “The odor of your own decomposition must have gone to your head. You are the advanced guard of the cybernetic welfare state—the reconsecration of order, no longer with God as ruler, but with technology raised ot myth in the perfect order of zombies. You are not an artist; you are a WHORE for power, decorating the society of consumption—not for just the jaded ruling class but for everyone. You are so benighted that you publicly suggest the use of TV so that all can ‘participate’ in the unilateral reception of images of their own alienation.” To Ted Kraynick, they wrote: “You are syphilis, a plague eating into consciousness...” The Council for Conscious Existence, November 20, 1969, Reel 5306, Frame 0801-0802, Gyorgy Kepes Papers, AAA.

SECTION II: APPLICATION AND EPISTEMOLOGY

In this section, I explore how scientific exceptionalism was evinced in Cambridge through the unsuccessful attempt to reinstate the criticality of the Vienna Circle by Philipp Frank, among others. His espousal for a sociological understanding of science fell out of favor in a political climate that sought to contain democratic engagement downstream of science, in its application not its epistemology. I then return to Kepes and posit that the difference between the Viennese unity of knowledge, Wissenschaft, exemplified by Frank and the unity of art and science sang at MIT may have contributed to the lack of correspondence between Frank and Kepes. I conclude by arguing that the conceptualization of the Boston Light Project alone, without necessitating materialization, already embodied the desired relationship between science and democracy that the Cold War exceptionalism sought to foster through CAVS.

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In the decades leading up to the late 1940s, which Wolfe identified as the time when “the US scientific freedom crystallized,” various efforts to understand the sociopolitical underpinning of scientific epistemology span across geopolitical contexts. One notable example in a corpus of works on the sociological explanation of science include Boris Hessen’s 1931 lecture republished in The Social and Economic Roots of Newton’s ’Principia’ (New York: H. Fertig, 1971).
closure of the Vienna Circle and many of its members emigrated to the United States. Frank settled in Cambridge, Massachusetts and took up a part-time lectureship at Harvard teaching physics and the philosophy of science. During his employment at Harvard, he sought to reinstate the Circle’s Manifesto which espoused a “unified science” that transcended the metaphysics of race, nationality, and religion.

In 1947, Frank established the Institute for the Unity of Science under the aegis of the American Academy of Arts and Sciences. The purpose of the institute was to conjugate logical empiricism with “the psychological and sociological backgrounds of science.” In drafting the proposal for the program, Frank included, under his list of sociological concerns, issues such as “What do political and religious ideologies have to do with the evolution of scientific theories? What is the influence of the Church, of Marxism, of Nazism?” Time and time Frank spoke at

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46 Holton, “Philipp Frank at Harvard,” 298.
47 Though course catalogue from this period indicate that he taught chiefly in the Physics department. It was W.V. Quine who would teach the philosophy of the Vienna Circle, of science, and of logical empiricism. Though Quine had made a pilgrimage to meet the Circle in his youth, his later work cast a critique of logical empiricism that likely contributed to its demise. A draft letter from Frank to Quine exists, seeking to make intellectual reconciliation though the extend to which it worked is doubtful. For teaching distribution, see Harvard course catalogue 1939-1940. For Quine’s critique, see W. V. Quine, “Two Dogmas of Empiricism,” *The Philosophical Review* 60 (1951): 20-43. For Frank’s draft letter to Quine, see Frank to Quine, draft letter, April 1, 1951, Box 13, Folder 370, W. V. Quine Papers, HL.
48 Otto Neurath, Rudolf Carnap, and Hans Hahn. “Scientific Conception of the World: The Vienna Circle,” in *Empiricism and Sociology*, ed. Marie Neurath and Robert S. Cohen, trans. Paul Foulkes and Marie Neurath (Dordrecht: Reidel Publishing Company, 1973), 306. Frank may not have been an official co-author because he did not adhere to the unequivocal truth of experiential knowledge that the Manifesto expressed. For Frank, “it is not possible to choose uniquely on the basis of experience. One may be simpler, another more complicated, but none true or false...it is not at all a scientific question” (Frank, *Modern Science and its Philosophy*, 59). However, he was nonetheless familiar with the production of the Manifesto—“Our chosen title seemed a little dry to Neurath, and he suggested adding ‘The Vienna Circle,’ because he thought that this name would be reminiscent of the Viennese waltz, the Vienna woods, and other things on the pleasant side of life” (Frank, *Modern Science and its Philosophy*, 38)—and the anthology he co-edited with Morris Schlick, *Monographs on the Scientific-World Conception* was mentioned in the Manifesto.
50 Frank, “Proposed Program,” November 14, 1945, Box 62, Folder 6, Gerald Holton Collections, HUA.
the conferences of his institute about the need to cultivate a sociological understanding of science. As he explained:

“…several scientific theories may account for the same observed facts. In this case, the ‘logico-empirical’ criteria are compatible with two or more different theories. The authorities, state or church or public opinion, can select among these doctrines the one which is the most useful for the training of ‘good citizens.’ To understand that observed facts do not determine scientific doctrines unambiguously is the most important prerequisite for understanding the role played by sociological factors in the acceptance of scientific doctrines.”

That “we choose the theory according to our purpose” does not invalidate the integrity of science. The unfolding inside a lab “tells the truth—but not the whole truth.” The moral, political, and religious debates that determines what knowledge gets produced scientifically hold immense implication for scientific epistemology. The democratization of science lies not in optimizing its application downstream, but in “letters written to Congressmen” and changing the “social conditions that produce the conditioned reflexes of the policy-makers” upstream.

Frank therefore allocated over half of his Institute’s Rockefeller Foundation to conduct “research project for the sociology of science.” Yet little seemed to have materialized from this...
strong sociological interest. By as late as 1953, when the Institute was surviving on its last year of funding from the Foundation, Frank was still writing to his colleagues soliciting potential topics to pursue, conceding that he may have to switch to other activities.\textsuperscript{56} Importantly, this wavering of faith was not due to a “loosening of the movement’s empirical standards” as art historian Elizabeth Finch observed in her monographic study of Kepes.\textsuperscript{57} Instead, I contend that it was rather the collegial environment of Harvard and the Cold War scientific exceptionalism at large that made academia unconducive to the sociopolitical approach to science that Frank, and many others, espoused.

Of all the colleagues Frank appointed to his “special committee” dedicated to sociological research at the institute, the one of closest geographic proximity to him was none other than Thomas S. Kuhn.\textsuperscript{58} Kuhn’s monograph in the years to come would valorize professionalization as the hallmark of integrous science, calling for a movement away from the “masses” which the Viennese Manifesto had deplored.\textsuperscript{59} The sociologist whom Frank had once contacted regarding initiating his own sociological study, Robert K. Merton, would receive scathing critique for his work, charged for subjugating scientists as puppets of their

\textsuperscript{56} See Philipp Frank to W. V. Quine, August 14, 1953. Box 20, Folder 547 2 of 2, W. V. Quine Papers, HL; Frank to Shapley, April 29, 1952, Box 88, Folder “Frank, Philipp,” Harlow Shapley Papers, HUA; and Frank to Morris, April 29, 1952 cited in George Reisch, \textit{How the Cold War Transformed}, 309.

\textsuperscript{57} Finch, “Languages of Vision,” 217.

\textsuperscript{58} Other colleagues were all based in New York, unlike Kuhn who was also at Harvard, and included Ernst Nagel at Columbia, Bernard Barber at Barnard College. Philipp Frank to W. V. Quine, August 14, 1953, Box 20, Fodler 547 1 of 2, W. V. Quine Papers, HL.

\textsuperscript{59} Speaking of those who will not mobilize the scientific world-conception for socioeconomic emancipation, the Vienna Circle manifesto states: “Of course not every single adherent of the scientific world-conception will be a fighter. Some, glad of solitude, will lead a withdrawn existence on the icy slopes of logic; some may even disdain mingling with the masses and regret the ‘trivialized’ form that these matters inevitably take on spreading.” Neurath, Carnap, and Hahn, “The Scientific Conception of the World,” 317. For Kuhn’s monograph, published as part of the second volume of the \textit{International Encyclopedia for Unified Science}, see Thomas Kuhn, \textit{The Structure of Scientific Revolution} (Chicago: University of Chicago Press, 1962).
socioeconomic conditions. The climate of scientific exceptionalism was not hospitable to a sociopolitical understanding of scientific epistemology. In light of the political tension of the Cold War, of which scientific exceptionalism was one manifestation, the Kuhnian appeal for professionalization bore an “irresistible, two-pronged appeal: It suggested that the path to intellectual success…and the path to job security…were one and the same.”

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Gyorgy Kepes would most likely have crossed paths with Philipp Frank during the late 1940s, mid-’60s. Frank settled in Cambridge in 1939; Kepes, in 1945. Kepes attended the meetings of Frank’s Institute for the Unity of Science; Frank was a Visiting Professor at MIT. Kepes had

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61 It should be mentioned that the Institute did have a “memorable” output—its 1953 conference on “Reasons of Acceptance of Scientific Theories, Considered from the Logical-Empirical and Sociological Aspects.” The conference brought together a rich collective of presentations on the sociopolitical aspect of science from the perspective of the Soviet Union (Barrington Moore, Jr.), the French Revolution (Henry Guerlac), and the Zeitgeist (Edwin G. Boring). It also received generous funding from the National Science Foundation, “the first time this government agency has supported scientific activities in domain outside the research in specialized fields of natural science.” For Holton’s remark on the “memorable” 1953 conference, see Gerald Holton, “Philipp Frank at Harvard University: His Work and His Influence,” Synthese (2006): 304. For conference program, see “Conference on the Validation of Scientific Theories,” Bulletin of the American Academy of Arts and Sciences 7, no. 3 (December 1953): 2-3. For receiving funding from the NSF, see Philipp Frank to W. V. Quine, August 14, 1953, Box 20, Folder 547 2 of 2, W. V. Quine Papers, HL. For publication of the papers presented at the conference, see Philipp Frank (ed.), Validation of Scientific Theories (Boston: Beacon Press, 1956).  
64 In 1956, Frank taught a guest course on “Acceptance of Scientific Theories” John Burchard, MIT Dean of the School of Humanities and Social Studies, quoted in Technology Review (May 1956): 356. Photographs from Frank’s seminar are in the Biographical Files “Frank, Philipp G.,” MIT.
reached out to the physicist Percy W. Bridgman to be a potential collaborator and considered contacting astronomer Harlow Shapley—both of whom were instrumental in getting Frank hired at Harvard.65 Four months prior to Frank’s death, Kepes spoke on “Science and Art” at the Boston Colloquium for the Philosophy of Science, a group that started as “the god-child of Philipp Frank” and as the “spiritual successor” to his Institute.66

They swam in the same sea of colleagues. Yet it is precisely this layering of similarities that made the lack of correspondence between them distinguishing. If Kepes had understood his unification of art and science as an extension of the Viennese Wissenschaft, it is conceivable that there would have been more contact between the two, especially given Kepes’ well-documented predatorial collegiality.67 The reason for this lack of exchange could be, as art historian Blakinger has convincingly argued, that if there one thing Kepes prioritized more than acquiring legitimacy through affiliation, it was subduing his own Marxist politics.68 That Kepes only considered Shapley as a potential contributor for one of his publications suggests a weariness for the astronomer’s known Communist orientation. The Kepes have themselves been searched by the FBI, during which they hid away their books in brown paper bags in the basement.69 The silence between Frank and Kepes therefore may not have been coincidental. Frank not only bore

65 Gyorgy Kepes to Percy W. Bridgman, November 16, 1951, Reel 5303, Frame 0300, Gyorgy Kepes Papers, 1909-2003, AAA. Kepes considered Shapley as a potential contributor to his exhibition catalogue New Landscape but Shapley’s more radical political views likely led to his eventual exclusion. See Blakinger, Gyorgy Kepes, 158. For Bridgman and Shapley’s petition for the hiring of Frank at Harvard, see Section II.
66 Robert S. Cohen to Marie Neurath, December 31, 1968, Box 71, Folder 15, Robert S. Cohen Collection, BU.
67 Especially since, as will be discussed, Kepes was, somewhat notoriously, known for publishing loosely coherent anthologies for the sole purpose of associating himself with famed scholars to reinforce the legitimacy of his program. Frank, though of a lesser professional stature in Cambridge than Kepes, was nonetheless Einstein’s sole appointee to succeed him at Prague University in 1912. See Gerald Holton, “From the Vienna Circle to Harvard Square: The Americanization of a European World Conception,” in Scientific Philosophy: Origins and Developments ed. F. Stadler (Dordrecht; Boston: Kluwer Academic, 1993), 54.
68 Blakinger, Gyorgy Kepes, 159.
69 Ibid. For the FBI’s investigation on Philipp Frank, see Reisch, How the Cold War Transformed.
the traces of the Red Vienna but had denounced conceiving science as distinct from the arts.\textsuperscript{70}

The Kepesian unification of art and science was not the Viennese \textit{Wissenchaft} aimed at changing socioeconomic planning. The art-science collaboration of the military-industrial complex was an artistic exemplification for democratic engagement with technoscience.

Art-science collaboration at CAVS occupied a strategically curtailed form of democratic participation. As Kepes made explicit in its dedication booklet, the “important use” of art with respect to technoscience was to contribute to the “publicly acknowledge[d] social goal” of restructuring the urban environment to “evoke positive acceptance” and “constructive response from citizens.”\textsuperscript{71} The Boston Light Project, for example, stemmed from years of urban planning research by Kepes and MIT urban planner Kevin Lynch. As with most urban planning undertaken at MIT during this time, the impetus to redesign the cityscape was intertwined with creating an environment conducive to the practice of democratic citizenry. Hence, one of Kepes and Lynch’s goals was to understand whether city dwellers perceived a “wide range of intensities…so linked together and mutually set off that each individual can choose the intensity he desires,” ascertaining “freedom.”\textsuperscript{72} The pair concluded that a monumental fixture of artificial light may contribute to this cause and the impetus metamorphosed into the Boston Harbour Project. Yet I would contend that without having to be materialized, the mere conceptualization of the Boston Harbour Project alone already enabled the embodiment of democratic ideals with

\textsuperscript{70} As Frank expressed, “science and all other types of knowledge, including art, consist in building up systems of symbols.” Philipp Frank, “Contemporary Science and the Contemporary World View,” \textit{Daedalus} 87, no. 1 (Winter 1958): 66.

\textsuperscript{71} Kepes, \textit{The Center for Advanced Visual Studies}, Box 1, Folder “CAVS Initial Publication 1966,” Gyorgy Kepes Papers, CAVS.

respect to technoscience. It was an opportunity that provided the freedom to choose, to select from infinitely creative ways of applying existing technoscientific knowledge without having to inquire about the paradigm through which such knowledge was produced.
SECTION III: DEMOCRATIC PARTICIPATION

In this final section I analyze two instances in which art-science collaboration as embodied by Kepes was categorically distinguished from democratic participation when art was understood for its destabilizing potential. The first instance was Kepes’ participation at the 1970 conference of the International Association for Cultural Freedom; the second was the withholding of his manuscript *Art of Participation* by his publisher George Braziller Inc. Through these two instances, I argue that it is precisely *when art was not seen as a form of democratic participation* that the relationship between art and science best indexes the relationship between science and democracy during Cold War exceptionalism.

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In 1970, Kepes spoke at the second of six panels at a conference hosted by the International Association for Cultural Freedom (IACF) entitled *Technology: Social Goals and Cultural Options*. The IACF was the successor to CIA’s most successful—and covert—cultural diplomacy program, the Congress for Cultural Freedom (CCF). Founded in 1950, the CCF was an anti-Communist operation that hosted conferences, sponsored festivals, and distributed journals, including *Daedalus* where Kepes first published his proposal for art-science cooperation.

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73 “It is one of the ironies of the story that the CIA gave its support secretly, conspiratorially, and believed that it could not—as to this day it does not—claim credit for one of its more imaginative and successful decisions.” Peter Coleman, *The Liberal Conspiracy: The Congress for Cultural Freedom and the Struggle of the Mind of Postwar Europe* (New York: The Free Press, 1989): xiii.
collaboration. Science had been an important element for propagating CCF’s democratic ideals since its inception. The Committee on Science and Freedom, based in Manchester and ran chiefly by George Polanyi, circulated the journal *Science and Freedom* as part of a “sustained attempt to incorporate science into the CCF’s broader cultural offensive against Communism.” The publication, however, failed to deliver CCF’s vision. It focused largely on the scientists’ freedom to do research, not appealing to their communist counterparts. As a result, the journal was dissolved and CCF reappointed Edward Shils to create *Minerva*, extending the covert cultural war on science into the 1960s.

By the sixties, however, the perception of the CIA had changed from one engaging in a “necessary” war of ideas to coups and assassinations worldwide. Hence, when *The New York Times* published its exposé on the CIA’s sponsorship of CCF in 1966, the latter dissolved and re-emerged as the International Association for Cultural Freedom (IACF) under the patronage of the Ford Foundation.

The IACF’s 1970 conference that Kepes attended was dedicated to finding “positive, constructive approach” to problems at the interface between “culture and nature.” This stood in diametric opposition to the “self-destructive character of the anarchy and violence for violence’s sake” that characterized the “irrationality of extreme student radicals.” As the conference organizers explained, contemporary “social-technical problems…are in principle amenable to

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74 Gyorgy Kepes, “The Visual Arts and Sciences: A Proposal for Collaboration,” *Daedalus* 94, no. 1 (Winter 1965): 117-134. Kepes also designed the logo of the journal, an aerial view of a labyrinthine, see Blakinger, *Gyorgy Kepes*, 334. The logo was adapted for to be the cover of *Daedalus* 87, no. 1 (Winter 1958) which published papers presented at Philipp Frank’s retirement conference.
75 Wolfe, *Freedom’s Laboratory*, 74.
76 Ibid., 86-88.
77 Coleman, *Liberal Conspiracy*, xiii.
78 Coleman, *Liberal Conspiracy*, xi.
79 *Technology: Social Goals and Cultural Options*, conference pamphlet, Reel 5306, Frame 0857, Gyorgy Kepes Collection, AAA.
80 Ibid.
well-devised ‘engineering’” but their solutionism had been curbed by individuals who veered away from “reason and rational action.” These individuals included those who hold “a refusal to ‘play the game’” by subscribing to the “conviction that ‘the system’ is incapable of being improved and must be destroyed.”

It is not known to what extend Kepes was involved with the IACF. But he was likely more engaged with the organization, at least during the preparation for the 1970 conference, than merely as an invited speaker to its second panel on art. Among his papers were an internal memorandum from IACF marked “not for circulation,” a copy of the draft invitation letter sent to potential attendees, and a guestlist of prospective artist attendees, several of whom were marked as “suggested by Kepes.” What is of most significance for our present discussion, however, is the categorical distinction drawn between the six panels at the conference. The panel in which Kepes spoke was dedicated to “Nature, Technology and the Creative Arts.” This was intended to untangle the “positive” and “negative” manner in which art can meet the “challenges of industrial society.” Likely stemming from the same effort to then resist the “negative” manner in which art can respond, the panel on creative art was categorically separated from the following panel dedicated to “Participatory Democracy and Technological Control.”

81 Ibid., Frame 0857. Underline original.
82 Ibid., Frame 0856.
83 For invitation to Kepes to be a panelist, see Shepard Stone, President of International Association for Cultural Freedom, to Gyorgy Kepes, February 6, 1970, Reel 5306, Gyrogy Kepes Collection, AAA.
84 International Association for Cultural Freedom, Internal Memorandum, November 24, 1969, Reel 5306, Frame 0827, Gyorgy Kepes Collection, AAA. Listed under potential attendees from the sector of “Literature-Culture-Enrionment,” Kepes had recommended Guyla Illyes, Robert Morris, and Claes Oldenburg. International Association for Cultural Freedom, Invitation Letter and Reserve List, January 5, 1970, Reel 5306, Frame 0837-0838, Gyorgy Kepes Collection, AAA.
85 Technology: Social Goals and Cultural Options, conference pamphlet, Reel 5306, Frame 0857, Gyorgy Kepes Collection, AAA.
86 Ibid., Frame 0860.
to know this sharp division between what is considered art and what is considered democratic participation first hand as he prepared for the last anthology of his Vision + Value series.

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In the mid-1960s, Kepes had published a collection of six anthologies under the series Vision + Value with George Braziller Inc. The essays were grouped together under expansive themes related to both art and science, such as structure, motion, vision, and education, and brought together nearly 100 luminous authors from disparate fields. Blakinger’s analysis of these anthologies, though self-admittedly “cynical,” echoed that of many others. The volumes were “self-serving,” they acted as a form of “legitimacy exchange,” they sought to secure “validation for [Kepes’] program through the power of other discourses.” The lack of internal coherence in each of the volumes reinforced this perception and prompted one reviewer at the time to dub the series as a “What’s What in Contemporary Thought.” In 1972, a seventh installment was added. Entitled Arts of the Environment, its focus on the role of art in mediating ecological crisis was, once again, seen as capitalizing on the vogue of environmentalism. But what scholarship on Kepes consistently overlook is that there was going to be an eighth volume that was a little

88 For a list of the six anthologies, see footnote 200.
89 Blakinger, Gyorgy Kepes, 204.
90 Ibid.
different from the consortium that had preceded it. That installment had collected all its essays and was in its “final layout stage” before it was cut from production. 92 And that anthology was a manuscript entitled the *Art of Participation*.

A flurry of exchanges between Kepes and George Braziller document the CAVS director’s indignation at the cancellation of his manuscript. Like the previous anthologies, the *Art of Participation* sought to “find a common denominator” among disparate activities related to art and science. Unlike the previous anthologies, this one wanted to find commonality between “participatory democracy, student movements, communes, and Woodstock to the sophisticated artistic exploration of participatory art forms.” 93 This was going to be a problem for Braziller. Framing his objection as stemming from both editorial and financial concerns, Braziller explained that the new set of essays “seem to bring little that is new to the subject” and the English publisher who had previously bought the foreign rights to the earlier anthologies had rejected *Arts of the Environment*. 94 Kepes was suspicious of these reasons. While he explicitly reasserted the volume’s editorial importance—“I believe the subject is an important and most relevant one and there is to my knowledge no book which deals with it” 95—he only hinted at what may have been Braziller’s real objection to the anthology:

“... I hope I am wrong [but] there are indications that your decision was dictated by reasons other than editorial considerations. The consistent bypassing of my requests for the

92 Gyorgy Kepes to Jeffrey Shaw, November 17, 1971. Box 1, Folder “Correspondence 1,” Gyorgy Kepes Papers, AAA.
93 Gyorgy Kepes to Richard Schechner, February 19, 1971. Box 1, Folder “Correspondence 1,” Gyorgy Kepes Papers, AAA.
94 “The financial problem this entails, not to mention the greatly increased costs of production, plus my doubts about the editorial content, make me seriously question if we can afford to go ahead with this book. I know this will be a disappointment to you, as indeed, it is to me, but I thought I should write you plainly about the situation.” George Braziller to Gyorgy Kepes, April 28, 1972. Reel 5308, Frame 0272, Gyorgy Kepes Collection, AAA.
95 Gyorgy Kepes to George Braziller, May 3, 1972, Reel 5308, Frame 0304, Gyorgy Kepes Collection, AAA.
manuscripts of The Arts of Participation, which were sent directly to you, seem also to stem from considerations other than an overload on your editorial staff.”

Kepes had reasons to be skeptical. During his collaboration with Braziller on Arts of the Environment, the publisher had intervened and forced the withdrawal of an essay by Hans Haacke. The publisher had initially accepted the essay. However, over the course of preparing for publication, Haacke’s show at the Guggenheim had been cancelled and the artist revised his submission to include a five-page commentary on the incident. The content was deemed “inappropriate” by the publisher. According to Haacke, Braziller had called him and demanded that he either cut out the last five pages, which would have been a third of the essay, or withdraw from the publication which was going to print tomorrow. In light of its editorial infeasibility, Haacke withdrew. However, as the artist later found out, Kepes’ introduction was not due to the publisher for another ten days which meant that Braziller’s ultimatum was not substantiated.

Furious, the artist charged Kepes for his eventual exclusion as Kepes had written to him during the ten-day interim to comment on the “misplaced correctedness” of his essay without mentioning that there was still time for resubmission. Yet it is entirely possible that Kepes had not been aware that Haacke withdrew when he composed his letter to Haacke. As Braziller later clarified with the artist, it was “we, as the publishers, [that] made the decision not to include your essay in the book.”

96 Ibid.
97 The content was “inappropriate for a book of this kind which avoids local infighting.” Janice Pargh, of George Braziller Inc., quoted in Gyorgy Kepes to Hans Haacke, December 21, 1971, Box 1, Folder “Haacke, Hans,” CAVS.
Kepes had invited Haacke to write about "nature processes involving wind, water, earth, fire." For Haacke, this did not exist “isolated from the socio-political fabric.” Though Kepes tried to explain to Haacke, in the aftermath, that Value + Vision was dedicated “to bring a confluence among different creative disciplines of the arts and sciences and in this way to illuminate essential common problems by a convergence of creative insights,” his holistic rhetoric likely did not assuage the situation. Weary from this incidence, Kepes was rightfully suspicious of Braziller’s resistance to publish an anthology on artistic participation that expanded its domain to include protest and activism in relation to technoscience. Art and participation seemed to be mutually exclusive in light of vanguardism. And perhaps necessarily so in order to enable the distinction between art and science during Cold War exceptionalism.

101 Gyorgy Kepes to Hans Haacke, December 10, 1969, Box 1, Folder “Haacke, Hans,” CAVS.
102 Ibid. Here Haacke is quoting from Kepes’ initial invitation for him to be a contributor to Art of Participation: “I hope you can write about your interest in basic environmental processes—nature processes involving wind, water, earth, fire etc.” Gyorgy Kepes to Hans Haacke, December 10, 1969, Box 1, Folder “Haacke, Hans,” CAVS.
103 Gyorgy Kepes to Hans Haacke, September 21, 1971, Box 1, Folder “Haacke, Hans,” CAVS. Following this cancelation, Haacke retroactively accepting to speak at the Art in Civic Scale conference, retaining “the option to digress from the water-subject.” This did not materialize either.
104 Moholy-Nagy’s widow Sibyl Moholy-Nagy once urged Kepes to leave MIT: “What you need more than anything else is to get out of MIT and Cambridge as fast as you can to save your soul and your talents and your integrity. You have no idea how silly and 19th century deterministic their programs look from the outside.” Sibyl Moholy-Nagy to Gyorgy Kepes, March 15, 1965, cited in Blakinger, Gyorgy Kepes, 209. That he chose to stay puts him in line with what Daniel Bell quibs, “one’s commitment is to one’s vocation.” Bell, The End of Ideology: On the Exhaustion of Political Ideas in the Fifties (Glencoe, Ill.: Free Press, 1960), 16.
105 According to Blakinger, Kepes had also exercised self-censorship in a previous publication. In the catalogue to his exhibition of scientific images, New Landscape in Art and Science (exhibition 1951; catalogue 1965), Kepes was originally going to open with images depicting war atrocities brought on by technoscience but withheld them in the final publication.
CONCLUSION: A SENSE OF PLACE

“Scientific statements of facts and relations, indeed, cannot produce ethical directives. However, ethical directives can be made rational and coherent by logical thinking and empirical knowledge.”

—Albert Einstein

Not far from where Kepes’ center would have been was the Walker Memorial building where MIT installed its first permanent set of artworks. A series of monumental allegorical murals adorned the main hall of this building dedicated to housing the army and navy cadets during World War I and commemorative student and alumni activities afterwards. The murals, executed by Edwin Howland Blashfield and assisted by Vincent Aderente, were installed between 1923-1930. On the north wall is Alma Mater, a personification of the Institute as an ascending Madonna attended by saints [Figure 1]. The Institute is enthroned on a white cloud above the silhouette of the school resting on the banks of the Charles River Basin. She holds the MIT seal in her left hand, Victory in her right, and the seal of the State of Massachusetts on her lap. Flanking her on either side are men of learning: one learns from letters, the other, from experimentation. She holds the earth under her feet, secured in place by an angel who rests one forearm above the landmass of the United States and one hand on the Atlantic Ocean. The angel

may be an allegory for the students who would come to convene underneath the mural during times of festivity.

Figure 1 Edwin Howland Bashfield and Vincente Aderente, *Alma Mater*, 1923. North Wall Mural (center), Morss Hall, Walker Memorial, Massachusetts Institute of Technology. Photo by author.

Two highly symmetrical group of acolytes extend their hands and laurel wreaths towards the Alma Mater. Their halos identify them as the various departments of the Institute. They stand in matching outfits, mirrored in gender and departmental proximity along the central axis. The three departments personified by the female pairs are: Architecture on the left and Electricity on the right; Geology (left) and Physics (right); Mathematics (left) and Chemistry (right). The two
male pairs are: Mining and Metallurgy; Biology and Engineering. Only one pair of delegates forms a heterosexual union are clad in ostensible white robes with gold patterning, extending their hands nearest to the Alma Mater. They are: Design and History.\textsuperscript{110} For a technical institute, it nonetheless guards the philosophy of its raison d’être in close proximity.

Across the room from Alma Mater are two narrower murals of similar heights. On the right is常识 by Knowledge and Invention depicting a mother and her children walking amongst chaos heading towards light following the scale of justice. On the left is Ye Shall Be As Gods Knowing Good and Evil depicting the supposed good and bad use of science [Figure 2]. The title is the English translation from a line in Genesis inscribed in Latin at the foreground of the painting. Above it, a group of four military officers and statesmen look up to a scientist standing on a pedestal. Science above politics.

\textsuperscript{110} Design was a prominent aspect of MIT education, especially in Kepes’ home department, the School of Architecture. By 1940, the total hours dedicated to design in a five-year undergraduate degree in Architecture outnumbered the hours dedicated to General Education, Science and Technology, and Expression combined—by ten percent. In severe need for a design instructor, the Dean of School of Architecture and Planning, William Wurster claimed that “we can make no mistake in securing the fame of Kepes.” For distribution of hours in undergraduate education, see “MIT School of Architecture: Major Subject Sub-Division of Curriculum,” December 16, 1941, Box 2, Folder “School of Architecture + Planning,” AC 400, DC. For Wurster’s acclaim for Kepes, see William Wurster to James R. Killian, Jr., July 10, 1945, Box 241, Folder 10, AC 4, DC.
Dressed in a white lab coat and a black tie, the outstretched hands of the scientist point to two vases in front of him. Each vase sends up a bellowing plume of smoke. The light shines...
favorably onto the left jar. It is glistering white, projecting a robust stalk of white gas that subsumes into the clothing of Hygeia, the goddess of Health, standing above it. A group of cherubs press their faces against the vessel, one touching the exterior surface of the structure. On the other side, shrouded in dim light, is a vase with two dogs of war lurk behind it. It emits a thin column of air that blackens as it wraps around Famine and the Tree of Knowledge personified by Nature. Contrary to Famine, Hygeia holds a cornucopia and bestows a laurel wreath onto the scientist, drawing attention to his head which dutifully averts his gaze from the vases to which he gestures. The men of politics look at the vases. The head of one military officer, and the protruding sword of another, point to the righteous vase. Allied with the good, the soldiers and the diplomats contort their body to fixate on the maleficent vessel while the children look the other way. The composition of the mural reiterates the rhetorical exceptionalism that knowledge is inherently neither good nor bad, only application makes it so.\(^{111}\)

This was the institutional milieu in which Kepes was moved to establish a laboratory for the arts.\(^{112}\) It was a place that upheld technoscience with religiosity, only to be further impelled

\(^{111}\) This rhetoric was shared from both institutional to presidential level. For examples of this discourse at MIT, for instance, Institute President Julius A. Stratton, “The Fabric of a Single Culture,” The Centennial Convocation Address Delivered at MIT on April 9, 1961 in Science and the Educated Man: Selected Speeches of Julius A. Stratton (Cambridge, MA: MIT Press, 1966). Stratton’s text is quoted in Anna Vallye’s discussion of this painting see Vallye, “The Middleman: Kepes’s Instruments” in Arindam Dutta (ed.) Second Modernism: MIT, Architecture, and the ‘Techno-Social’ Moment (Cambridge, MA: SA + P Press; MIT Press, 2013), 145. For presidential discourse of the 1960s, see for example John F. Kennedy at the centenial of MIT in 1961 praised the Institute for accepting its “study of man and societies” to help science “bring its result to bear in a human setting.” Lyndon B. Johnson, when signing the National Endowment for the Arts and Humanities into law in 1965 remarked that: “we have not always been kind, in America, to the artists and scholars who are the creators and keepers of our vision. Somehow, the scientists always seem to get the penthouse, while the arts and humanities are always down in the basement.” For Kennedy, see “Pre-Recorded Remarks to a Massachusetts Institute of Technology Luncheon in Cambridge, Massachusetts, 6 April 1961,” JFK. Audio recording available online at https://www.jfklibrary.org/asset-viewer/archives/JFKWHA/1961/JFKWHA-021-001/JFKWHA-021-001 Accessed August, 2019. For Johnson, see Mary Eleanor McCombie, “Arts and Policy: The National Endowment for the Art’s Art in Public Places Program, 1967-1980” (PhD diss., University of Texas at Austin, 1992), 47.

\(^{112}\) Moholy-Nagy’s widow Sibyl Moholy-Nagy once urged Kepes to leave Cambridge, writing: “Gyuri…What you need more than anything else is to get out of MIT and Cambridge as fast as you can to save your soul and your
by a scientific exceptionalism in the years to come. The Center for Advanced Visual Studies was founded on the institutional supposition that restoring communication between art and science will put technoscience back in the jar of goodness. The murals, however, suggest otherwise. The application of scientific knowledge had always belonged to the realm of politics. To emphasize its constructive applications through the arts was to sidestep the sociopolitical values registered in the scientific knowledge proper. Moreover, there had always been a keen awareness for the role of representation of technoscience and for the role of the visual arts at the technical institute. As such, the distinction drawn between art and science was predicated on, and in servitude of, an exceptionalism that depressed the sociopolitical understanding of science and curtailed its democratic engagement. That art exists as a separate entity from science is irrelevant\(^\text{113}\); that they are entities so profoundly different that they need to be reconciled to bring about social betterment is the misattribution of Cold War propaganda.

\(^{113}\) “Analytic attempts to distinguish ‘art’ and ‘science’ often founder at the boundaries drawn between them.” Peter L. Galison and Caroline A. Jones eds., *Producing Science; Picturing Art* (New York: Routledge, 2013), 1.

talents and your integrity. You have no idea how silly and 19\(^{th}\) century deterministic their programs look from the outside.” Cited in Blakinger, *Gyorgy Kepes*, 208.
Bibliography


Orrghen, Anna. “Surveying the Literature on Technoscience Art: from Pioneer Stories to Collaborations Between Artists, Scientists and Engineers as the Object of Study.” *Digital Creativity* 28, no. 2 (April 2017): 157-176.


