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Recorded Objects: Time-Based Technologically Reproducible Art, 1954-1964

A Dissertation Presented

by

Gerald Hartnett

to

The Graduate School

in Partial Fulfillment of the

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Abstract of the Dissertation

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Illuminating experimental, time-based, and technologically reproducible art objects produced between 1954 and 1964 to represent “the real,” this dissertation considers theories of mediation, ascertains vectors of influence between art and the cybernetic and computational sciences, and argues that the key practitioners responded to technological reproducibility in three ways. First of all, writers Guy Debord and William Burroughs reinvented appropriation art practice as a means of critiquing retrograde mass media entertainments and reportage. Second, Western art music composer Richard Maxfield mobilized chance techniques and indeterminacy to resist scientific and philosophical determinism’s pervasive influences upon post-1945 art and life. Third, author and playwright Samuel Beckett conjectured that ubiquitous recording might become problematic to the quality of experiential life in technologically mediated environments. This study analyzes musical, cinematic, theatrical, and computational works of art from an art historical perspective that is broadly informed by film history, media studies, the Frankfurt School, post-structuralism, gender studies, and queer theory.

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Introduction, Technological Representations of “the Real” Midway Between the Discourse Networks of 1900 and 2000

From 1954 to 1964 practitioners in Paris and New York City crafted time-based, technologically reproducible artworks using experimental appropriation, chance, and allegorical techniques with the aim of representing “reality.” Guy Debord and William S. Burroughs re-edited borrowed texts and news broadcasts, Richard Maxfield computed chance music composed of recorded sounds, and Samuel Beckett gauged the effects of externalizing memory from the biological body and seemed to regard ubiquitous visualization as surveillance. Attending to these artists’ actions, statements, and works, this dissertation describes conceptual techniques featuring technological reproducibility they developed prior to the better-recognized pop, minimalist, multimedia, and conceptualist art movements of the later 1960s. To establish the historical and social contexts necessary for understanding this art, this introduction analyzes the major conceits of post-1945 art history; describes the urban milieus the artists worked in; defines the key terms “recording,” “indexicality,” “suturing,” and “allegory;” and evaluates new media scholarship by Friedrich Kittler, Alexander Galloway, and Ina Blom. It then discusses concepts such as agency and necromancy that pervade the scholarly literature on recording media, evaluates new research on art and technological reproducibility, and appraises the methodology utilized to unravel the artworks’ diverse connections to cinema, music, broadcast radio and television, and the sciences.

Scholarship and Technological Reproducibility After 1945

Just as art historians of the post-1945 era have covered technological reproducibility from the stance of pictorial culture (i.e., primarily through photography and printing), film scholars have copiously studied the moving image’s literary and narrative deployments. More relevant to

this study is the fact that experimental cinema is well adumbrated,¹ as is the moving image's role in pop, minimal, and conceptual art after 1963,² and a literature on auditory art has flourished since 1990.³ Unfortunately, however, disciplinary prerogatives have in several ways delayed recognition of vital recording-based art of the 1950s and early '60s. First of all, U.S. art critic Clement Greenberg (1909-1994) evolved a theory of medium specificity holding that, to be modern, artworks must elaborate upon the discreet characteristics of their material supports. "Content is to be dissolved into form that the work of art or literature cannot be reduced in whole or in part to anything not itself,"⁴ he wrote in 1939, amplifying the concept twenty years later: "It quickly emerged that the unique and proper area of competence of each art coincided with all that was unique in the nature of its medium. The task of self-criticism became to eliminate from the specific effects of each art any and every effect that might conceivably be borrowed from or

¹ See, for instance, Gene Youngblood, *Expanded Cinema* (New York: Dutton, 1970); P. Adams Sitney, *Visionary Film: the American Avant-Garde* (Oxford: Oxford University Press, 1974); Malcolm Le Grice, *Abstract Film and Beyond* (Cambridge, MA: MIT Press, 1977) and *Experimental Cinema in the Digital Age* (London: British Film Institute, 2001); A.L. Rees, *A History of Experimental Film and Video* (London: British Film Institute, 2011 [1999]), Malcolm Turvey, *The Filming of Modern Life* (Cambridge, MA: MIT Press, 2011), Pavle Levi, *Cinema by Other Means* (Oxford: Oxford University Press, 2012), David Tomas, *Vertov, Snow, Farocki: Machine Vision and the Posthuman* (New York: Bloomsbury, 2013), Jamie Baron, *The Archive Effect: Found Footage and the Audiovisual Experience of History* (Abingdon, Oxon and New York: Routledge, 2014), and Daniel Barnett, *Movement as Meaning in Experimental Cinema: The Musical Poetry of Motion Pictures Revisited* (New York: Bloomsbury, 2017).

² Early attempts by art curators to grapple with the moving image include John G. Hanhardt's *New American Filmmakers Series, 1970-73*, and *Re-Vision: Projects and Proposals in Film and Video*, 1979; the modern exhibition history includes *Into the Light: The Projected Image in American Art*, edited by Chrissie Iles (New York: H.H. Abrams, 2001), which excluded art produced before 1964; see also the critical anthologies *Art and the Moving Image: A Critical Reader*, edited by Tanya Leighton (London: Tate Publishing, 2008) and *Screen/Space: the Projected Image in Contemporary Art* (Manchester, U.K. and New York: Manchester University Press, 2011).

³ For auditory art, see *Sound by Artists*, edited by Micah Lexier and Dan Lander (Toronto: Art Metropole, 1990); *Wireless Imagination: Sound, Radio and the Avant-Garde*, edited by Douglas Kahn and Gregory Whitehead, (Cambridge: MIT Press, 1991); *Radiotext(e)* edited by Neil Strauss and Dave Mandel (New York: Semiotext(e), 1993); *Radio Rethink: Art, Sound, and Transmission*, edited by Diana Augaitis and Dan Lander (Banff, Canada: Walter Phillips Gallery, 1994); *Klangkunst*, ed. by Helga de la Motte-Haber (Berlin, München, New York: Prestel, 1996); Douglas Kahn, *Noise Water Meat* (Cambridge, MA: MIT Press, 1999); *Reinventing Radio: Aspects of Radio as Art*, edited by Heidi Grundmann (Frankfurt am main: Revolver, 2008); Brian Kane, *Sound Unseen: Acousmatic Sound in Theory and Practice* (New York: Oxford University Press, 2014); *Voice Studies: Critical Approaches to Process, Performance, and Experience*, edited by Konstantinos Thomaidis and Ben Macpherson (New York, NY: Routledge, 2015); and *The Music and Sound of Experimental Film*, edited by Holly Rogers and Jeremy Barham (Oxford: Oxford University Press, 2017).

⁴ Clement Greenberg, "Avant-Garde and Kitch," *Partisan Review* Vol. 6, No. 5 (Fall, 1939), 36.

by the medium of any other art.”⁵ Predicated, as it was, on painting and sculpture, Greenberg’s narrative did not foresee a time when technological reproducible media would dominate fine art, yet his work influenced art history’s direction for decades. Second, German media theorist Hans Magnus Enzensberger attacked experimental artists active in the 1950s whose works featured technological reproducibility but did not subscribe, in his analysis, to the radical leftism of the era. “The underground may be,” he observed, “increasingly aware of the technical and aesthetic possibilities of the disc, of videotape, of the electronic camera, and so on, and is systematically exploring the terrain, but it has no political viewpoint of its own and therefore mostly falls a helpless victim to commercialization.”⁶ Advancing Enzensberger’s critique, the German art historian Peter Bürger damned post-1945 experimental art as an emblematically vacant “neo-avant-garde” that, as he put it, “institutionalizes the *avant-garde as art* and thus negates genuinely avant-garde intentions [...] of returning art to the praxis of life.”⁷ Overlooking the schism that durational technological reproducibility represented to his theory, Bürger insisted that cinema was less valuable than Cubist painters’ pasting of newsprint or chair back caning onto a painted canvas. Film, he reasoned, sought to fool the eye, not integrate sounds and imagery into a revolutionary praxis for transforming life directly.⁸ By nearly the same token, Bürger denigrated John Heartfield’s photomontages for concealing the divide between life and

⁵ Clement Greenberg, “Modernist Painting,” *The Collected Essays and Criticism of Clement Greenberg, Volume Four* (Chicago and London: The University of Chicago Press, 1993 [1960]), 85

⁶ Hans Magnus Enzensberger, “Constituents of a Media Theory,” translated by Stuart Hood, reproduced in John Hanhardt (ed.) *Video Culture: A Critical Investigation* (Rochester: Visual Studies Workshop Press, 1986 [1974]), 103.

⁷ Peter Bürger, *Theory of the Avant-Garde*, translated by Michael Shaw (Minneapolis: University of Minnesota Press, 1984 [1974]), 58.

⁸ “[P]hotomontage is close to film not only because both use photography but also because in both cases, the montage is obscured or at least made difficult to spot. This is what fundamentally distinguishes photomontage from the montage of the cubists or Schwitters.” He added, “Within the frame of a theory of the avant-garde, the use to which film puts the concept cannot become relevant because it occupies an intermediate position between montage in films and montage in painting, because in it, the fact that montage is being used is so often obscured.” Bürger, 76, 77.

art that avant-garde artists must eradicate—failing to recognize that post-1945 artists confronted a vastly different audiovisual media economy from the one cubist artists operated in during the 1910s or that Heartfield’s technique offered artists an effective model for engaging in political critiques of that media economy.

Persistently occluding technologically reproducible means, Greenberg, Enzensberger, and Bürger’s analyses informed post-1945 art history. Benjamin Buchloh’s writing of the 1980s and ‘90s, for instance, consistently elevated institutional critique and conceptualism, tendencies hide-bound to the gallery situation, to the detriment of art featuring moving images and recorded sounds.⁹ Among the art historians to look beyond Greenberg and Bürger’s models, Brandon Joseph recognized that music, cinema, dance, photography, and performance had infiltrated art produced by the circle of artists in the 1950s affiliated with artist-composer John Cage (1912-1992).¹⁰ Cage’s influence on younger artists Allan Kaprow, Dick Higgins, Richard Maxfield, La Monte Young, Nam June Paik, Ben Vautier, Mieko Shiomi, Yoko Ono, and Walter de Maria, some of who incorporated the moving image or recorded sounds into Happenings, Fluxus, Multimedia, and Performance art, has received scholarly attention.¹¹ Art historians have also recognized a comparable renovation of art practice during the late 1950s in Paris, where artists

⁹ See Buchloh, *The Neo-Avant-Garde: Essays on European and American Avant-Garde Art from 1955-1975* (Cambridge, MA: The MIT Press, 2000). See also Hal Foster, “What’s Neo About the Neo-Avant-Garde,” *October* Vol. 70 (Autumn 1994), 5-32.

¹⁰ For a ground zero of this reappraisal, see Joseph’s article, “White on White,” *Critical Inquiry* Vol. 27, No. 1 (Autumn 2000), 90-121. See also Joseph’s *Random Order: Robert Rauschenberg and the Neo-Avant-Garde* (Cambridge, MA: MIT Press, 2003); *Beyond the Dream Syndicate: Tony Conrad and the Arts After John Cage* (Cambridge, MA: Zone Books, 2008), and *Experimentations: John Cage in Art, Music, and Architecture* (New York: Bloomsbury, 2016).

¹¹ See, for the New York City artists, Robert E. Haywood, *Allan Kaprow and Claes Oldenburg: Art, Happenings and Cultural Politics* (New Haven, CT: Yale University Press, 2017), Judith Rodenbeck, *Radical Prototypes: Allan Kaprow and the Invention of Happenings* (Cambridge, MA: MIT University Press, 2011), *In the Spirit of Fluxus*, edited by Janet Jenkins (Minneapolis: Walter Art Center, 1993), *The Lunatics Are On the Loose: European Fluxus Festivals-1962-1977*, edited by Petra Stegmann (Potsdam, Germany: Down With Art Press, 2012), Natasha Lushetich, *Fluxus: the Practice of Non-Duality* (Amsterdam: Rodopi Press, 2014), and Chris Thompson, *Felt: Fluxus, Joseph Beuys, and the Dali Lama* (Minneapolis: University of Minnesota Press, 2011).

Isidore Isou, Gil J. Wolman, Yves Klein, Arman, Daniel Spoerri, Jean Tinguely, Francois Dufrêne, and Raymond Hains participated in the Lettrist, Lettrist International, Nouveau réalisme, International Fluxus, and Décollage artistic avant-gardes.¹² What differentiates this dissertation from recent studies of these artists and movements is that it evaluates auditory, musical, theatrical, and moving image works by Debord, Burroughs, Maxfield, and Beckett art historians have not, as of this writing, paid attention to.

To contextualize their art in its sites of production, one must first remember that during the 1950s France was still a predominantly rural country suffering through a belated recovery from the ravages it endured under German occupation during the Second World War. Shortages of items essential to basic human needs recurred into the early 1950s. While scarcity ruled the immediate post-war years, by 1952 covertly politicized Marshall Plan aid from the U.S. jumpstarted what became a burgeoning industrial economy that flooded its own markets with soaps, washing machines, refrigerators, and inexpensive Citroën and Renault automobiles. Similarly industrialized entertainment products promulgated by a reconstituted mass media, particularly potent with respect to its enframings of cinematic, radiophonic, and televisual spectacles, also appeared in droves.¹³ Besides such market- and media-borne phenomena, urban developers seized upon reconstruction as a means to undertake large-scale architectural and highway building projects. Urban renovations of a scope unseen since Baron Georges-Eugène

¹² For Parisian artists, see Jill Carrick, *Nouveau Réalisme, 1960s France, and the Neo-avant-garde: Topographies of Chance and Return* (Farnham, Surrey, Burlington, VT: Ashgate Press, 2010), *New realisms, 1957-1962: Object Strategies Between Readymade and Spectacle*, edited by Julia Robinson (Cambridge, MA: MIT Press, 2010), Kaira Cabanas, *The Myth of Nouveau Réalisme: Art and the Performative in Postwar France* (New Haven, CT: Yale University Press, 2013) and *Off-screen Cinema: Isidore Isou and the Lettrist Avant-Garde* (Chicago: University of Chicago Press, 2015), *Critical Gestures and Contested Spaces*, edited by Sarah Watson, Annie Wischmeyer (New York City: Hunter College, 2016).

¹³ See Kirsten Ross, *Fast Cars, Clean Bodies: Decolonization and the Reordering of French Culture* (Cambridge, Massachusetts: MIT Press, 1995); Frances Stoner Sanders, *The Cultural Cold War: The CIA and the World of Arts and Letters* (New York: The New Press, 1999); and Richard Bissell, *Reflections of a Cold Warrior: From Yalta to the Bay of Pigs* (New Haven: Yale University Press, 1996).

Hausmann's traumatic reconfigurations of mid-19th century Paris¹⁴ relocated city residents to new and poorly built suburban enclaves like Sarcelles, located north of the city, as roads were built to facilitate commutes to and from work after the fashion Le Corbusier had proposed in his book *The Radiant City*, 1935.¹⁵

With its cities and resources intact after the Second World War, the United States emerged as the preeminent global superpower, lunging headfirst into an era of unparalleled prosperity and international influence. During the 1950s, a media economy of banal, stylized recorded music and Hollywood cinema catered to a youthful demographic born into relatively comfortable circumstances. Historians and social scientists, however, frequently described the 1950s as an era swept up in conformity-embracing social structures, when individual's needs were subordinated to a rationalized economy and the hierarchical corporate mentality that served as its emblem.¹⁶ Interestingly, New York City underwent urban reconfigurations that closely resembled the changes underway in Paris. The U.S. urban planner Robert Moses, a devotee of Hausmann and Le Corbusier, instigated slum clearance policies that subjected inner city neighborhoods to economic speculators and highway construction projects like the Brooklyn-Queens Expressway that fostered a large urban population's flight to suburbs in Long Island and Westchester. Fortunately, neighborhood activist Jane Jacobs successfully fought Moses' plan to route a highway through Manhattan's Greenwich Village neighborhood and the environmentalist Rachel Carlson drew attention to the devastation chemical pesticides and unbridled construction

¹⁴ See Louis Chavalier's *The Assassination of Paris*, trans. by David P. Jordan (Chicago: University of Chicago Press, 1994 [1977]).

¹⁵ Le Corbusier, *La ville radiieuse, éléments d'une doctrine d'urbanisme pour l'équipement de la civilisation machiniste* (Boulogne: Éditions de l'architecture d'aujourd'hui, 1935).

¹⁶ See William H. Whyte Jr., *The Organization Man* (New York: Simon and Schuster, 1956), C. Wright Mills, *The Power Elite* (Oxford: Oxford University Press, 1959), and Paul Goodman, *Growing Up Absurd* (New York: Random House, 1960).

were inflicting on experiential life.¹⁷ It is against these backdrops that artwork by Debord, Burroughs, Maxfield, and Beckett must be read, analyzed, and understood.

The Terminology of Recording: Indexicality, Suturing, Allegory, Metacriticism

One reason why these artists' works resisted conscription into art history is that the tropes of medium specificity and vanguardism brought about a discursive block that prevented lucid terminology from evolving in scholarly discourses on art and technological reproducibility. The resulting lacunae may have also stemmed from what Walter Benjamin noted in 1936—that the term “technological reproducibility” itself characterizes many processes that have no in-born temporal dimension.¹⁸ An alternative explanation for this discursive block on this art may be that, with the possible exception of structural cinema and select phenomenological musical compositions,¹⁹ technologically reproducible art defies theories of medium specificity and political vanguardism. For one thing, the artist who utilizes technologies of reproduction may readily conceal his or her authorial handiwork, a characteristic shared, no doubt to Bürger's displeasure, by Heartfield's photomontages and classical cinema, both of which operationally distract the perceiver's attention from the recording, editing, or projection apparatuses that serve as their material supports.²⁰ Second, as Benjamin also noted, technological reproducibility's

¹⁷ See Jane Jacobs, *The Death and Life of Great American Cities* (New York: Random House, 1961) and Rachel Carson, *Silent Spring* (Boston: Houghton Mifflin, 1962).

¹⁸ E.g., founding and stamping, bronze casting, woodcuts, the printing press, lithography, etc. See Walter Benjamin, “The Work of Art in the Age of Its Technological Reproducibility (Second Version),” translated by Edmund Jephcott and Harry Zohn in *The Work of Art in the Age of Its Technological Reproducibility*, edited by Michael W. Jennings, Brigid Doherty, and Thomas Y. Levin (Cambridge, MA: Harvard University Press, 2008 [1936]), 19-55.

¹⁹ “A film is materialist if it does not cover its apparatus of illusionism,” Peter Gidal writes. “Thus it is not a matter of anti-illusionism pure and simple, uncovered truth, but rather, a constant procedural work against the attempts at producing an illusionist continuum's hegemony.” Peter Gidal, *Materialist Film* (Oxon and New York: Routledge, 2014 [1969]), 17. Phenomenological composers like La Monte Young and Alvin Lucier explored the material characteristics of sound as a medium, the latter with a greater emphasis upon technological reproducibility than the former. See, for instance, Lucier's *I Am Sitting in a Room*, 1969, described in *Reflections: Interviews, Reflections, Writings* (Cologne: MusikTexte, 1995), 94-102.

²⁰ Many writers have addressed the erasure of apparatus and labor in cinema. See Jean-Louis Comolli's “Technique and Ideology: Camera, Perspective, Depth of Field [Parts 3 and 4]” in *Narrative, Apparatus, Ideology*, edited by

banishment of expressive handiwork threatens the authenticity, ritual, and presence that once served as an artwork's *raison d'être*.²¹ A third issue, which Benjamin did not survive to grapple with, is that in the 1950s practitioners utilized technological reproducibility to invoke and resist a bureaucratic, ratiocinated future many thought of as immanent and deeply problematic. While the metaphors for this future artists embedded into this art were usually computational, many employed magnetic sound recording and the moving image to evoke the automation of work, machine intelligence, and unbridled leisure that were to be fruits of a fully rationalized future.

Therefore, to describe the audiovisual media economy artists worked in from 1954 to 1964, a clarification of returned-to terms will be useful. Ordinarily, the word “recording” refers to inscriptive writing in a diverse set of media from stone tablets to photography, the registration and preservation of legal transactions in archives, or to the processes of capturing sounds and images with reproducible means.²² In this dissertation, however, “recording” will denote those photochemical, optical, or electromagnetic process that capture, store, archive, retrieve, or transmit time-dependent audiovisual data—a “recording” is, therefore, a sequential moving image work, auditory work, or a combination of sound recording and moving image purporting to represent the “real.” By extension, a “recorded object” is a recording-based artwork presenting a real situation or one an artist has fabricated to seem real. The term “suturing,” a practice distinct from the abrasive rupture of modernist montage, is borrowed from the art historian

Philip Rosen (New York: Columbia University Press, 1986); Rick Altman, “Introduction” *Cinema Sound: Yale French Studies* No. 60 (1980), 3-15; and Mary Ann Donne, “The Voice in the Cinema: The Articulation of Body and Space,” *Narrative, Apparatus, Ideology*, 335-48.

²¹ “Originally, the embeddedness of an artwork in the context of tradition found expression in a cult. As we know, the earliest artworks originated in the service of rituals—first magical, then religious. And it is highly significant that the artwork’s auratic mode of existence is never entirely severed from its ritual function. In other words: *the unique value of a the “authentic” work of art always has its basis in ritual.*” Benjamin, 24.

²² “Recording, n.” OED Online. June 2017. Oxford University Press. <http://www.oed.com.proxy.library.stonybrook.edu/view/Entry/159883?isAdvanced=false&result=1&rskey=gSWL6b&> (accessed August 11, 2017).

Sabina T. Kribel. “Whereas the aesthetics of rupture emphasizes the fissures between parts and revels in a discordant materiality” Kribel writes, “the language of ‘suture,’ or visual seamlessness, aims to disguise them.”²³ As applicable to recorded sound as to the still or moving image, the sutured cut vanishes behind drawn together edges that conceal the edit. The suture’s ostensible purpose is to challenge the perceiver to discern the meaning of political, aesthetic, or social phenomena presented as “reality” in a recorded object. “Allegory” refers to the gathering of cultural fragments to enact a new awareness of political and historical realities in a perceiving subject.²⁴ The term “metacriticism,” coined by J.G. Hamann in 1782,²⁵ references art that queries the principles and methods of art production, reception, and criticism as it represents the “real.”

Although this dissertation tracks artistic representations of “reality,” it recognizes that technological reproducibility’s hold on the object world—its indexicality—is not necessarily what drew artists to recording technology. “The camera is just as capable of lying,” as Bertolt Brecht noted in 1931, “as the typewriter.”²⁶ While art has always traded in the falsification or reduction of reality, in the arena of public consumption technological reproducibility maintained an evidentiary value long after 1945. Indeed, if by 1954 few artists addressed falsifications of reality in the mass media of cinema, radio, or television, in the late 1960s a new, self-conscious reflexivity became palpable. In the film *Medium Cool*, 1968, for instance, the cinematographer Haskell Wexler appears on-screen in the act of filming himself as he filmed Chicago police who

²³ Sabine T. Kribel, *Revolutionary Beauty: The Radical Photomontages of John Heartfield* (Berkeley, Los Angeles, London: University of California Press, 2014), 11.

²⁴ As Susan Buck-Morss points out, Walter Benjamin revived allegory to illustrate how temporally disjointed fragments could be reassembled to awaken a historical consciousness in the present. “The allegorical mode allows Benjamin to make visibly palpable the experiences of a world in fragments, in which the passing of time means not progress but disintegration.” Susan Buck-Morss, *The Dialectics of Seeing: Walter Benjamin and the Arcades Project* (Cambridge, MA: MIT Press, 1989), 18.

²⁵ Gwen Griffith Jackson’s *Johann Georg Hamann’s Relational Metacriticism* (Berlin and New York: Walter de Gruyter, 1995) provides a nuanced contextualization of Hamann’s critique of Enlightenment philosophy.

²⁶ Bertolt Brecht, cited in Douglas Kahn, *John Heartfield: Art and Mass Media* (New York: Tanam Pres, 1985), 64.

were attacking leftist protesters when, in actuality, he sutured the scene to retrofit a turbulent reality as a consciousness-raising cinematic artwork instead of a diversion from reality.²⁷ As such, *Medium Cool* represented a salutary wave of critical, reality-embracing audiovisual art.²⁸ By 2005, however, digitalized media entertainments cast doubt on recording's grasp on reality in a new and retrograde way. In that year, a producer of a "reality" television show *The Bachelor* filed a suit to claim that his work at creating social situations and editing vast digital reservoirs of recorded sounds and moving images into a specious "reality" constituted personal authorship.²⁹ Whether it did or not is nearly beside the point; what actually matters is that the program's vast audience received the news without blinking an eye. Reality's value and meaning had changed once again.

"New Media" Scholarship: Discourse Networks, Digitalization, the Necromancy Metaphor

If artists, scholars, and the public overlooked reality's shifting status in both fine art and entertainment, the German literary scholar Friedrich Kittler (1943-2011) offered a farsighted analysis of technological reproducibility in the nineteenth, twentieth, and twenty-first centuries that took reality into account. Transposing Foucault's theory of discourse production into a philosophy of "discourse networks," Kittler asserted that communications technology shaped reality's perception in every historical era.³⁰ At the center of discourse network's relevance to art

²⁷ *Medium Cool*, dir. Haskell Wexler, (Los Angeles: Paramount Pictures, 1969).

²⁸ This salutary self-consciousness toward media, inaugurated by Gene Youngblood's *Expanded Cinema*, has been followed more rigorously in art historical studies by David Joselit, *Feedback: Television Against Democracy* (Cambridge: MIT Press, 2007) and Pamela Lee, *Chronophobias: On Time in the Art of the 1960s* (Cambridge: MIT Press, 2004). See also Craig Peariso's *Radical Theatrics: Put-ons, Politics, and the Sixties* (Seattle: University of Washington Press, 2014), which examined queer, Yippie, and black activists' provocations within the recording and broadcast media.

²⁹ Sharon Waxman, "Union Plans to File Suit for Reality TV Workers," *New York Times* (June 5, 2005), E1.

³⁰ Kittler claimed Jacques Lacan's psychoanalytic categories of "the symbolic," "the real," and "the imaginary" corresponded, respectively, to the nineteenth-century inventions the typewriter, the phonograph, and film. Friedrich Kittler, *Gramophone Film Typewriter*, translated by Geoffrey Winthrop-Young and Michael Wurtz (Stanford: Stanford University Press, 1999 [1986]), 15.

of the 1950s, Kittler observed that recorded sounds and moving images, which had resisted technological transcription for centuries, were fixed by the invention of phonograph and the cinema as time-dependent, writeable data flows for the first time in history. Constitutive of the 1900 discourse network, Thomas Edison's phonograph transcribed sound waves into physical deviations of a spiral groove impressed onto a tinfoil surface. When brushed over the resulting hill-and-dale inscription, a stylus reproduced the sound "written" there again and again. The exact correspondence of physical sound wave to its inscription reproduced what Kittler called the "real."

Completed in its silent form by Edison and the French Lumiere Brothers in 1895 and also constitutive of the 1900 discourse network, Kittler claimed cinema did not present the real, but the imaginary. First, as he put it, "Instead of recording physical waves, generally speaking it only stores their chemical effects on its negatives."³¹ The photographic image did not trace physical objects, but rather the light objects reflected back through a lens and onto a celluloid material base coated with chemicals. The second reason is that, by scanning "reality" at a rate of twenty-four images per second, cinema substituted a discontinuity for actuality and then permitted this discontinuous flow to be subjected to montage. "As phantasms of our deluded eyes," Kittler noted, "cuts reproduce the continuities and regularities of motion."³² Cinema's powerful *trompe l'oeil* effect stems from a perceptual frisson between the film image's seeming objectivity and a discontinuity Kittler viewed as its special property: "Chopping or cutting in the real, fusion or flow in the imaginary—the entire research history of cinema revolves only around this paradox."³³ According to Kittler, an artist feeds the moving image into a viewer's consciousness,

³¹ Kittler, 119.

³² Kittler, 119.

³³ Kittler, 122.

where it competes with his or her grasp of the “real,” an analysis that coheres with the claim of art historian David Joselit, who observed that television and experiential reality seemed to “mutually derealize one another.”³⁴ Interestingly, formalist critics say little about technological reproducibility’s affective character as Kittler and Joselit described it, as if to acknowledge that recorded sounds and imagery resist the medium specificity their valuation of modern art rests upon.³⁵

One of Kittler’s most compelling insights into technological reproducibility was his claim that fixing acoustical and optical data on separated technological media of cinema and sound recording inaugurated a bifurcation of vision and hearing, senses more closely interrelated and correlated with one another than is commonly recognized. “Ever since that epochal change,” he wrote,

we have been in possession of storage technologies that can record and reproduce the very time flow of acoustic and optical data. Ears and eyes have become autonomous. And that changed the state of reality more than lithography and photography, which (according to Benjamin’s thesis [in the “Artwork” essay]) in the first third of the nineteenth century merely propelled the work of art into the age of its technical reproducibility.³⁶

Although this assertion seems counterintuitive, particularly so to individuals raised in the era of broadcast television and sound cinema, the separation of vision and hearing helps to explain the technological and discursive limitations artists confronted in the 1950s, twenty years after talking pictures became a technological standard in cinema. As the 1950s progressed, artists began to demarcate spaces in-between the channelized visual and auditory networks and created art to

³⁴ David Joselit, “Yippie Pop: Abbie Hoffman, Andy Warhol, and Sixties Media Politics,” *Grey Room* No. 8 (Summer 2002), 69.

³⁵ This has not prevented critical attempts to do so. “For, in order to sustain artistic practice, a medium must be a supporting structure, generative of a set of conventions, some of which, in assuming the medium itself as their subject, will be wholly ‘specific’ to it, thus producing an experience of their own necessity.” Rosalind Krauss, *Voyage on the North Sea: Art in the Age of the Post Medium Condition* (New York: Thames and Hudson, 2000), 26.

³⁶ Kittler, 3.

activate these interstitial spaces. Their activities may have anticipated the unification of sound and vision that took place in the discourse network of 2000, which was digitalized and computation-driven. “The general digitalization of channels and information,” Kittler wrote in 1986, “erases the differences among individual media. Sound and image, voice and text are reduced to surface effects, known to consumers as interface.”³⁷

The discourse network of 2000, as Kittler foresaw it, did enact disciplinary crises in art history and cinema studies. In 2001 the art theorist Lev Manovich claimed digitalization subjected recorded objects to alterations at the level of programming code and to the effects of “interfaces,” sometimes defined in his text as “metaphors and strategies” and at others as “a system of controls to operate a machine.”³⁸ With considerable imprecision, Manovich asserted that in the digital paradigm, photography’s *raison d’etre* was no longer the indexing of objects with reflected light, but to capture objects in a numerical database-form subject to programmable alterations. Most controversially, cinema’s narrative capability was, he argued, locked in a death struggle with computation as “two competing ideologies, two basic creative impulses, two essential responses to the world.”³⁹ Boiled down to the argument that digitalization destroys recorded sounds and moving images’ indexical properties, infamously put as “the kino brush replaces the kino eye.”⁴⁰ Digital media liquidated art’s claims on reality *tout court*. “In short,” Manovich observed, “the avant-garde becomes software.”⁴¹ Accordingly, engineers who design

³⁷ Kittler, 1.

³⁸ Lev Manovich, *The Language of New Media* (Cambridge: MIT Press, 2001), 72.

³⁹ Manovich, 233.

⁴⁰ “The mutability of digital data,” he added, “impairs the value of cinema recordings as documents of reality.” Manovich, 307.

⁴¹ He further qualified this assertion: “This statement should be understood in two ways. On the one hand, software codifies and naturalizes the techniques of the old avant-garde. On the other hand, software’s new techniques of working with media represent the new avant-garde of the meta-media society.” Lev Manovich, “Avant-garde as Software,” *Artnodes* (2002), 11. Available from:

<https://www.uoc.edu/artnodes/espai/eng/art/manovich1002/manovich1002.html>, accessed on May 16, 2017.

digital interfaces and programmers who write code ascend to the role of artist, presumably in possession of skills fine artists develop over the course of lifetimes.

Not surprisingly, this analysis of digitalization elicited responses from academic art and cinema historians. Editors of the art history journal *October*, for instance, took great umbrage:

It is with some interest that we witness the usage of a critical avant-garde film such as Dziga Vertov's *Man with a Movie Camera* as the opening device of a recent text on the "language of new media," just as it once provided the signal image some years ago for the very first issue of this journal. And it is also with some doubt that we listen to these same theoreticians of the new digital media proclaim that cinema and photography—with their indexical, archival properties—were merely preliminary steps on the path to merging with the computer in the *uber*-archive of the database.⁴²

The formalist art historians of *October* rejected Manovich's dismissal of indexicality out of hand and without examining their embrace of medium specificity or their disregard for experimental post-war art that violated its tenants. Film historian Thomas Elsaesser, on the other hand, responded to Manovich's provocation more carefully, declaring the breach between digital and analogue technologies as a rationale to reexamine how histories of cinema's overlooked the material and theoretical bases of digital computation.⁴³ This necessitated engaging with optical, chemical, auditory, mechanical, and electromagnetic phenomena occluded from analyses.⁴⁴

⁴² Editors, "Introduction," *October* #100 (Spring 2002), 3-5.

⁴³ Today we notice, above all, the other sources upstream not included: all that is absent, missing or that has been suppressed in the genealogical chart. Sound, for instance, since the silent cinema was rarely if ever silent, in which case: why is the history of the phonograph not listed as another tributary? And as we now understand the cinema as part of a multimedia environment, how about the telephone as an indispensable technology? Radio-waves? Electro-magnetic fields? The history of aviation? Do we not need Babbage's difference engine ranged parallel to his friend Henry Fox-Talbott's Calotypes or Louis Daguerre's sensitised copper plates? These questions in themselves show how much our idea—and maybe even our definition—of cinema has changed even without appealing to digitisation as a technology, which is nonetheless implicit as a powerful "perspective correction" and thus counts as an impulse in this retrospective re-writing of the past.

Thomas Elsaesser, "The New Film History as Media Archeology." *Cinémas* 142-3 (2004), 86.

⁴⁴ The new field of media archaeology has missing aspects of media history. See, for instance, Siegfried Zielinski, *Deep Time of the Media: Toward an Archaeology of Hearing and Seeing by Technical Means* (Cambridge, MA: MIT Press, 2008); Erkki Huhtamo, *Media Archaeology: Approaches, Applications, and Implications* (Berkeley, CA:

Beyond its relevance to art history or cinema studies, digital technologies yielded new aesthetic possibilities. After 2002 artists navigated space with the Global Positioning System; formed affinity-based networks via social media websites; and published texts, photos, sounds, and moving images on “many-to-many” sites like YouTube.com. Wholeheartedly embracing this new situation, communications scholar Henry Jenkins claimed digital media would “provide a catalyst for reconceptualizing other aspects of culture, requiring the rethinking of social relations, the reimagining of cultural and political participation, the revision of economic expectations, and the reconfiguration of legal structures.”⁴⁵ More attuned to digitalization’s role in education and scientific research, yet no less enthusiastic than Jenkins, N. Kathleen Hayles evaluated digital communications’ potential to accelerate salutary epigenetic changes comparable to spot mutations that took place over the long sweep of evolutionary history.⁴⁶

If newer scholarship on digital networking, connectivity, and aesthetics has supplanted this early optimism,⁴⁷ recording’s more dystopian prospects have been observable for decades in the necromantic metaphors critics employed to discuss it. In 1936 Walter Benjamin attacked commercial films’ movie star cult for preserving “that magic of the personality which has long

University of California Press, 2011); and Jussi Parikka, *What is Media Archaeology* (Cambridge, UK and Malden, MA: Polity Press, 2012).

⁴⁵ Henry Jenkins, Sam Ford, and Joshua Green, *Spreadable Media: Creating Value and Meaning in a Networked Culture* (New York: New York University Press, 2013), 3.

⁴⁶ While on the one hand Hayles cautions that contemporary technogenesis, like evolution in general, “offers no guarantees that the dynamic transformations taking place between humans and technics are moving in a positive direction,” her analyses of the technics and consciousness consistently favors positive conclusions about the impact of digitalization on academic practice. Tellingly, Hayles seldom mentions its effects upon everyday experiential life. N. Katherine Hayles, *How We Think: Digital Media and Contemporary Technogenesis* (Chicago and London: The University of Chicago Press, 2012), 81.

⁴⁷ See, for instance, Charissa N. Terranova, *Art as Organism: Biology and the Evolution of the Digital Image* (London and New York: I.B. Taurus, 2016), a book that traces connections between science and modern art in systems, information theory, and cybernetics. Patrick Jagoda, too, advocates a stance of ambivalence toward digital networks he describes as “a process of slowing down and learning to inhabit a compromised environment with the discomfort, contradiction and misalignment it entails” so that new forms of cooperation and thoughtfulness may emerge. See Jagoda, *Network Aesthetics* (Chicago: University of Chicago Press, 2016), 225.

been no more than the putrid magic of its own commodity character.”⁴⁸ Theorizing an era of “repetition” when individuals exchanged their labor to purchase commoditized musical recordings, in 1977 the economist Jacques Attali called recording “the blasphemous herald of the death of a society in which reality is only a normalized, liquidating artifice,” adding that “*the stockpiling of use-time in the commodity object is fundamentally a herald of death.*”⁴⁹ Cinema theorist Laura Mulvey observed in 2006 that “[t]he photograph’s freezing of reality [...] marks a transition from animate to the inanimate, from life to death.”⁵⁰ One need not be a Marxist to extemporize on technological reproducibility with the rhetoric of necromancy; even Kittler, an avowed political conservative took pains to observe, as recording grew ubiquitous in the twentieth century, of “man” [sic] that, “His essence escapes into apparatuses. Machines take over functions of the central nervous system, and no longer, as in times past, merely those of muscles.”⁵¹ Here, Kittler identified the affect-generating moving image and sound recording representations that seem to reify lived experiences.

Recording Technology and Immersion, Agency, and Surveillance

In 2007, digital theorists Alexander Galloway and Eugene Thacker discerned an even deeper ignominy than the migration of essence into recorded platforms. Borrowing Foucault’s concept of biopower, which regarded the body as a site of manipulation and control in

⁴⁸ Benjamin, 33.

⁴⁹ Jacques Attali, *Noise*, translated by Brian Massumi (Minneapolis: University of Minneapolis Press, 1989 [1977]), 125-6. Emphasis in original.

⁵⁰ Laura Mulvey, *Death 24X Per Second: Stillness and the Moving Image* (London: Reaktion Books, 2006), 15.

⁵¹ Kittler, *Gramophone Film Typewriter*, 16. Kittler here echoed Foucault’s famous passage about the emergence of the individual human subject as “not the liberation of an old anxiety, the transition into luminous consciousness of an age-old concern, the entry into objectivity of something that had long remained trapped within beliefs and philosophies: it was the effect of a change in the fundamental arrangements of knowledge. As the archaeology of our thought shows, man is an invention of a recent date. And perhaps one nearing its end.” Michel Foucault, *The Order of Things*, (London: Routledge, 1989 [1966]), 449.

scientifically oriented societies,⁵² they argued that digital networks reduce individuals to “samples, data, markets, or ‘banks.’” As digital communications diminish the exercise of agency, existence in the grand philosophical sense diminishes to a set of strictly determined options that force individuals to exist inside of “a topology of control.”⁵³ Clarifying the stakes of this physical and sensory immersion, Galloway and Thacker described such networks as environments where surveillance of behaviors and affinities is routine. Each mouse click or screen tap feeds electronic information—a kind of recorded object predicted, as I will show, in 1945—to vast data storehouses where metrics are stored.⁵⁴ Private inclinations and memories reflected in such metrics may, after all, endanger the modern subject’s autonomy and expectations of free will.

New technologies often threatened privacy, as when in 1890 U.S. Supreme Court justices Louis Brandeis and Samuel Warren’s defined privacy as “the right to be let alone” after Eastman Kodak’s 1884 “snap” camera raised concern that newspapers would publish images of private behaviors to embarrass opponents and enhance profits.⁵⁵ The conditions Galloway and Thacker describe, it merits noting, offer very few opportunities to resist the full scale monitoring of users who participate in networks overseen by either police or market forces. “Capitalism’s capacity to absorb its adversaries is now so routine,” digital activist Geert Lovink wrote in 2011, “that it is next to impossible to argue that we still need criticism—in this case of the internet—until the day when all of your public telephone conversations and internet traffic are becoming publically

⁵² Biopower, Foucault wrote, designates “what brought life and its mechanisms into the realm of explicit calculations and made knowledge-power an agency of transformation of human life.” Michel Foucault, *The Foucault Reader*, translated by Robert Hurley, edited by Paul Rabinow (New York: Pantheon Books, 1984 [1978]), 265.

⁵³ Alexander R. Galloway and Eugene Thacker, *The Exploit: A Theory of Networks* (Minneapolis and London: University of Minnesota Press, 2007), 40.

⁵⁴ Internet sites that providers sign-in services track user with “onboarding” or “canvas fingerprinting” techniques. With the latter, impossible to detect numbers assigned to each user enable mass surveillance in every web browser except Tor. Julia Angwin, *Dragnet Nation: A Quest for Privacy, Security, and Freedom in a World of Relentless Surveillance* (New York, NY: St. Martins Press, 2015), 227.

⁵⁵ Daniel J. Solove, *Understanding Privacy* (Cambridge, MA: Harvard University Press, 2009), 15-18.

available.”⁵⁶ The potential for misusing recorded objects and archived data seems to auger, as Galloway, Thacker, and Lovink suggest, an ominous new era of social repression.

In view of machines that absorb bodies and networks that surveil affinities, it is no surprise that art historical writing on technological reproducibility flirts with the rhetoric of diminished agency. A 2016 study of artists’ works in video, the signaletic, frequency-modulated, “live” technology many adopted in the late 1960s, proposed “[t]o trace the lifespan of video—that is, the lifespan of an agency involved in the reconfiguration of social memory.”⁵⁷ While Ina Blom’s tongue-in-cheek provocation undergirds an excellent book, the rhetorical gambit of positing a technology as history’s engine and memory’s keeper appears to overlook withering critiques of machine agency.⁵⁸ The biological subject’s computational encounters with its digital doppelgänger recall, as Blom has argued, theories of the nineteenth-century sociologist Gabriel Tarde (1843-1904), who understood matter and mind as roughly coeval phenomena:

Tarde’s monadology suggests that there is no principled difference between the events of association/invention in different material composites: the electrochemical reactions that cause the contractions and distribution of time and sensation in the neuronal systems of human is simply one very particular aspect of the contractions and distributions matter/memory taking place across the board. All are equally social—i.e. connective.⁵⁹

The leveling of biological and machine agency, a key topic among media archaeology scholars, seems to be making assumptions based on small particle behaviors no better understood than the

⁵⁶ Geert Lovink, *Networks Without a Cause* (Cambridge, UK: Polity Press, 2011), 147.

⁵⁷ Ina Blom, “The Autobiography of Video: Outline for a Revisionist Account of Early Video Art,” *Critical Inquiry*, Vol. 39, No. 2 (Winter 2013), 282. Blom productively exploited the rhetoric of agency in her book *The Autobiography of Video: The Life and Times of a Memory Technology* (Berlin: Sternberg Press, 2016).

⁵⁸ See C.S. Pierce, “Logical Machines,” *The American Journal of Psychology* Vol. 1, No. 1 (1887); Allen Newell, “Some Problems of Basic Organization in Problem-Solving Programs” Rand Corporation white paper (December 1962); Drew McDermott, “Artificial Intelligence Meets Natural Stupidity,” *SIGART Newsletter* No. 57 (April 1967), 4-9; Joseph Weizenbaum, *Computer Power and Human Reason: From Judgment To Calculation* (San Francisco: W. H. Freeman, 1976); Theodor Roszak, *The Cult of Information* (New York: Pantheon Books, 1986); and Roger Penrose, *The Emperor’s New Mind* (Oxford: Oxford University Press, 1989).

⁵⁹ Ina Blom, *Memory in Motion*, edited by Ina Blom, Trond Lundemo, and Eivind Rössaaak (Amsterdam: Amsterdam University Press, 2017), 24.

nature of consciousness itself. Memory must no longer be understood, Blom insists, as a “container” but rather as a set of electromagnetic flows and fields biological entities share with machines. Surely, the adequation of subject to object is no more easily grasped when the object itself aspires toward be a subject, but Blom’s argument that an affinity binds biological beings to machines is well made. Indeed, it points to a schism Bruno Latour addressed. “We know how to describe human relations, we know how to describe mechanisms,” he wrote, “we often try to alternate between context and content to talk about the influence of technology on society or vice-versa, but we are not yet expert in weaving the two resources into an integrated whole.”⁶⁰

Attempting a *rapprochement* between technologically reproducible means of the 1950s and the artists who employed it, this dissertation utilizes a new scholarly approach toward what used to be called “media theory.” “At its most creative,” Eva Horn wrote in 2007, “media theory might *not* be a field in itself but rather a disciplinary crossover or a transdisciplinary pursuit.” Instead of reading artworks in light of any one critical or technological trope, Horn implored art historians to focus on what artists “*do*, how they charge and discharge the events for which they are the cause and of which they are a part,”⁶¹ advice which leaves no doubt that the biological practitioner remains the agent of production, even in an era as marked by necromancy and violence as the mid-twentieth century was.

Recent Scholarship on Technological Reproducibility and Art

Since 2000, a number of ambitious museum exhibits have shed light on technologically reproducibility’s impact upon art across a broad range of temporalities, media, and geographical

⁶⁰ Bruno Latour, “Technology is Society Made Durable” in *Sociological Review* Vol. 38 (S1) (May 1990), 111.

⁶¹ Eva Horn, “There Are No Media,” *Grey Room* No. 29 (Fall 2007), 10, 11.

locations.⁶² By far the most in-depth recent publication on this subject, Tamara Trodd's *The Art of Mechanical Reproduction: Technology and Aesthetics from Duchamp to the Digital*, 2015, has adopted an equally far-reaching approach to historicizing twentieth- and twenty-first century fine art conceived with a welter of technologically reproducible means. Trodd asserts that mass media of the 1920s created a "new technological situation [that] affords new *aesthetic* resources for art: new models of visual pleasure, imaginative satisfaction, affective engagement."⁶³ In case studies on Paul Klee, Ellsworth Kelley, Tacita Dean and many other artists, Trodd articulately explains how oil transfers, etchings, photography, newsprint, Xerox photocopying, and cinema informed art production, often in unpretentious or makeshift ways akin to "an integer in a compound material practice."⁶⁴ Of Walter Benjamin's much discussed observation that technological reproducibility destroys art's "aura," Trodd discerns a post-aura aesthetics that is, she claims, "not a stripped-bare theory of experience without aesthetic possibility, but is transformational and fantastic, charged with new phantasmatic content and affect."⁶⁵

The post-aura aesthetic emerges as cinema reconstitutes the perceptual apparatus to grasp and resist the root causes of alienation of modern life, a claim Trodd illustrates with analyses of Chris Marker's *La Jetée*, 1963, and Andrei Tarkovsky's *Solaris*, 1972. Composed of still photographs filmed at twenty-four frames per second, Trodd regards *La Jetée* as a cinematic

⁶² See, for instance, the following catalogues: *Sons & lumières: une histoire du son dans l'art du XXe siècle*, edited by Sophie Duplaix and Marcella Lista (Paris: Centre Georges Pompidou, 2005), which traced the relationship between the senses from nineteenth century synaesthesia to contemporary installation practices; *Expanded Cinema: Art Performance Film*, edited by A.L. Rees, Steven Ball, and David Curtis (London: Tate Gallery Publication, 2011) focused on post-1960s installation art that incorporated cinema; and *Dreamlands: Immersive Cinema and Art*, edited by Chrissie Iles (New York: Whitney Museum of American Art, 2016), which presented a lineage of immersive or haptic cinema—as opposed to the more conventional literary and dramatic uses of the moving image—from 1900 to the present time.

⁶³ Tamara Trodd, *The Art of Mechanical Reproduction: Technology and Aesthetics from Duchamp to the Digital* (Chicago and London: University of Chicago Press, 2015), 3.

⁶⁴ Trodd, 4.

⁶⁵ Trodd, 194.

elaboration upon the photographic image as a traumatic scar on memory. In what turns out to be a presentiment of the male protagonist's own death, the film's key image depicts a woman he sees at Orly airport at the moment of his death. In Trodd's view, the image operates as a balm for soothing a traumatized male subject, evoking here the psychoanalytic theory of fetishistic disavowal—an original, if debatable, gendering of *La Jetée*. Encountering a simulation of his deceased spouse, *Solaris*'s male protagonist attempts a romantic relationship with her that fails after the woman tries to commit suicide. She, however, soon repudiates her identity as his spouse and, by refusing to fix his psychological wounds, acquires the status of an emancipated (if not quite human) being. Tarkovsky, Trodd concludes, “puts the machinery of the image to work to articulate the point that of view of the ‘other,’ who is excluded from the modernist story arc.”⁶⁶

Trodd's valuable insights notwithstanding, a paradoxical mixture of abundance and omission mars *The Art of Mechanical Reproduction*. First of all, the case studies span some ninety-years and media economies so diverse that technological reproducibility's consequences for art practice are never addressed, implying that a pared down version of this book would have made a more useful text. Second, the titular reference to digital art hides a lack of engagement with computational formats. Trodd's gloss on the Irish artist John Gerrard's unsettling moving image simulations of controversial physical sites he assembles from satellite transmissions, photographs, and software algorithms fails to analyze the key question of whether digitalization has materially changed the fine arts. Finally, *The Art of Mechanical Reproduction*'s chapters on durational art treat technological reproducibility as a narrative theme, not a tool artists employed to craft challenging or experimental artworks.

⁶⁶ Trodd, 210.

Fortunately, recent scholarly works that refused to fetishize machine agency, succumb to the rhetoric of necromancy, or offer a mere gloss over vast areas of modern art have provided this dissertation with better models. In *Peripheral Vision*, 2015, for instance, Zabet Patterson excavated the Stromberg-Carlson SC-4200 computer graphics machine, a cathode ray generator that focused an electron beam through a grid of 252 x 184 characters, combining, recombining, and agglomerating letters, words, and images into new shapes while a sixteen-millimeter film camera recorded the results. Patterson demonstrates how filmmaker Stan VandDerBeek employed the SC-4200, an IBM 7094 mainframe, and a graphics-generating programming language to craft the animated film *Poemfields*, 1964-1969. “The dual fascination with language—as system and as material form—showcases a concern,” Patterson wrote, “with the layers of representation occasioned by computation and computerization. The *Poemfields* films already partake in the aggregative interlocking supports and layered conventions of cinema. But added onto that is the layered, differential specificity of the SC 4020 and the interlocking elements around it, ranging from the IBM 7094 to the card punch.”⁶⁷ *Peripheral Vision* described Bell Laboratories-sponsored collaborations between scientists and artists in the late 1950s and 1960s, establishing that recording-dependant computational art existed before curators embraced cybernetics, computation, and systems art in 1970.⁶⁸

Whereas Patterson traced art crafted on a conglomeration of apparatuses into new terrain, Andrew V. Uroskie’s *Between the Black Box and the White Cube: Expanded Cinema and*

⁶⁷ Zabet Patterson, *Peripheral Vision: Bell Labs, the S-C 4020, and the Origins of Computer Art* (Cambridge, MA: MIT Press, 2015), 69-70.

⁶⁸ The canonical fine art exhibitions on computation include *The Machine: as Seen at the End of the Mechanical Age*, edited by K.G. Pontus Hultén (New York: Museum of Modern Art, 1968); *Cybernetic Serendipity*, edited by Jasia Reichardt (New York: Praeger, 1969); *Software-Information Technology: Its New Meaning for Art*, edited by Jack Burnham (New York: The Jewish Museum, 1970); and *Information*, edited by Kynaston McShine (New York: Museum of Modern Art, 1970).

Postwar Art, 2014, integrated geographically and aesthetically diverse art objects into one study on the cinema's unsung role in post-1945 installation, performance, and social art practices. Academic critics who regarded experimental film as a discreet, medium-specific art object overlooked, as Uroskie wrote, "an aesthetic and conceptual domain whose practitioners had rarely understood themselves as far removed from the other arts."⁶⁹ Just as Rosalind Krauss's wrote that sculpture's journey from the plinth to the expanded field left it "homeless," occluding the moving image's intersections with photography, video, installation, and performance from art historical discourse consigned a multitude of practices to a comparable state of dispossession.⁷⁰

Noam M. Elcott's recent study of phantasmagoria exhumed commonalities shared by eighteenth-century moving image projections in the theater and deployments of film in fine art installations by Robert Whitman, Anthony McCall, Peter Campus, Dara Birnbaum, and Tony Ousler. The failure to properly historicize integrations of technologically reproducible images and living human bodies reflected an omnibus critical prohibition that arose because projected imagery foiled analytical tropes for distinguishing "cinema," "sculpture," and "theater" as ontologically separate art practices and academic disciplines. "The technical and historical lacunae are," Elcott wrote,

symptomatic of a broader deficiency: neither art history nor film studies recognizes phantasmagoria as a fundamental configuration of image and spectator—one with deep media archaeological roots and myriad contemporary manifestations. Focused on individual media, technologies, genres, artists, movements, styles, or subjects, scholars have largely failed to recognize the decisive roles played by the coordinated disposition of these disparate elements in

⁶⁹ Andrew V. Uroskie, *Between the Black Box and the White Cube: Expanded Cinema and Postwar Art* (Chicago and London: University of Chicago Press, 2014), 234.

⁷⁰ "The postwar expanded cinema divorced the idea of cinema from the historical contingency of [the] exhibitionary model, creating a new and provocative condition of homelessness for the moving image within the institutions and discourses of contemporary art." Uroskie, 233.

relation to specific modes of spectatorship.⁷¹

As such, what Elcott calls the phantasmagoric *dispositif* expands to encompass Bernini's *trompe l'oeil* *The Ecstasy of St. Teresa*, 1652, and virtual and augmented reality technologies that will immerse bodies into animated spaces or integrate technologically reproducible imagery into the perceiver's physical surroundings. In his book *Artificial Darkness: An Obscure History of Modern Art and Media*, 2016, Elcott considers how it came to pass that white screens in black theaters disembodied the cinematic spectator while black screens in lit spaces placed the body in a new relationship to moving images, architectural surroundings, and other bodies. As Elcott has cautioned, his research,

does not advance the medium of darkness in place of the medium of painting or the medium of film. The histories of art and film presented here demonstrate not only that artificial darkness *could* operate between media but, more so, that it could *only* operate between media. Implicit in these histories, therefore, is a more radical proposition—asserted expansively by media theorists like Eva Horn—that there are no media.⁷²

This dissertation, then, balances an acknowledgment that discrete media no longer exist with Kittler's assertion that technological tools delimit art's style and conceptualization. In what follows, the evaporation of "media" and "media theory" of a certain kind must co-exist with two new recording technologies that allowed artists to capture the "real" with an unequalled fidelity and intimacy between 1954 and '64.

The Miniaturization and Portability of Technological Reproducibility from 1948 to 1960

The first of these, magnetic audiotape, rarely discussed by visually oriented art historians, yet completely decisive to the art described below, deserves a particularly detailed historical

⁷¹ Noam M. Elcott, "The Phantasmagoric *Dispositif*: An Assembly of Bodies and Images in Real Time and Space," *Grey Room* 62 (Winter 2016), 46.

⁷² Noam M. Elcott, *Artificial Darkness: An Obscure History of Modern Art and Media* (Chicago and London: The University of Chicago Press, 2016), 11.

review from its conceptual origins to its perfection during the Second World War. In 1888, U.S. engineer Oberlin Smith speculated that electrically magnetized steel dust could record speech. Because Smith did not pursue his idea, the Danish inventor Valdemar Poulsen obtained a patent in 1900 for a steel wire device that stored and played magnetically encoded data. Transported over a playback head that translated the code into voltages, Poulsen's device reproduced sounds with surprisingly good fidelity.⁷³ In 1928, Fritz Pfleumer magnetized oxide-coated paper stock to invent bendable audiotape.⁷⁴ From 1931 to 1940, the German firms Allgemeine Elektrizitäts-Gesellschaft (AEG) and Badische Anilin und Soda Fabrik engineered first modern tape recorder. The Magnetophone, as it was called, stored sounds on a cellulose acetate material that could be wound onto playback and take-up reels. By magnetizing its recording head with an alternating current bias type, The Magnetophone drastically reduced tape hiss. It reproduced sounds so well that German radio started to broadcast pre-recorded music and, in a preview of things to come, took advantage of its relative portability to field-test it as a tool for gathering reportage.⁷⁵

The Magnetophone migrated from Germany to North America when U.S. army major John Mullin, perplexed by symphonic music he had heard at unusual times on German radio stations, toured a Frankfurt radio station after the war. There he discovered that the music he had listened to was not performed live but recorded on AEG's tape recorder. On the spot, he stole several Magnetophones he later exhibited at San Francisco Bay area engineering conferences. Ampex, a San Carlos, CA military contracting firm, bought Mullin's purloined Magnetophones

⁷³ Poulsen called his invention The Telegraphone. See Roland Gelatt, *The Fabulous Phonograph* (New York: McMillan Publishing, 1977), 115.

⁷⁴ Michael Chanan, *Repeated Takes: A Short History of Recording and its Effects on Music* (London & New York: Verso Books, 1996), 96. His patents were, however, later challenged. See Richard James Burgess, *The History of Music Production* (Cambridge: Cambridge University Press, 2014), 33.

⁷⁵ Friedrich K. Engel, "The Introduction of the Magnetophone," *Magnetic Recording: The First 100 Years*, edited by Eric D. Daniel, C. Dennis Mee, and Mark H. Clark (New York: The Institute of Electrical and Electronics Engineers, Inc., 1997), 62.

for the audiophile Harold Lindsay, an engineer who duplicated AEG's recording and playback heads. In 1948 Ampex demonstrated its copy to the popular singer Bing Crosby.⁷⁶ [Image 0.1a and 0.1.b] The host of a live-to-air radio program he performed twice each Sunday (once for Eastern audiences and again for listeners on the West coast), Crosby immediately recognized the labor-saving benefit of reproducing musical performances and bought twelve audiotape recorders for \$4,000 each, an investment that financed Ampex's research into helical scan and transverse videography.⁷⁷

On par with magnetic audiotape's impact on the separated auditory channel of the 1900 discourse network, after 1959 a wave of lightweight sixteen- and thirty-five millimeter film cameras revolutionized the moving image. In U.S.-made Auricons, Canadian Arriflexes, and French Éclairs, engineers replaced fragile vacuum tubes with tiny transistors; [Image 0.2] lightweight plastic gears and casings supplanted heavy, noisy metal film transports; and sensitive, low-light stock obviated types that required powerful stage lights.⁷⁸ Magnetic audiotape partially supplanted optical sound-on-film, the motion picture industry's universal standard for unifying sound and image from 1929 to 1955. Adapted from military ship-to-ship communications devices, optical recording translated acoustical sounds into voltages, enhanced the low level signal with a tube amplifier, translated it back into a photographed strip alongside of the image track, and then shone light onto that strip to activate the sounds stored on celluloid. [Image 0.3]

⁷⁶ John Leslie and Ross Snyder, "History of the Early Days of Ampex Corporation," paper for the Audio Engineering Society's Historical Committee, December 17, 2010, accessed on May 2, 2014 at: http://www.aes.org/aeshc/docs/company.histories/ampex/leslie_snyder_early-days-of-ampex.pdf

⁷⁷ Bing Crosby, *Call Me Lucky* (New York: Da Capo Press, 1953), 153-165.

⁷⁸ Jack C. Ellis and Betsy MacLane, *A New History of Documentary Film* (New York: Continuum, 2005), 210-11.

Unfortunately, optical sound offered poor fidelity and could not be synchronized in real time to the moving image track, a fact that substantiated Kittler's assertion that image and sound had been bifurcated. In fact, sound films made from 1929 to 1952 were completed by physically superimposing a "sound negative" over an image negative so that both could be re-photographed in a final print. While producers could substitute one actor's voice for another's or add Foley sound effects, it entailed a laborious process, multiple sound negatives, and hair trigger timing. In the 1950s, the introduction of magnetic sound-on-film improved soundtracks' fidelity and dynamic range, but offered no better image synchronization or editing capacities than optical sound.⁷⁹ It was not uncommon for projectionists to hand synchronize separate sound and image reels in this period using so-called countdown leader or frames numbered "8-7-6-5-4-3-2-1."

Magnetic audiotape facilitated the recombination of hearing and vision once filmmakers who used the new portable cameras began to record sounds *in-situ* with tape recorders that had also become lightweight. Able at last to record visual and auditory streams outside of a movie set, filmmakers spilled into streets like nineteenth century painters freed from having to mix pigments in the studio when readymade tubes of paint first appeared. Film documentarians in particular revised their working methods, wittingly or otherwise, to be in accord with Dziga Vertov's aim to capture unadorned reality. The U.S. filmmaker Robert Drew (1924-2014), for instance, who harbored the ambition to record reality objectively but lacked the funds to buy professional equipment or hire a film crew,⁸⁰ obtained technical assistance from Mitchell Bogdanowicz, a mechanical engineer who operated a New York City surveillance laboratory for

⁷⁹ Mark Mooney "The History of Magnetic Recording," *Hi-Fi Tape Recording*, Vol. 5 No. 3 (February 1958), 37.

⁸⁰ Nicholas Rapold, "Interview: Robert Drew," *Film Comment* (November 10, 2014), n.p., accessed on June 20, 2016 at <http://www.filmcomment.com/blog/interview-robert-drew/>

C.I.A. and F.B.I. activities.⁸¹ Obviously experienced at meeting Drew's needs, Bogdanowicz refitted his sixteen-millimeter Arriflex with a powerful zoom lens; a lightweight, plastic, and quiet film transport mechanism; a portable, rechargeable battery; and a crystal oscillator rigged to a quarter-inch reel-to-reel Nagra audiotape recorder to synchronize sound and image.⁸²

[Image 0.4] Used with sensitive film stocks, Bogdanowicz's modifications allowed Drew to film anywhere and at any time of day without a flotilla of stage lights announcing his presence or tangle-prone cables restricting his movements. Arguably the most important device in Drew's recording system, the Nagra audiotape deck obviated optical sound's most egregious limitations, particularly the steel camera encasements called "blimps" that silenced transports and non-directional steel ribbon microphones that picked up wind and crew noises. Magnetic audiotape's portability and fidelity in representation contributed as much to the viewer's sense of being-there as the visual track did in Drew's films. Noting sound's importance to establishing a believable *mise-en-scene*, film scholar Rick Altman wrote, "It is thus on the model of soundtrack practices that Hollywood's practice of *constructing* reality (as opposed to *observing* it) is based."⁸³

Infused with an unsettling realness by the handheld camera's kinetic imagery and an indisputably authentic soundtrack, Drew's first film with this recording system, *Primary*, 1960, documented U.S. senators John F. Kennedy and Hubert Humphrey vying for the Democratic Party's 1960 presidential nomination. [Image 0.5] While *Primary* commemorated their public speeches, it is more noteworthy for depicting the candidates relaxing in hotel rooms, riding in

⁸¹ "Mitchell Bogdanowicz was the technical genius who allowed us to change the gears in the camera from metal to plastic, which would make the camera quiet enough. Bogdanowicz was able to adapt the camera to take the zoom lens, and he engineered a device to change battery power. He had a studio in New York, which I think was mainly devoted to the CIA. It was rather a large place, and he wouldn't talk about the work he was doing for the government." Rapold, "Interview: Robert Drew," n.p., accessed on June 20, 2016 at <http://www.filmcomment.com/blog/interview-robert-drew/>

⁸² Rapold, "Interview: Robert Drew," n.p.

⁸³ Rick Altman, "The Evolution of Sound Technology," *Film Sound: Theory and Practice*, edited by Elisabeth Weis and John Belton (New York: Columbia University Press, 1985), 47.

automobiles, and preparing backstage to debate one another. Given Bogdanowicz's involvement, Drew's flirtation with the rhetoric of surveillance expanded the perceiver's sense of omniscience over the "real" and set a precedent productively elaborated upon by works by *cinéma vérité* and direct cinema films that followed on the heels of *Primary*.

Methodology

The methodology employed in this dissertation was to read the available publications, privileging artists' statements and writings whenever possible, gathering contextual details, and analyzing individual artworks. If any one recurring theme emerged as the most important, it was that artists employed technologically reproducible means in the 1950s and early '60s to render historical awareness vibrant and meaningful—the traditional work of allegory. And while their technologies were long ago superannuated by digitalization, this era is still relevant for artists who record, edit, and publish their works computationally, often with little understanding of predecessors' responses to the first wave of portable apparatuses to capture sounds and imagery as fixed data flows.

Chapter one analyzes auditory art Guy Debord and William S. Burroughs crafted in Paris, France with magnetic audiotape recorders. It opens with a discussion of earlier appropriation practices within the discourse network of 1900. Part one recounts Debord's participation in the Lettrist movement, formation of the breakaway Lettrist International from 1952 to 1957, and recounts the origins of *détournement*, the use of pre-existing materials to create art Debord practiced in his later films. This section reviews Debord's admiration for nineteenth-century Uruguayan-born author Isidore Ducasse, explains his remarkable works and catalytic influence upon Debord, and unpacks Debord's theorization of *détournement* in a 1956 article published in the Belgian surrealist journal *Les Levres Nues*. Finally, it analyzes Debord's infatuation with

auditory culture and analyzes his only known work of art for radio, *Educative Value*, 1954. Part two explores the cut-ups method of Williams S. Burroughs. It follows cut-ups' development between 1959 and 1964 from Burroughs's interest in vocalization, virology, homosexuality, addiction, and telepathy, which feature as key metaphors in Burroughs's novels *Junky*, 1953 and *Nova Express*, 1964. It then reads the largely unexamined experimental poetry he wrote with appropriative methods and published in 1960. The goal was to carefully explain how Burroughs transferred his longstanding interest in the voice into the domain of technological reproducibility. Borrowing theoretical concepts from Steven Connor's study on ventriloquism, this section grasps Burroughs's fascination voice as an attempt to understand its operations at the seat of individual identity and a site where nefarious forces could exert control over both the individual and the collective. This section concludes with a detailed analysis of *Hankderchief Masks*, 1964, an auditory collage that intervened in the slanted reportage of news and information Burroughs perceived in reportage broadcast over the radio.

Chapter two exhumes the experimental art music of Richard Maxfield, a composer whose energetic participation in New York City's downtown arts scene from 1958 to 1962 has been overlooked. Evidently, Maxfield's excursions to Europe in 1954 and 1956 placed him in close proximity to radio and sound recording studios where signal generators and audiotape recorders were being implemented as standard equipment; the indicated was clear: both the composition and performance of music could soon be entirely automated with significant consequences to a longstanding, conservative patronage system of cultural production. This chapter hones in on Maxfield's attempts to negotiate a role for a performing agency within electronically automated music and addresses his work's dalliances with cryptography, information theory, and modern physics. It examines the influence of chance operations on Maxfield's art practice after he met

John Cage's associate David Tudor. Since Maxfield's computational, archival, and electronic processes are wholly unrecognized in art history, musicology, or sound studies, this chapter restores recognition of his lost art music by detailing the compositional methods he disclosed in a lengthy 1960 interview, analyzing articles he published in 1962, and by gathering recollections of his peers Christian Wolff, La Monte Young, Walter de Maria, David Behrman, Alvin Lucier, and Robert Morris.

Chapter three evaluates two works by the Irish modernist author Samuel Beckett that feature technological reproducibility. The first of these, the play *Krapp's Last Tape*, 1958, envisioned a future when magnetic audiotape had become an adjunct to memory that, intentionally or not on the author's part, paralleled the claims of memory scientists in the 1940s and '50s. This chapter notes that by 1954 magnetic audiotape was both a sound recording technology associated with audiophile culture *and* a computational affordance in use with so-called electronic brains, i.e., machines expected to exhibit agency or perform intelligent feats. Registering the impact of recording and computational technology on Beckett and other artists, this section reads *Krapp's Last Tape* in light of Alain Resnais's film *Tout la Mémoire du Monde*, 1956, which had aimed to represent computational forms of memory. Part two considers the likelihood that Beckett's other foray into the subject of technological reproducibility, a moving image work entitled *Film*, 1964, cast a cold eye on recording's capacity to disclose aspects of one's personal life. Set in the year 1929, *Film* reprised several landmark works of cinema completed that year, notably Dziga Vertov's *Man With a Movie Camera* and Buster Keaton's *The Cameraman*. While set in the past, this section evaluates *Film* as an allegory of post-1960 cinematic practice that aggressively pursued the "real" with the new recording technologies filmmakers had at their disposal. The camera's pursuit of *Film*'s lead character, who conceals his

face from both the apparatus and the audience, supplied an apt metaphor for a time and place where all activity might be subjected to visual recording and surveillance. In this connection, *Film* spotlighted recording's capability to violate the modern individual's expectations of privacy and self-determination. The last section of chapter three offers a reading of one work Beckett likely objected to, Edgar Morin and Jean Rouch's film *Chronicle of a Summer*, 1961, which aimed to capture intimate social relationships with recording apparatuses that reunified sound and vision to depict the experiential realities of young Parisian residents. And although Morin and Rouch tried to foster recognition and cooperation between individuals from different walks of life, *Chronicle of a Summer's* abject failure to accomplish its goal provides an excellent platform for grasping Beckett's intentions in *Film*.

While conclusions are reached throughout, a short coda considers recording's role in artist-constructed realities that offered alternatives to the disagreeable social and political realities they confronted, revisits the question of computational agency, and summarizes the value of analogue recorded objects and artistic techniques for contemporary artists who are often prepossessed by a surplus of faith in computational tools' power to remember, think, and create.

I benefitted greatly from the guidance of my advisor Andrew Uroskie and my committee member Brooke Belisle, Jacob Gaboury, Noam M. Elcott. I am also grateful for the mentoring Anita Moskowitz and Joseph Monteyne offered at Stony Brook University. This dissertation's shortcomings are my responsibility, not those who displayed enormous patience and generously offered advice.

Chapter 1, *Détournement* and Cut-up: Auditory Suturing in the Saint Germain-des-Prés, 1954-60

One can dispute whether the aural world alone is rich enough to give us lively impressions of our life, but if one agrees, even with reservations, no further doubt is possible that the visual must not be smuggled in by the listener's power of imagination. Statues must not be subsequently be given a coating of fresh tints, and a wireless broadcast must not be envisaged.

--Rudolph Arnheim, 1936

As if anticipating Friedrich Kittler's claim that the cinema and phonograph bifurcated vision and hearing, at the turn of the twentieth century artists appropriated moving images and recorded sounds differently, quickly diverting pre-existing films into narratives far afield from their original contexts and intended meanings.⁸⁴ By the mid-1920s U.S. film archives housed upwards of five million feet of indexed newsreels,⁸⁵ but as prices for this "stock footage" rose beyond the means of independent artists, art-minded appropriation dwindled.⁸⁶ In the Soviet Union, however, the film editor Esfir Shub (1894-1959) combined newsreels and Czar Nicholas II's home movies at Moscow's Goskino movie studio into *The Fall of the Romanov Dynasty*, 1927, a suture film that rivaled the method and sophistication of a John Heartfield photomontage. And while Henri Storck, Hans Richter, and Luis Buñuel made Shub-inspired films between 1929 and '36, no artist produced comparable appropriation-based works in the auditory channel. Walter

⁸⁴ Already in 1898, a Lumier Brothers representative touring Russia, Francis Doublier, satisfied Jewish cinema patrons' demand for moving images of the Dreyfus Affair, named for a French military officer who was exiled on spurious accusations of treason motivated by anti-Semitism. Sensing an opportunity, Doublier cobbled together scenes of a French military captain leading a parade, Parisian streets, a tugboat *en route* to a nearby barge, and images of Egyptian's Nile delta. Soon, crowds flocked to see a film that Doublier claimed showed Dreyfus prior to his arrest, the Palais de Justice where he was court-martialed, his escort to a waiting battleship that transported him to French Guiana, and, finally, Devil's Island, the destination of his exiled. Similarly, in 1902 U.S. director Edwin S. Porter amplified the pathos of footage shot of firemen by cutting in sequences from a different film of a woman and her children who were trapped in a burning building but rescued at the last minute. Jay Leyda, *Films Beget Films* (New York: Hill and Wang, 1964), 13-14.

⁸⁵ Richard Maran Balsam, *Non-Fiction Film: A Critical History* (Bloomington, IN: University of Indiana Press, 1992), 18 and 32.

⁸⁶ Leyda, 37-8.

Ruttmann's imageless film *Weekend*, 1928, came the closest to a suture,⁸⁷ but Ruttmann's disruptive editing style drew the listener's attention to the author's hand instead of suppressing her awareness of it, as a suture invariably does.

Meanwhile, as the economic collapse of 1929, the arrival of sound cinema, and the Second World War refocused artistic and industrial priorities, time-based appropriation faded into obscurity—but not indefinitely, for as this chapter will argue, artists attempted to suture in the cinema with optical- and magnetic sound-on-film recording technologies. Their failure to do so, however, led to the emergence of auditory suturing between 1954 and '64 in Paris's Saint-Germain-des-Prés neighborhood, where Guy Debord and William S. Burroughs, best known for their activities in politicized post-1945 avant-garde art groups the Situationist International and the Beat Generation, developed complex suture-based theories and artworks. Although crafted with small magnetic audiotape recorders to intervene in the ideological biases of contemporary journalism and radio newscasts, their auditory sutures forecast future aesthetic practices that remain relevant, if not crucial, for contemporary artists who use digital recording devices.

Suture Selves: Working Around the Bifurcated Discourse Network at Mid-Century

While it may seem that the arrival of optical- and magnetic-on-film might have facilitated artistic experimentation, these technologies actually limited appropriation practice, a fact that may be gleaned by reading attempts to craft audiovisual sutures at the mid-point between the 1900 and 2000 networks. First of all, Luis Buñuel claimed that he re-edited Leni Riefenstahl's *Triumph of the Will*, 1935, and Hans Bertram's pro-Nazi documentary about Germany's invasion of Poland *Baptism by Fire*, 1940, into a new sound film that ridiculed prominent Nazis.⁸⁸ “Since

⁸⁷ Walter Ruttmann, *Weekend* (1994; Fontaine, France: Metamkine, 1928), Compact Disc.

⁸⁸ Leyda, 50.

my German was nonexistent,” Buñuel wrote of this project, completed while working in exile at New York City’s Museum of Modern Art,

I was given an assistant and went to work, trying to preserve some continuity in the speeches of Hitler and Goebbels and still making some significant cuts. Ideologically, of course, the films were horrific, but technically they were incredibly impressive. [...] The cutting and editing went well and the abridged versions were widely shown, particularly to senators and consulates. René Clair and Charlie Chaplin rushed to see them and had totally different reactions. “Never show them!” Clair said, horrified by their power. “If you do, we’re lost.” [¶] Chaplin, on the other hand, laughed, once so hard he actually fell off his chair.⁸⁹

Wringing peals of audience laughter from precision-edited moving images fixed to an optical soundtrack posed special challenges. First of all, since optical sound technology permitted no amplitude changes, changes in amplitude could not be fixed, and neither could Buñuel employ multi-tracking, erasing, or overdubbing. Perhaps worst of all, cutting speech from one image sequence and adjoining it to another with hair-trigger timing to maintain a coherent phraseology was extremely difficult with optical sound-on-film. Effective suturing invariably matches recorded speech to images precisely, or the artist risks discombobulating the perceiver’s belief in the work’s evidentiary value. Buñuel’s assistant may have been a talented editor, but the 1900-era technology at his or her disposal frustrated efforts to suture in both channels at once. In the more likely scenario, Buñuel recorded actors performing from a script onto a sound negative and then combined it with a sutured image track in a new print. How else might the speech of Nazis have tickled the funny bones of senators and diplomats who spoke no German?

The difficulty of matching sounds with moving images led suture-minded artists to edit in either the visual or the auditory channel, but not in both simultaneously. The initial scenario Guy Debord wrote for his first film *Hurlements en faveur de Sade*, 1952, initially conceived as an

⁸⁹ Luis Buñuel, *My Last Sigh: The Autobiography of Luis Buñuel* (New York: Vintage, 2013 [1983]), 179-80.

moving image appropriation of marching armies, rioting, youths, the Cluny Museum's facade, boxing matches, and parachutists wedded to an intricate soundtrack of speech, music, and noises never got made.⁹⁰ Whether the format proved too difficult, costly, or proved aesthetically deficient, Debord reduced *Hurlements*' complex imagery to sections of black and white film leader and focused on the soundtrack. When white leader illuminates the screen, the projection space, and the audience, recorded voices enunciate a dialogue Debord appropriated from a number of texts. Apparently disappointed with the results of this initial foray into appropriation, in 1978 he decried *Hurlements*' soundtrack as "those miserable phrases"⁹¹ as if acknowledging that his use of the technique was not yet fully matured in 1952.

Similarly, Bruce Conner's *A Movie*, 1958, may be read as an index of how magnetic sound-on-film technology also thwarted multichannel suturing. Conner tips the perceiver off to this after the opening credits by introducing countdown leader, a contrivance developed when, image and sound tracks were kept on separate reels. Countdown leader helped the projectionist synchronize the sound reel to the moving image reel. Its appearance in *A Movie* was, however, an absurdity because music is already playing when it appears on-screen. An additional indication of the difficulty of suturing both tracks at once is that Conner excluded the original audio from newsreels, B-movies, novelty films, and soft-core pornography that comprise *A Movie*'s imagery of human folly and failure. He then pasted a recording of Ottorino Respighi's emotionally ebullient symphonic work *Pines of Rome*, 1924, to impose a sense of continuity for the viewer who might otherwise notice the technological separation of imagery and sounds.

⁹⁰ Guy Debord, "Hurlements en faveur de Sade," *Ion: Centre de Création* #1 (April 1952), 219-30.

⁹¹ Debord, *In girum imus nocte et consumimur igni*, trans. by Lucy Forsyth and Michael Prignet (London: Peligan Press), 35. An in-depth treatment of the earlier film is beyond the scope of the present essay.

Inverting Debord's deletion of images from the cinema by deleting sounds and keeping the images, *A Movie* exemplified another method for suturing in the channelized discourse network.

Part I—On the Origins of *Détournement*: Guy Debord's Historical Menagerie, 1954-1956

By the mid-1950s, however, small, affordable magnetic audiotape recorders offered artists a new and personalized format to experiment in the auditory channel. After a raucous screening of the imageless *Hurléments en faveur de Sade* at the Musée de l'Homme in 1952,⁹² Debord did not make another film for seven years and focused his energies on sound recording. Neither his films nor sound experiments received art historical attention during his lifetime for several reasons.⁹³ First of all, beyond a photo collage credited to him, perhaps apocryphally,⁹⁴ Debord created few works with traditional fine art media. Second, he intransigently opposed the notion of aesthetics as a domain separated from everyday life's surfaces, spaces, and events, even during his most intensive involvements with art between 1951 and 1961, after which he expunged most of the professional artists from his circle and directly pursued more political objectives.⁹⁵ A third factor in Debord's anonymity was his announced withdrawal from public

⁹² Thomas Y. Levin, "Dismantling the Spectacle: The Cinema of Guy Debord," *On the Passage of a Few Persons Through a Rather Brief Moment in Time: the Situationist International, 1957-1972*, edited by Elisabeth Sussman (Cambridge and Boston, MA: MIT/Institute of Contemporary Art, 1989) 82-3.

⁹³ Besides the exhibition catalogue *On the Passage of a Few People*. See also *October* #102 (Winter, 1997), see *Debord and the Situationist International*, edited by Thomas F. McDonough (Cambridge, MA: MIT Press, 2002); *October* #115 (Winter 2006); Thomas F. McDonough's "*The Beautiful Language of My Century*": *Reinventing the Language of Contestation in Postwar France, 1945-1968* (Cambridge: MIT Press, 2007); and Mackenzie Wark, *The Beach Beneath the Street: The Everyday Like and Glorious Times of the Situationist International* (New York: Verso Books, 2011) and Mackenzie Wark, *The Spectacle of Disintegration: Situationist Passages out of the 20th Century*, (New York: Verso 2013).

⁹⁴ Entitled "Time Passes, in Fact, and We Pass Away with It," this work is reproduced in Roberto Ohrt, *Phantom Avantgarde: Eine Geschichte der Situationistischen Internationale und der modernen Kunst* (Hamburg: Editions Nautilus, 1997), 90.

⁹⁵ As late as 1963 Debord wrote an essay for a Danish art exhibition, noting "it should be clear that when we speak of a unified version of art and politics, this absolutely does not mean that we are recommending any sort of subordination of art to politics," Guy Debord, "The Situationists and the New Forms of Action in Politics and Art"

life in 1972, after he disbanded the Situationist International (S.I.), an avant-garde group he led since its founding in 1957:

Never have we been seen mixed up with the business, the rivalries and the frequentations of the most leftist politicians or the most advanced intelligentsia. And now that we can flatter ourselves with having acquired the most revolting celebrity, we will become *even more inaccessible*, even more clandestine. The more our theses become famous, the more we will ourselves be hidden.⁹⁶

Debord's unwelcomed celebrity stemmed from the S.I.'s participation in France's May 1968 student-worker uprising, during which its members guided the Sorbonne's occupation committee and appropriated comic strips, posters, and slogans that figured prominently in the insurrection's visual culture. Debord called this artwork *détournement*, i.e., "diversion" with "subversion" intended as a secondary meaning, and it exemplified what has been described as a paradigm shift in art production after 1945 from facture-based representation to presentational strategies.⁹⁷

Indicative of the S.I.'s desire to perpetuate an image of itself as May '68's singularly authentic revolutionaries, Debord's 1972 withdrawal in no way predicted the more pronounced retreat he undertook after March 7, 1984, the day his friend, publisher, and benefactor Gérard Lebovici, a film producer associated with actors Jean-Paul Belmondo, Gérard Depardieu, and Catherine Deneuve, was assassinated in a Paris parking garage. [Image 1.1] The murder inspired a series of articles in the popular press insinuating that Debord, whom many journalists viewed as a Mephistophelian presence in Lebovici's otherwise forthright career, had ordered the murder. Incensed by the accusations, Debord withdrew all six of his films from circulation, promising to

in *Destruction of RSG-6: en kollektiv manifestation af Situationistisk internationale* (Odense, Denmark: Galerie EXI, 1963), 11.

⁹⁶ Guy Debord and Gianfranco Sanquinetti, *The Veritable Split in the International, Public Circular of the Situationist International* (London: B.M. Chronos, 1990 [Paris: Editions Gérard Lebovici, 1972]), 76.

⁹⁷ See Kristine Stiles, "Language and Concepts, Introduction" in *Theories and Documents of Contemporary Art*, edited by Kristine Stiles and Peter Seltz (Berkeley: University of California Press, 1996), 804-16.

never allow them to be shown again. Beleaguered by a painful case of polyneuritis, he died on November 30, 1994 by means of a self-inflicted gunshot in his Champot farmhouse in the Upper Loire.

The Lettrist International Years: The Origins of *Détournement*

Although remembered for re-captioned cartoons read by thousands of students and workers during the *événements* of '68, *détournement* enjoyed a lengthy gestation in the 1950s. As an eighteen-year old who relocated in 1951 to Paris from Pau, a small city located in the *cote d'azur*, Debord participated in Isidore Isou's Lettrist avant-garde art movement, which produced pictorial works, philosophy, poetry, and films of great rawness and vitality that, however, underwhelmed art and literary critics. "Where Existentialism has done a conscientious job of clearing the ground and digging the foundations for new constructions," Roger Shattuck observed in 1948, "Lettrism has simply thrown up a shack,"⁹⁸ a harsh statement corroborated by Eugene Jolas, Pierre Boulez, and Henri Lefebvre.⁹⁹ Although its poetry derived largely from Russian Zaum and Italian Futurism, Lettrist writing influenced Concrete poetry and its films cast a lengthy shadow over post-1945 experimental cinema.¹⁰⁰ Lettrists integrated performance art, poetry, and films that, as newer scholarship has shown, provide a link between the pre and post-

⁹⁸ Roger Shattuck, "Paris Letter," *Accent* Vol. 9, No. 1, 1948, 52.

⁹⁹ Isou's "style is frequently obscurantist and the author occasionally indulges in the pseudo-philosophical verbiage that is the plague of modern critical writing," Eugene Jolas. "From Jabberwocky to Lettrism" in *Transition* Vol. 48, No. 1 (January, 1948), 105. Describing a Lettrist's disruption of a musical lecture by asking about jazz be-bop, Boulez wrote to John Cage, "The gentleman in question was a *poète lettriste* [...] I was crimson with rage, and I threw the worst insults I could think of at them," "Letter from Pierre Boulez to John Cage, April 1950" in *The Cage-Boulez Correspondence*, trans. and ed. by Robert Samuels (Cambridge and New York: The Cambridge University Press, 1993), 88. And Henri Lefebvre recalled of Lettrists: "They had ambitions on an international scale. But that was all a joke. It was evident in the way that Isidore Isou would recite his Dadaist poetry made up of meaningless syllables and fragments of words," cited in *October* #79, edited by Thomas F. McDonough (Winter, 1997), 72.

¹⁰⁰ U.S. filmmakers Stan Brakhage and Kenneth Anger, for instance, attended screenings by Isou, Maurice Lemaitre, Gil J. Wolman, and most likely, Debord. In 1974, U.S. film archivist Robert Haller wrote to Jonas Mekas of *Treatise on Slime and Eternity*, "We find it extraordinary that there is no mention at all to speak of in any publications on avant-garde film." "Letter from Haller to Mekas, May 22, 1974," Located by the author at Anthology Film Archives, July 2005.

World War Two avant-gardes and, in certain ways, anticipated Allen Kaprow's Happenings by nine years, Warhol's Exploding Plastic Inevitable by thirteen years, and Fluxus artist Dick Higgins's "Statement on Intermedia," 1966, by an astounding fourteen years.¹⁰¹

Although his brief association with Isou was important, Debord made rapid conceptual advances in articulating a theory of *détournement* after striking out on his own as leader of the confusingly entitled Lettrist International group (L.I.). His initial investigations with the L.I. alternated between the haptic and the literary. As far as the first of these was concerned, the L.I. practiced the *dérive*, an updated form of *flânerie* meant to shed conventional habituations, with psychical results thought to parallel those achieved through psychoanalysis.¹⁰² More germane to understanding *détournement*, Debord's literary investigations involved stylistic and historical analyses. In the key 1955 article "Why Lettrism?" he and co-author Gil J. Wolman noted that Roger Vailland's novel about labor strife at a modern French factory, *Beau Masque*, 1954, written in the psychological prose style of Stendhal's nineteenth-century novel *The Red and the Black*, 1830, set up a allegorical correspondence between the July 1830 revolutionary disorder and war-disheveled French society in the mid-1950s.¹⁰³ In the same article, Debord wrote of his infatuation with *préciosité*, the eloquent speech and refined manners practiced in seventeenth-

¹⁰¹ See, for instance, Kaira M. Cabanas, *Off-Screen Cinema: Isidore Isou and the Lettrist Avant-Garde* (Chicago: University of Chicago Press, 2014) and Andrew Uroskie, "Beyond the Black Box: The Lettrist Cinema of Disjunction" *October* #135 (Winter 2011), 21-48.

¹⁰² "The *dérive* (with its flow of acts, its gestures, its strolls, its encounters) was *to the totality* exactly what psychoanalysis (in the best sense) is to language." Ivan Chtcheglov, *Situationist International Anthology*, 372. Rebecca Solnit's *Wanderlust: a History of Walking* (New York: Viking, 2000) and Lori Waxman's *Keep Walking Intently: The Ambulatory Art of the Surrealists, Situationist International, and Fluxus* (Berlin and New York: Sternberg Press, 2017) offer fine historicizations of walking and twentieth century art.

¹⁰³ [...] when Roger Vailland wrote "Beau Masque" in a Stendalian tone, despite its almost estimable content, it had only a passing chance of pleasing as a prettily done pastiche. That is to say, he, no doubt contrary to his intentions, addressed himself to intellectuals with outdated tastes. And the majority of criticism that foolishly attacked the content, praised the prose style.

Guy Debord and Gil J. Wolman, "Why Lettrism?" *Potlatch* #22 (1955), translated by Luther Blisset and available at <http://www.cddc.vt.edu/sionline/presitu/whylettrism.html>, accessed on July 24, 2005.

century literary salons, apprehending, once again, that a bygone temporality might reawaken the consciousness of history in the present time.¹⁰⁴ By late 1955, the allegorically inclined Debord looked to the world beyond literature, proposing to relocate equestrian sculptures to an isolated desert location, undermining their exhibitionary value and changing their meanings:

When global resources have ceased to be squandered on the irrational enterprises that are imposed on all of us today, all the equestrian statues of all the cities of the world [should] be assembled in a single desert. This would offer to the passersby—the future belongs to them—the spectacle of an artificial cavalry charge, which could even be dedicated to the memory of the greatest massacres of history, from Tammerlane to Ridgeway. Here we see reappear one of the main demands of this generation: Educative Value.¹⁰⁵

Relocating war statuary to a remote *cordon sanitaire* benefited the lives of urban environments they were removed from, as would a later action conceived by Debord's circle to commemorate worthier figures with statuary put back into prominent public spaces.¹⁰⁶

While indicative of Debord's intellectual precocity, neither the *dérive* nor the literary conjectures about style, nor even the public sculpture proposal predicted the breakthrough that came in 1956. In that year, a new article by Debord and Wolman offered an insightful theory of *détournement* that expounded on its origins and meaning with clarity. "Art," they wrote, "can no longer be justified as a superior activity, or even as an activity of compensation to which one could honorably devote oneself."¹⁰⁷ As Debord's equestrian proposal had implied, all cultural traditions should be cannibalized to launch a revolution against alienation. "In fact," they wrote

¹⁰⁴ Debord and Wolman, "Why Lettrism?" Debord's Vailland, Stendhal, the *mouvement précieux*, and Georges Bataille are discussed at length in my M.A. thesis "On the Origins of *Détournement*: Guy Debord's Historical Menagerie," (University of Pittsburgh, 2005).

¹⁰⁵ Guy Debord, "Introduction to a Critique of Urban Geography," *Situationist International Anthology*, translated and edited by Ken Knabb (Berkeley: Bureau of Public Secrets, 1981), 7-8.

¹⁰⁶ On March 10, 1969, a group of Situationists returned a plaster copy of a statue of Charles Fourier to its plinth in the Place Clichy, which had remained empty since the removal of its original incarnation by the Nazis. "Never before has the technique of *détournement* reached such a domain," read an unsigned editorial published in the Situationist journal. "The Return of Charles Fourier," *International Situationist #12* (September 1969), 97.

¹⁰⁷ Guy Debord and Gil J. Wolman, "Methods of *Détournement*," *Situationist International Anthology*, 8.

of art and literary authorship, “it is necessary to finish with any notion of personal property in this area. The appearance of new necessities outmodes previous ‘inspired’ works.”¹⁰⁸ To further clarify that *détournement* was first and foremost a political weapon, Debord and Wolman rooted their surging aesthetic radicalism in an underexplored aspect of modern poetry.

The discoveries of modern poetry regarding the analogical structure of images demonstrate that when two objects are brought together, no matter how far apart their original contexts may be, a relationship is always formed. Restricting oneself to a personal arrangement of words is mere convention.¹⁰⁹

The reference here was, of course, to the analogy in the Comte de Lautréamont’s novel *Songs of Maldoror*, 1868, “as beautiful as the chance meeting on a dissecting-table of a sewing-machine and an umbrella.”¹¹⁰ It bears noting that the construction “as beautiful as” in Lautréamont’s prose operated somewhat differently than an analogy typically does: rather than establish logic-bound equivalences, it levels distinctions between binary opposites like “beauty” and “ugliness.”¹¹¹ This eccentricity of style was no accident, but a purposeful subversion of language applicable to many artistic contexts and media. It explained to some degree the fluidity of media and authorship in Heartfield’s suture technique, which reversed photographic portraits intended as propaganda into still-image visual narratives that implicated important Nazis in criminal activities. As the literary scholar Alex de Jonge has put it: “Lautréamont is concerned first and last with the impact of the media on the individual consciousness, and with the nature of the distortions that they create. The fact that he wrote long before the creation of the global village

¹⁰⁸ Debord and Wolman, *Situationist International Anthology*, 9.

¹⁰⁹ Debord and Wolman, *Situationist International Anthology*, 9.

¹¹⁰ Comte de Lautréamont [Isidore Ducasse], *Maldoror and the Complete Works*, trans. by Alexis Lykiard (Boston: Exact Change Press, 1994 [1868]), 193.

¹¹¹ Referring to a young man who prowls the streets of Paris at night, the entire quote reads “He is as [beautiful] as the retractability of the claws of birds of prey; or again, as the uncertainty of the muscular movements in wounds in the soft parts of the lower cervical region; or rather, as that perpetual rattrap always reset by the trapped animal, which by itself can catch rodents indefinitely and work even when hidden under straw; and above all, as the chance meeting of on a dissecting-table of a sewing-machine and an umbrella!” Comte de Lautréamont, *Maldoror and the Complete Works*, 193.

should deceive no one. The poetry of Lautréamont is some of the most media-conscious work ever written.”¹¹² The subverted analogical relationship, while key to *détournement*, was not the only tactic Debord borrowed from Lautréamont.

The other tactic was the advocacy of plagiarism. In this connection, the more important of Lautréamont’s books to *détournement*’s evolution was not *Maldoror* but *Poésies*, 1870, which he published under his birth name, Isidore Ducasse (1846-70), shortly before he died at age twenty-four during the Paris Commune, probably of consumption or starvation. Presented as a piece of literary criticism, *Poésies* brims with ethical maxims written by Vauvenargues, Pascal, Chateaubriand, and other Classical seventeenth-century French writers. But rather than simply copy their outworn styles, clichés, and postures word-for-word, Ducasse treated their texts as readymade material for revision so that, afterword, they conveyed surprising new meanings. “An assistant schoolmaster could,” Ducasse wrote of this method, “manufacture a literary outfit for himself by stating the contrary of what the poets of this century have said. He would replace their affirmations with negations. And vice versa.”¹¹³ Here was a set of objects upon which analogical reversals and stylistic alterations could be performed, and *Poésies*’ best-known aphorism programmatically expressed this very idea: “Plagiarism is necessary. Progress implies it. It closely grasps an author’s sentence, uses his expressions, deletes a false idea, replaces it with the right one.”¹¹⁴ Beyond the extremely clear literal meaning, however, lay a formidable subtext that may be comprehend only by comparing Ducasse’s revision with the aphorism as the Marquis de Vauvenargues (1715-1747) actually wrote it. It reads, in fine *grand siècle* style,

¹¹² Alex de Jonge, *Nightmare Culture: Lautréamont and the Cult of Maldoror* (London: Creation Books, 2006 [1973]), 157.

¹¹³ Comte de Lautréamont, *Maldoror*, 235-236.

¹¹⁴ Comte de Lautréamont *Maldoror*, 240.

We ought never to be afraid to repeat an ancient truth, when we feel that we can make it more striking by a neater turn, or bring it alongside of another truth, which may make it clearer, and thereby accumulate evidence. It belongs to the inventive faculty to see clearly the relative state of things, and to be able to place them in connection, but the discoveries of ages gone by belong less to their first authors than to those who make them practically useful to the world.¹¹⁵

Although the finer stylistic points are lost on the Anglophone reader, Ducasse's transformation of Vauvenargues' prose into its facile, modern cognate is considerably weirder than it appears. For one thing, the revision deletes the classical French locution's insistence that truth emerges only through the self-conscious apperception of historical eras. Very subtly, Ducasse's translation attacked the modern belief in progress held by individuals who had lost "the inventive faculty" to see empirical reality clearly and connect it to the past. This was, after all, how Debord valued both *préciosité* and *Beau Masque*. In other words, the seventeenth century's apperception had yielded to modern functionality; but the message is all the more clever for embodying in its very form the loss of Vauvenargues' major point. What appears to be an improvement on the past is actually a radical critique of what is lost when trying to do so, e.g. historicity and apperception.

Taking as its title a literary term outmoded in the nineteenth-century, *Poésies* was no academic study of poetics, but an exposé of modernity masquerading as an old-fashioned book of theory that taught Debord how to glean fluidity and humor with analogical and stylistic reversals. Indeed, just as Raymond Roussel's similarly untranslatable, punning, and deeply weird *Impressions of Africa*, 1910, had inspired Marcel Duchamp to stop painting and make art in and

¹¹⁵ *Il ne faut pas craindre non plus de redire une vérité ancienne, lorsqu'on peut la rendre plus sensible par un meilleur tour ou la joindre à une autre vérité qui l'éclaircisse et former un corps des raisons. C'est le propre des inventeurs de saisir le rapport des choses, et de savoir les rassembler, et les découvertes anciennes sont moins à leurs premiers auteurs qu'à ceux qui les rendent utiles.*

Marquis de Vauvenargues, *Familiar Quotations from French and Italian Authors*, edited by Cauford Tait Ramage (New York: George Routledge and Sons, 1904 [1847]), 357.

through language,¹¹⁶ Ducasse's criticisms alerted Debord to the mediating role of language in social conventions that tidily separated dichotomies like lawful and criminal, cause and effect, similarity and difference, and originality and plagiarism. It soon followed that *détournement*, as Debord and Wolman wrote,

leads to the discovery of new aspects of talent; in addition, clashing head-on with all social and legal conventions, it cannot fail to be a powerful cultural weapon in the service of a real class struggle. The cheapness of its products is the heavy artillery that breaks through all the Chinese walls of understanding. It is a real means of proletarian artistic education, the first step toward a *literary communism*.¹¹⁷

As Roland Barthes was engaging in the semiotic analysis of popular culture, the L.I.'s members viewed their cultural heritage as a coded substrate that traversed class and educational barriers, and, for these reasons, supplied a reservoir of fine material for forging resistive consciousness.

Debord and Wolman attacked individuals who misapprehended Ducasse's methods and therefore stood no chance of grasping *détournement* and, at the same time, rejected those who defended Ducasse because he appeared to embody the presumed insolence of a *poète maudit*. A journalist for the newspaper *Figaro* who discovered that *Songs of Maldoror* contained rewritten quotations from the nineteenth-century scientist Georges Buffon's forty-volume *Natural History*, 1849-88, then ridiculed it for lacking authorial integrity received a special condemnation.

Viroux caused considerable astonishment three or four years ago by demonstrating conclusively that *Maldor* is one vast *détournement* of Buffon and other works of natural history, among other things. That the prosaists of *Figaro*, such as Viroux himself, were able to see this as a justification for disparaging Lautréamont, and that others believed they had to defend by praising his insolence, only testifies to the intellectual disability of these two camps of dotards in courtly combat with each other.¹¹⁸

¹¹⁶ James Housefield, *Playing With Earth and Sky: Astronomy, Geography, and the Art of Marcel Duchamp* (Lebanon, NH: Dartmouth College Press, 2016), 68-9

¹¹⁷ [Emphasis in original.] Debord and Wolman, *Situationist International Reader*, 11.

¹¹⁸ Debord and Wolman, *Situationist International Reader*, 9-10.

Despite their youthfulness and lack of postsecondary education, Debord and Wolman's critique of those who defended Ducasse's was, in dialectical terms, a perfect negation of the negation.

Unwilling to confine their criticisms to journalistic debates, Debord and Wolman assailed avant-garde art that seemed to express affinities with *détournement*:

Duchamp's drawing of a mustache on the *Mona Lisa* is no more interesting than the original version of that painting. We must now push this process to the point of negating the negation. Bertolt Brecht, revealing in a recent interview in the magazine *France-Observateur* that he made some cuts in the classics of the theater in order to make the performance more educative, is much closer than Duchamp to the revolutionary orientation we are calling for. We must note, however, that in Brecht's case these salutary alterations are held within narrow limits by his unfortunate respect for culture as defined by the ruling class—that same respect, taught in the primary schools of the bourgeoisie and in the newspapers of the workers parties, which leads the reddest worker districts of Paris always to prefer *The Cid* over *Mother Courage*.¹¹⁹

The readymade succumbed to the same aestheticism it should have disrupted; Brecht's salutary didacticism, by adhered to bourgeois forms, lost its audience to commercial films; and Surrealist automatic writing was simply boring. Whether all art was *a priori* ideological, as Debord and Wolman seemed to imply, in 1956 *détournement* aimed for greater political results than, for instance, twenty-first century preoccupations with copyright law, the situational interactions that have been valorized as Postproduction Art, or the recent periodization of contemporaneity.¹²⁰

Beyond the assault on journalists and the historical avant-garde, Debord and Wolman displayed an unusual sensitivity for *détournement*'s applicability in recording and broadcasting technologies that, although not new in 1956, were starting to impact daily life in accelerated and

¹¹⁹ On Surrealism, they looked forward to "above all an ease of production far surpassing in quantity, variety and quality the automatic writing that has bored us so much." Debord and Wolman, *Situationist International Anthology*, 11.

¹²⁰ For an introduction to the debate on appropriation in contemporary art, see *Dear Images: Art, Copyright and Culture*, edited by Daniel McClean and Karsten Schubert (London: Ridinghouse and ICA, 2002) and Nicolas Bourriaud, *Postproduction: Culture as Screenplay*, ed. by Caroline Schneider; trans. by Jeanine Herman (New York: Lukas & Sternberg, 2000). On contemporaneity, see Terry Smith, *The Contemporary Composition* (Berlin: Sternberg Press, 2016).

novel ways. Although scarcity ruled the immediate post-war years, by 1952 politicized Marshall Plan aid from the U.S. jumpstarted a burgeoning industrial economy soon to flood its own markets with washing machines, refrigerators, and inexpensive Renault automobiles. Similarly commodified cinematic, radiophonic, and televisual entertainments also emerged in droves.¹²¹

And while allegories of temporality and style, redeployments of equestrian sculpture, and Ducasse's methods all figured into its theorization, by 1956 Debord announced the arena where *détournement* might be let loose, "it is undoubtedly in the realm of the cinema that *détournement* can attain its greatest efficacy, and undoubtedly, for those concerned with this aspect, its greatest beauty."¹²² It appears, however, that, at least from 1952 to 1958, Debord had taken cinema's separated image and sound streams as far he could. And since the economic upturn brought a glut of inexpensive transistorized magnetic audiotape recorders in the early 1950s, he chose to experiment during this period within the auditory channel. It was no departure from his past. As a pre-teen Debord won a call-in radio quiz show.¹²³ A segment of *Hurlements en faveur de Sade* lamented a child radio star's suicide.¹²⁴ In 1952, he began to record texts onto audiotape and is said to have experimented with musical acoustics.¹²⁵ In 1954, the first issue of the L.I.'s journal *Potlatch* recommended listening to musical recordings as a worthwhile ludic activity,¹²⁶ and only

¹²¹ See Kirsten Ross, *Fast Cars, Clean Bodies: Decolonization and the Reordering of French Culture* (Cambridge, Massachusetts: MIT Press, 1995); Frances Stonor Sanders, *The Cultural Cold War: The CIA and the World of Arts and Letters* (New York: The New Press, 1999); and Richard Bissell, *Reflections of a Cold Warrior: From Yalta to the Bay of Pigs* (New Haven: Yale University Press, 1996).

¹²² Debord and Wolman, *Situationist International Reader*, 12

¹²³ Hussey, *The Game of War: The Life and Death of Guy Debord* (London: Jonathan Cape, 2001), 25.

¹²⁴ Guy Debord, *The Society of the Spectacle and Other Films*, trans. by Richard Parry (London: Rebel Press, 1992), 14.

¹²⁵ See respectively, Guy Debord, *Enregistrements Magnétiques, 1951-1961* (Paris: Gallimard, 2010) for a transcription of his audio taped presentations, the actual audio having been recently published on line at <https://www.youtube.com/watch?v=BACZwo5BoAk>, accessed June 2, 2017 and *Situationisten*, said to be a recording of his ambient sound experiments, available from <http://www.ubu.com/sound/debord.html>, accessed on May 21, 2017.

¹²⁶ In accordance with what you are seeking, choose a country, a more or less populated city, a more or less busy street. Build a house. Furnish it. Use decorations and surroundings to the best advantage. Choose

a year later he assigned technological reproducibility a key role in the project of liberating desire from the repressive social climate of the 1950s, making a reference to the tactic of withholding he employed in *Hurléments*:

To accomplish serious seduction we can imagine an adroit use of currently popular means of communication. But a disruptive sort of abstention, or manifestation designed to radically frustrate the fans of these means of communication, could also promote at little expense an atmosphere of uneasiness extremely favorable for the introduction of a few new notions of pleasure.¹²⁷

On November 10, 1957, Debord delivered the lecture “Surrealism: Dead or Alive?” by means of tape recorder while seated beside the apparatus with an alcoholic beverage in hand.¹²⁸ In one of his most revealing statements on recording technology, on May 17, 1961 he addressed Henri Lefebvre’s Group for Research on Everyday Life, again substituting an audiotape recording of his voice for his physical presence, presumably to avoid the *ressentiment* participation in an academic conference addressing the cordoning off of everyday life in the fascist era might bring. “It is thus desirable to demonstrate,” Debord explained to the conferees,

by a slight alteration of the usual procedures, that everyday life is right here. These words are being communicated by way of a tape recorder, not of course, in order to illustrate the integration of technology into everyday life on the margin of the technological world, but in order to seize the simplest opportunity to break with the appearance of pseudo-collaboration, of artificial dialogue, established between the lecturer ‘in person’ and his spectator.¹²⁹

If personalized recording technology offered a means for breaking with retrograde culture, it did so only when individuals actively incorporated it into their lives. The passive consumption of telephones, radios, and recorded music had taken place, as Debord put it, “within the framework

the season and the time of day. Bring together the most suitable people, with appropriate records and drinks. The lighting and the conversation should obviously be suited to the occasion, as should be the weather or your memories.

“Psychogeographical Game of the Week,” *Potlatch* #1 (June 22, 1954), n.p..

¹²⁷ Debord, *Situationist Anthology*, 6.

¹²⁸ Ralph Rumney, *The Counsel*, translated by Malcolm Imrie, (San Francisco: City Lights Books, 2002), 60.

¹²⁹ Debord, *Situationist International Anthology*, 68.

of modern bureaucratized capitalism—[that] certainly tends rather to reduce people's independence and creativity."¹³⁰ This was no idle observation, but was based on his own participation in an auditory experiment seven years beforehand.

Détournement on the Airwaves: Equestrian Radio Sculpture and Hapless Aquatic Spectators

In view of his lengthy engagement with sound recording, comes as no surprise that Debord composed an auditory appropriation for radio broadcasting in late 1954¹³¹ or that it constituted his first sophisticated artistic *détournement*, or that it proved once and for all the immense artistic possibilities of Ducasse's techniques. With a reference to his equestrian sculpture proposal, Debord called this work *Educative Value*, publishing the text as installments in the January, February, and March 1955 issues of the L.I.'s journal *Potlatch*.¹³² [Appendix]

Debord borrowed *Educative Value*'s source material from the seventeenth-century Catholic priest and public orator Jacques-Bénigne Bossuet's *Panegyrique de Bernard de Clairvaux*, 1670; a sixth grade geography textbook; news and cultural articles from the November 5, 1954 issue of *France-soir*; the biblical books of Jeremiad, Psalms, and Samuel; Karl Marx and Friedrich Engels's *Communist Manifesto*, 1847; and Louis-Antoine de Saint-Just's *Reports and Discourses at the Convention*, 1792-4. Recasting their writings as an original work of art that updated Ducasse's method into an age of electromagnetic recording and broadcasting, *Educative Value* deserves close attention for several reasons.

¹³⁰ Debord, *Situationist International Anthology*, 71.

¹³¹ "We commence at this time with the publication in writing of the radiophonic transmission which received its remarkable debut in December," an unsigned introduction in *Potlatch* proclaimed, "and is presented here without the use of intonation or the noises that no small breeze passing over the waves should disturb [sic], because the words are carefully connected." Guy Debord, "Educative Value," *Potlatch* #16 (January 1955) and reprinted in *Potlatch, 1954-1957* (Paris: Editions Gérard Lebovici, 1985), 100.

¹³² Guy Debord, *Educative Value*, reproduced in *Potlatch* (Paris: Editions Allia, 1996), 100-102, 112-113, 203-204 and translated into English by Gerald Hartnett, Luke Sandford, and David Auerbach for my unpublished M.A. thesis *Phonographic Sound, 1952-1962*, (Wesleyan University, 1998), 201-204. It was carefully analyzed in my *On the Origins of Détournement: Guy Debord's Historical Menagerie, 1954-56* (M.A. thesis, University of Pittsburgh, 2005).

First of all, its diction and phraseology veer wildly between the styles of classical literature and modern reportage, evoking different temporalities after Ducasse's example to mark the need, and indeed generate, historical consciousness in the contemporary year of 1954. A biblical passage about incest in *Educative Value*, considered in relation to subsequent phrases, helps to clarify *détournement*'s strange and fluid beauty:

Voice 2 (young woman): Tamar took the cakes she had made and brought them to Amnon, her brother, in the bedroom. She offered them to him so that he might eat them; but he seized her, saying, "Come and sleep with me, sister." She answered, "No, brother, do not do violence unto me. One does not act in this manner in Israel. Do not commit this infamous act! Where would I go to bear my shame? And as for you, you would be disgraced in Israel. Speak instead with the King, I beg you; he will not prevent you from taking me as your wife." But he refused to listen, and was stronger than her; and he did violence unto her and abused her.¹³³

Marx and Engels's evaluation of flaws in Judeo-Christian family structure under the influence of market capitalism, which makes bodies available at a price, answered the biblical quotation:

Voice 3: Upon what criteria does the contemporary family, that is, the bourgeois family, depend? Upon capital, upon private enrichment. The family only exists in its fully-developed form for the *bourgeoisie*; but the consequences of this are public prostitution and the total disappearance of the family within the proletarian classes. To be sure, the *bourgeois* family will disappear, along with its logical consequences; and these too will disappear along with capital.¹³⁴

An excerpt from Bossuet's *Elegy* lamenting the death of the conservative French abbot, writer, and theologian who launched the Second Crusade in 1146 answers Marx and Engels. Delivered in a classically florid yet stilted prose style, Debord applied the seventeenth-century author's elegy for Clarivaux toward quite different ends than Bossuet intended. In this case, Bossuet encourages political action founded on Marx's critique of bourgeois family structure:

Voice 1: Bernard, Bernard, this first bloom of youth will not last forever. The fatal hour will come, and will resolve all false hopes thanks to its unyielding

¹³³ Debord, *Potlatch, 1954-1957*, 101.

¹³⁴ Debord, *Potlatch, 1954-1957*, 101.

verdict. Life, like a false friend, will pass us by in the midst of our endeavors. The rich of this earth, enjoying their pleasant lives, see themselves as having many possessions, and they will be thoroughly shocked to find themselves empty-handed.¹³⁵

The mellifluous *Elegy* allegorized Debord's identification with the *mouvement précieux*, in whose salons the sixteen-year-old Bossuet distinguished himself as a skillful orator. In later years, however, Bossuet advocated a theory of political absolutism, advocating that kings received power directly from God—thereby becoming, along with Stendhal, another reactionary spokesman swallowed up into Debord's historical menagerie of resources to be appropriated. The disjunction produced by placing Bossuet next to Marx yields a bizarre but wonderful irony that exemplified the “parodic-serious” requirement Debord and Wolman felt a successful *détournement* should fulfill. As they put it in 1956, “far from aiming at arousing indignation or laughter by alluding to some original work, [*détournement*] will express our indifference toward a meaningless and forgotten original, and concern itself with rendering a certain sublimity.”¹³⁶

After transforming Bossuet's romantic injunction into a revolutionary invective, Debord inserted language purloined from a *France-soir* piece on France's war in Algeria suggesting that, after putting down indigenous rebellions there, French colonial forces effectively controlled the cities of Chinchilla and Cassaigne.

Voice 4: However, what will especially help foster the climate of confidence to which the Algerian populace aspires is the news that police operations have been carried out successfully, and ended with 130 arrests made, most notably in Chinchilla: 36 terrorists or agitators were apprehended there, that is, the vast majority of the commandos who were in action on the fateful night. In Cassaigne there were 12 arrests. As concerns the latter, it is especially comforting to note that of the twelve individuals arrested, four were actually turned over by *fellahs*

¹³⁵ Debord, *Potlatch, 1954-1957*, 101.

¹³⁶ Debord and Wolman, *Situationist Anthology*, 9. This assertion of *détournement* was conceived in the spirit of the authors' youthful radicalism and is not consistent with the technique's allegorical and historical complexities.

[peasants] living in the region, who were anxious to take part in the investigations so that the guilty might be brought to justice.¹³⁷

Typifying Western journalists' enforcements of nationalist ideologies, the passage presented Algerian citizens as appearing to want a French-imposed juridical order to protect them from the independence movement resisting French occupation. Accordingly, *France-soir* represented Algerian nationalists as terrorists and agitators. To further this critique of bias in popular press accounts of international affairs, *Educative Value* turned to anthropomorphism, borrowing evocations of the natural world from *Songs of Maldoror*. "The placid bovines," the next voice said, "would be at the mercy of the carnivores if they did not have their pairs of horns to defend themselves."¹³⁸ Lifted from *France-soir* in what appears to be a completely arbitrary decision, this sentence implied that France's military keeps the Algerian rebellion at bay only by use of force—and only precariously at that. Note, too, how Bossuet's warning may now be re-interpreted as a rebuke of France's presence in Algeria, illustrating the ease with which *détournement* subverts intended meanings and may be applied to a multitude of materials and technological platforms. The anthropomorphization intensifies in the very next passage: "In the adjoining aquarium we see strange fish whose eyes are bulging inordinately."¹³⁹ Borrowed from a different newspaper article, this sentence presented *Educative Value*'s listeners a metaphorical image of French citizens peering impotently at the Algerian conflict through the dubious rhetoric of a tabloid newspaper like *France-Soir*. Despite *Educative Value*'s stylistic fluctuations, its attempt to normalize phraseological connections—accomplished by reading the quotations in staid, affectless tones—qualified it as suture-type auditory art. It certainly diverged from Lettrist sound poetry's raucous linguistic dislocations, emblems of a modernist shock aesthetic nearing,

¹³⁷ Debord, *Potlatch, 1954-1957*, 102.

¹³⁸ Debord, *Potlatch, 1954-1957*, 102.

¹³⁹ Debord, *Potlatch, 1954-1957*, 102.

if not lingering beyond, its date of expiration. Positioned to supplant it as the preferred artistic vocabulary, *détournement*, as *Educative Value* proves, concealed the author-editor's sources and handiwork.

Educative Value and the Traditions of Radio Drama and Experimentation

Educative Value's originality may be gauged by comparing to radio dramas that preceded the Second World War and continued after. It is wholly unlike the productions of, for instance, German Hörspiel, which retained the theatrical conventions of discreet characters, a stabilized temporality, and a linear narrative.¹⁴⁰ It bore even less resemblance to Antonin Artaud's censored radio transmission *To Have Done with the Judgment of God*, 1947, during the course of which Artaud, ailing from rectal cancer, warned of the dangers entrepreneurialism and militarism posed in a forthcoming era of U.S. hegemony yet.¹⁴¹ One point of divergence from such standard and extraordinary radio dramas stemmed from Debord's decision to parody commercial broadcasting conventions by making recorded phrases respond directly to one another in a "talking head" format, albeit one that expressed ideas inimical to radio's advertiser-driven imperatives. Its unusual resonance stems from Debord's convening a roundtable of authors who lived up to twenty centuries apart from one another without attributing the authors, thereby reversing necromantic characterizations of technological reproducibility. In this connection, *Educative Value* anticipated Glen Gould's *The Idea of North*, 1967, and Gregory Whitehead's *Dead Letters*, 1984, works composed from interviews edited to convey the impression that discourses

¹⁴⁰ The best English language collection is *German Radio Plays*, edited and translated by Everett Frost and Margaret Herzfeld-Sander (New York: Continuum, 1991), which gathers Hörspiel texts by Wolfgang Borchert, Gunter Eich, Ingeborg Bachmann and Peter Handke. On Anglophone radio drama, see Elissa Guarlnick, *Sight Unseen: Beckett, Pinter, Stoppard, and Other Contemporary Dramatists on Radio* (Athens, OH: Ohio University Press, 1996) and Allen Weiss, *Phantasmatic Radio* (Durham, NC: Duke University Press, 1995), which addresses experimental strains of radio art.

¹⁴¹ Antonin Artaud, *To Have Done with the Judgment of God*, trans. by Clayton Eshleman and Norman Glass (Los Angeles: Black Sparrow Press, 1975). In 1996, the Belgian record label Sub Rosa released a recording of Artaud's performance; see Antonin Artaud, *Pour En Finir Avec Le Jugement De Dieu*, Sub Rosa, 1996, compact disc.

between multiple talking heads were taking place when, in fact, the dialogues had been edited together using the suture technique.

Part II—William S. Burroughs’s Experimental Cut-Up Texts and Tape Recordings, 1958-1962

Debord’s experiment with recorded speech soon shared the tactic of appropriation with a group of Anglophone artists who had also taken up residence in Paris’s Sixth Arrondissement. As is well known, the Beat Generation writer these artists congregated around, William Seward Burroughs (1912-1998), adopted an appropriation-based technique in the late ‘50s and early ‘60s to write *The Ticket That Exploded*, *Nova Express*, *The Nova Mob*, and *Soft Machine*, science fiction novels about characters who use audiovisual recordings in wars for the control of planet earth. While certain details about the technique may be looked up in the secondary literature on Burroughs,¹⁴² to my knowledge no scholarship has yet scrutinized the magnetic audiotape works he created in Paris from 1959 to 1964. Location was not the only thing Debord and Burroughs shared. Just as Guy Debord participated actively in the French *événements* of May 1968,¹⁴³

¹⁴² See especially Robin Lyndenberg, *Word Cultures: Radical Theory and Practice in William S. Burroughs’s Fiction* (Urbana and Chicago: University of Illinois Press, 1987) a fine, post-structuralism-informed analysis of cut-ups and, for a treatment of Burroughs’s later auditory works, Lyndenberg’s essay “Sound Identity Fading Out, William S. Burroughs’s Audiotape Experiments” in *Wireless Imagination: Sound, Radio and the Avant Garde*, edited by Douglas Kahn and Gregory Whitehead (Cambridge, MA: MIT Press 1993), 409-37; Scott Bukhatman, *Terminal Identity* (Durham: Duke University Press, 1993), 74-101, and Douglas Kahn, *Noise Water Meat* (Cambridge, MA: MIT Press, 1999), 293-321.

¹⁴³ These included the Sorbonne’s occupation by students and *enragés*, the barricading of Latin Quarter streets, President Charles de Gaulle’s evacuation to Germany, and a millions-strong workers’ strike that plunged France into what, for some, represented chaotic insurrection. To participants, however, it signified the awareness, as they described it in a heat-of-the-moment telegram, “that we are consciously starting to create our own history. We are determined,” the telegram to Amsterdam’s International Institute of Social History continued, “to make this known to posterity through your institute’s archives.” Quoted from “Texts of Telegrams Sent by the Occupation Committee of the Sorbonne on May 17, 1968,” in René Viénet, *Enragés and Situationists in the Occupation Movement, France, May ‘68*, trans. by Richard Parry and Helene Potter (Brooklyn, NY: Autonomedia and London: Rebel Press, 1992 [1968]), p. 133.

Burroughs, while no doctrinaire leftist, enjoined with young radicals at the Democratic National Convention a few months later, linking arms with Jean Genet as tear gas filled the streets.¹⁴⁴

Early in his life, Burroughs began to admire individuals who lived outside of bourgeois social mores, unusually so for the namesake of a wealthy grandfather whose adding machine firm grew into a major manufacturer of mainframe computers. [Image 1.2] Although catered to in elegant homes and at high society gatherings, also Burroughs endured emotional hardships. The sensitive boy witnessed racism and violence, recognized resemblances between his family's business practices and criminality, and suffered sexual abuse while in the care of a domestic assistant.¹⁴⁵ Although attracted to other boys as a teenaged student at the Los Alamos Ranch School, Burroughs repressed his feelings, presented a heterosexual persona, and romanced a succession of women. A 1936 Harvard graduate who briefly attended medical school in Vienna and subsisted on a lifelong monthly stipend from his family, Burroughs resided during the mid-1940s in Manhattan's Upper West Side, where he befriended Columbia University students Allen Ginsberg and Jack Kerouac, yet also fell in with *déclassé* criminals like Phil White and Herbert Huncke who introduced him to narcotics. A morphine addiction brought legal problems in New York City in the 1940s that recurred in Edinburg, Texas and New Orleans, Louisiana. On September 6, 1951, while beset by depression in Mexico City, Burroughs murdered his spouse, Joan Vollmer Adams, a remarkable individual in her own right.¹⁴⁶

¹⁴⁴ For an account of the Chicago events, see Terry Southern, "Grooving in Chi," *Now Dig This: The Unspeakable Writings of Terry Southern 1950-1995*, edited by Nile Southern and Josh Alan Friedman (New York: Grove Press, 2001), 118-129.

¹⁴⁵ This biographical material may be found in Barry Miles, *Call Me Burroughs: A Life* (New York, NY: Twelve-Hachette Book Group, 2013), 23-5.

¹⁴⁶ "Brilliant and well-versed in philosophy and literature, Joan was the whetstone against which the main Beat writers—Allen [Ginsberg], Jack [Kerouac], and Bill [Burroughs]—sharpened their intellects." Brenda Knight, *Women of the Beat Generation: The Writers, Artists, and Muses at the Heart of a Revolution* (Berkeley: Conari Press, 1996), 49.

This section traces the metaphors of ventriloquism, queerness, viruses, and telepathy that illustrated the artist's evolving thoughts about art and technological reproducibility in his novels *Junky*, 1953 and *Nova Mob*, 1964. It then analyzes experimental poetry he crafted between 1959 and '63, a period when he abandoned chance results for the "fold-in" technique, which allowed him to concealed his authorial presence and smooth over the discordant effects of chance-based appropriation. Finally, it considers how Burroughs recorded and reedited radio broadcasts with magnetic audiotape with the aim of countermanding distracting and deceptive news reportage.

Sending-Receiving, Ventriloquism, Viruses, and Telepathy

In 1938, at the age of twenty-six, Burroughs experienced an artistic breakthrough while transcribing voices he and his boyhood friend Kells Elvins performed in "routines." An example of what Michel Foucault called "those reflective and voluntary practices by which men [sic] not only set themselves rules of conduct, but seek to transform themselves,"¹⁴⁷ routines helped Burroughs cope with the ennui and banality of living in the 1940s and '50s and were particularly effective if the "receiver" happened to be a lover. "Without routines," he wrote in 1954, "my life is chronic nightmare, grey horror of Midwest suburb [...] I have to have receiver for routine. If there is no one there to receive it, routine turns back on me and tears me apart, grows more and more insane (literal growth like cancer) and impossible."¹⁴⁸ To assuage such horrors, Burroughs took a succession of younger sexual partners that included Allen Ginsberg, with whom he fell deeply in love in the early 1950s.

Itself an artifact of telecommunications, the "sender-receiver" metaphor fit aptly among many other recording and broadcasting technologies referenced in *Junky*, a novel that chronicled

¹⁴⁷ Michel Foucault, *The History of Sexuality, Volume 2*, translated by R. Hurley (New York: Vintage Books), 10-11.

¹⁴⁸ "Letter from William S. Burroughs to Allen Ginsberg [1954]," cited in Barry Miles, *William Burroughs, El Hombre Invisible, A Portrait* (New York: Hyperion, 1993), 72.

Burroughs's 1944 immersion into an urban underworld populated by hustlers who financed drug habits by robbing drunks and burglarizing pharmacies. "Waves of hostility and suspicion," he wrote of protagonist William Lee's associate, "flowed out from his large brown eyes like some sort of television broadcast."¹⁴⁹ But not every transmission or recorded object conveyed dread. Lee and co-protagonist Mary, also a drug addict, seek out recorded music to soothe jangled nerves and to try kicking their habits. Taking refuge beside a jukebox, Lee observed, "When you are sick, music is a great help."¹⁵⁰ When Lee overcomes an opiate habit with Louis Armstrong records, the implication that recorded sound's properties offer a psychological balm is made clear.¹⁵¹

Unfortunately, jazz recordings offered only a short-lived cure, for addiction threatens Lee and Mary's physical bodies. To Lee's horror, Mary's calcium-starved body liquefies to suggest that drugs or "junk" compromised one's humanity. "There was something boneless about her, like a deep-sea creature," he remarked. "Her eyes were cold fish eyes that looked at you through a viscous medium she carried about her. I could see those eyes in a shapeless, protoplasmic mass undulating over the dark sea floor."¹⁵² Acquainted with the Roman poet Ovid's *Metamorphoses*, c. 100 B.C.E., and later works in the literary genre of transformation it gave rise to, Burroughs's writing differed in that bodily disintegrations were not caused by meddling Olympian gods, but rather by a post-1945 social milieu shaped by drugs, science, consumerism, the Cold War, and paranoia about the atomic bomb. "One afternoon, I closed my eyes and saw New York in ruins," Lee remarks of a waking nightmare. "Huge centipedes and scorpions crawled in and out of empty bars and cafeterias and drugstores on Forty-second Street."¹⁵³ In no doubt about where to

¹⁴⁹ William S. Burroughs, *Junky* (New York: Ace, 1953), 5.

¹⁵⁰ Burroughs, *Junky*, 15 and 28.

¹⁵¹ Burroughs, *Junky*, 28.

¹⁵² Burroughs, *Junky*, 14.

¹⁵³ Burroughs, *Junky*, 28.

place blame for the deaths of thousands of innocent civilians in Hiroshima and Nagasaki, he wrote to Allen Ginsberg, “If it was in my power to destroy all bombs and cyclotrons and atomic scientists, in fact extirpate the whole science of physics, I would do so.”¹⁵⁴

Drug addiction and modern physicists were not the only fears Lee confronted in *Junky*. Opiates quelled the sexual desire he felt for other men but viewed ambivalently. For Lee, being gay implied acceding to the manipulations of an exterior voice he compared to the exchanges ventriloquists staged with mannequins. “A room full of fags gives me the horrors,” he observed.

They jerk around like puppets on invisible strings, galvanized into hideous activity that is the negation of everything living and spontaneous. The live human being has moved out of these bodies long ago. But something moved in when the original tenant moved out. Fags are ventriloquists' dummies who have moved in and taken over the ventriloquist.¹⁵⁵

Lee’s comment traced a key aspect of Burroughs’s infatuation with the voice literature scholar Stephen Connor has carefully studied. “The disturbing effect of ventriloquism,” Connor wrote, “may derive from its transcendence or disruption of seen space. This is not a transcendence of space itself, although it may appear as such. Both eye and ear operate in, and require spaces, but the synaesthetic relations of eye and ear are asymmetric.”¹⁵⁶ By casting a disembodied voice into an automaton, the ventriloquist tests the perceiver’s senses of sight and audition, which respond differently to visual and auditory cues. Vision, always directional, seems to penetrate outward into the object world, a configuration the viewer may “turn off” by blinking or looking away. On the other hand, sounds penetrate one’s senses and cannot be voluntarily excluded. Existing as fleeting vibrations of air for most of human history, sounds—most emblematically that of the voice—resisted technological reproducibility until the phonograph fixed them as continuous data

¹⁵⁴ Unpublished section of letter from William S. Burroughs to Allen Ginsberg dated January 9, 1955, Barry Miles Papers, Columbia University.

¹⁵⁵ Burroughs, *Junky*, 72.

¹⁵⁶ Steven Connor, *Dumbstruck: A Cultural History of Ventriloquism* (Oxford University Press, 2000), 15.

flows. As Connor points out, however, recorded sounds are not easily affixed to objects, bodies, or technologies they originate from, giving rise, in part, to our distrust of the ear, typified by the dubious authenticity of information one only “hears,” a cultural holdover from an era that predates recording. Yet, as all children learn, “seeing is believing.” Lee’s metaphor of queerness as ventriloquism may be thought of in psychoanalytical terms as an invading super-ego that did not share the subject’s in-born expectations or values. Lee’s rational perception of same sex desire as an invading voice is a milder symptom of what schizophrenics describe as “guiding voices,” as in the delusions of D.P. Schreber, a German judge whose psychiatric illness Sigmund Freud diagnosed as a case of paranoid schizophrenia induced by repressed homosexuality.¹⁵⁷

Lee’s metaphor also hinted at the history of attempts to give automata vocal capabilities. Vocalization presented makers of automata the ultimate challenge because, as Connor suggests, “speech was the most plausible proof that the automaton was truly self-moving, or even, as we might nowadays say, self-organizing.”¹⁵⁸ Although Connor’s reference to machine intelligence harkens to confusions of agency that arose in the 1950s with cybernetic and computational sciences, he demonstrates in *Dumbstruck* that ventriloquism predated the discourse network of 1900. The first speaking automaton appeared as a demonically-activated bust in Robert Greene’s play *Friar Bacon and Friar Bungay*, 1594, and, more to the point of Burroughs’s art, he argues that technological reproduction shares with Greene’s talking head a disembodiment of voice that

¹⁵⁷ Schreber experienced god’s voice as

a mighty bass as if directly in front of my bedroom windows. The impression was intense so that anybody not hardened to terrifying miraculous impressions as I was, would have been shaken to the core. Also, *what* was spoken did not sound friendly by any means: everything seemed calculated to instill fright and terror into me and the word “wretch” was frequently heard—an expression quite common in the basic language to denote a human being destined to be destroyed by God and to feel God’s power and wrath.

Daniel Paul Schreber, *Memoirs of My Nervous Illness*, translated by Ida Macalpine and Richard A. Hunter (Cambridge, MA: Harvard University Press, 1988 [1955]), 124.

¹⁵⁸ Connor, 340.

indissolubly colors one's perception of agency.¹⁵⁹ Furthermore, the technological severance of voice from its bodily mooring in 1877 by Edison's phonograph led to ventriloquism's demise and inflicted a wound upon the human psyche that has never been properly acknowledged. As Connor put it,

The rapid naturalization of the technologically mediated voice does not seem to have resulted in the painful severing the voice from the subject, for that severing was indeed a bloodless surgery. [¶] And yet there is a loss, of a kind, namely the loss of the loss of the voice. We have been severed, not from our voices, but from the pain of that severance. What aches is the numbness; what is strange is the familiarity of the disembodied voice.¹⁶⁰

Ubiquitous recording has deprived individuals from the metaphysical comfort of knowing that voices always correspond to physical bodies, and Burroughs's obsession with the voice and specifically with ventriloquism can be said to engage unconscious effects recording imposes.

To be sure, voice metaphors resounded throughout Burroughs's 1950s correspondence, filled with ribald stories about individuals who either fall prey to vocalic manipulation or perpetrate it for economic gain. A 1955 letter to Ginsberg described a carnival worker whose talking anus became the focal point of his act. Initially satisfied with the arrangement, the man soon recoiled at its propensity for chewing holes in his pants to be better heard and demands for its rights as an agency independent of the man. The man began screaming at his anus in public, punching it with his fist, and inserting candles into it but nothing kept it from talking. "It's you who will shut in the end, not me," it proclaimed, "Because we don't need you around here

¹⁵⁹ For what is specific to both ventriloquism and the tradition of talking heads is the attempt to take the voice out of one body—or in the case of earlier forms of ventriloquism, out of one part of the body—and put it (back) into another. The profanity of a voice that speaks from some inappropriate place in a single body—from the chest, armpit, nostrils, genitals, or anus—is equivalent to the profane dream of producing speech in and from another body. This circuit of removal and restoration will tie ventriloquism tightly to the development of auditory technologies of various kinds at the end of the nineteenth century.

Connor, 342.

¹⁶⁰ Connor, 410-411.

anymore. I can talk and eat *and* shit.”¹⁶¹ Ventriloquism figured in Burroughs’s assessment of psychoanalysts who suppressed patients’ legitimate desires with the mirage of a talking cure. “The suppressors are not stupid,” he thundered in 1959, “‘*Tres grand illusion.*’ They use pompous and dull ventriloquist dummies is all. I repeat they are not stupid and not accidental. I have personal relation with some of these ladies and gentlemen and they don’t stay where they are by being dull.”¹⁶²

These stories convey that, for Burroughs, the voice is an individual’s most intimate tool for participating in symbolic orders and the seat of identity. Consequently, it is the apparatus that ill-intentioned entities exploit to by spreading contagion, and Burroughs’s *oeuvre* is awash in hostile strains of protein-encased nucleotides—viruses—that infiltrate and control bodies in ventriloquism-like way. Burroughs had borrowed from William Reich’s *The Cancer Biopathy*, 1949, a theory that attributed malignant cancer to “protozoal self-disintegration and autoinfection of the organism,” with T-bacilli viruses brought on by unfulfilling sexual relations.¹⁶³ And by 1953 viruses travelled in the form of vocalizations that could only cured in two ways. First, one could attain a state of non-communication, i.e. “silence,” or, second, by learning to communicate telepathically, that is, in the absence of speech or writing. “What I look for in any relationship,” Lee observed in *Junky*, “is contact on the nonverbal level of intuition and feeling, that is, telepathic contact.”¹⁶⁴ Lee’s remark reflected Burroughs’s dalliances with esotericism,¹⁶⁵ but his

¹⁶¹ William S. Burroughs, “Letter to Allen Ginsberg dated February 5, 1955,” *The Letters of William S. Burroughs, Volume 1*, edited by Oliver Harris (New York: Penguin, 1994), 259.

¹⁶² “Letter from William S. Burroughs to Allen Ginsberg dated October 27, 1959,” *The Letters of William S. Burroughs, Volume 1*, 431.

¹⁶³ Wilhelm Reich, *The Cancer Biopathy*, translated by Andrew White, Mary Higgins, and Chester Raphael (New York: Farrar, Straus, and Giroux, 1973 [1948]), 222.

¹⁶⁴ Burroughs, *Junky*, 152.

¹⁶⁵ “My personal experiments and experiences have convinced me that telepathy and precognition are solid demonstrable facts; facts that can be verified by anyone who will perform certain experiments.” Letter from William S. Burroughs to Allen Ginsberg dated May 1, 1950, *The Letters of William S. Burroughs, Volume 1*, 67.

secret model for telepathic communication was Joseph Conrad and Ford Maddox Ford's novel *The Inheritors*, 1901.¹⁶⁶ "There are passages where [Conrad and Ford seem] to be escaping from words or going beyond words," Burroughs said, "in a quite conventional, quite classical narrative form." In their novel, a writer named Arthur chooses between saving humanity and his love for Miss Etchingham Granger, member of a fourth dimensional group seeking control of the earth. All is lost when Arthur refuses to expose the invaders who communicated telepathically. *The Inheritors* seemed to inform Burroughs's depiction of radio, cinema, television, pharmacology, psychoanalysis, genomics, and computers as media that spread the "control virus."

Nova Express: Cyclotron Shit, Interrogation of a Death Dwarf, Recorded Objects as Weapons in the War with Minraud

This may be observed in *Nova Express*, 1964, a novel about a conflict between invaders from planet Minraud determined to enslave the human race, the Nova Mob, who battle the Nova Police, a resistance force investigating the aliens' methods of controlling human beings. In the course of the investigation, Nova Police investigator William Lee interrogates Mr. Winkhorst, a pharmaceutical chemist whose firm manufactures noxious, technically reproducible recordings that infects those who perceive them with the virus. Winkhorst explains how he used a Cyclotron to make these noxious films.

All right—We'll talk—The cyclotron processes image—It's the microfilm principle—smaller and smaller, more and more images in less space pounded down under the cyclotron to crystal image meal—We can take the whole fucking planet out that way up our ass in a finger stall [... . Do] you see now why we had to laugh till we pissed watching those dumb rubes playing around with photomontage—Like charging a regiment of tanks with a defective slingshot.¹⁶⁷

The inventor of a durational audiovisual genre far more powerful than photomontage, Winkhorst suddenly glides out of the interrogation in a strange "song and dance routine," leaving the reader

¹⁶⁶ William S. Burroughs, quoted in Victor Bockris, *A Report from the Bunker* (New York: Seaver Books, 1981), 84.

¹⁶⁷ William S. Burroughs, *Nova Express* (New York: Grove Press, 1964), 44.

to the devices of a policeman wearing an archaic, 1890s-era uniform and holding a ventriloquist dummy.¹⁶⁸ The imagery signals a shift in temporality to the early cinema of Mack Sennett and the *Keystone Cops*. Interestingly, early slapstick comedy that had to some degree surpassed vaudeville in a way analogous to sound recording's superannuation of ventriloquism. As if to reopen the wounds recording had inflicted on both traditions, this ventriloquist dummy is no ordinary mute, but a Nova Mob Death Dwarf constructed to distribute Winkhorst's virus-laden recordings. So frightful that the Death Dwarf developed a narcotics addiction from distributing these recordings, it offers the Police information for a fix. "Images—millions of images—That's what I eat—Cyclotron shit," it tells Police Inspector Lee after shooting up. "I got all the images of sex acts and torture ever took place anywhere," he says, "and I can just blast it out and control you gooks right down to the molecule—I got orgasms—I got screams."¹⁶⁹ The films, in other words, depict torture pornography and episodic humiliations human beings view with a mixture of voyeuristic pleasure and ethical disgust.

When the Death Dwarf nods out from the fix, Winkhorst reappears and explains how he composes his films. "What I do is put the blazing photo from Hiroshima and Nagasaki under my cyclotron and shade the heat meal in with mescaline," adding that the admixture may be varied to suit readers of *Fleur du mal*, 1857, "[s]ay I want 'The Drenched Lands' on the boy what I do is put the image from his cock under the cyclotron spurting whitewash in the white hot skies of Minraud."¹⁷⁰ The reference was, I believe, to Baudelaire's lost innocence poem "The Enemy,"

¹⁶⁸ Burroughs, *Nova Express*, 44.

¹⁶⁹ Burroughs, *Nova Express*, 45.

¹⁷⁰ Burroughs, *Nova Express*, 47-8. An outspoken critic of nuclear weapons, Burroughs's commingling of fission-treated photographs of sexual acts with a hallucinogenic powder resisted the barbarous destruction of Hiroshima and Nagasaki. The cyclotron's role in splitting the atom was heralded widely after the war, but it had been a guarded secret during hostilities. Three months before Harry Truman ordered Hiroshima's incineration on August 6, 1945, the U.S. Department of Defense censored a *Superman* comic strip about a cyclotron. Its author, Alvin Schwartz, not

“Now I have touched the autumn of my mind/And I must use the spade and rakes/To assemble again the drenched lands/Where water digs holes as large as graves.”¹⁷¹ Targeted to suit a perceiver’s sexual proclivities, the film virus reflected Burroughs’s childhood sexual trauma, his sexual preference for young male partners, and his outrage that the U.S. government’s nuclear attack on a civilian population.

The narrator tells the reader the Nova Mob manicures consciousness with recordings that alter perceptions of reality, often employing ratiocination as its key tool to control individuals. “There is no true or real ‘reality’” for, as the narrator says, “‘Reality’ is simply a more or less constant scanning pattern—The scanning pattern we accept as ‘reality’ has been imposed by the controlling power on this planet—”¹⁷² Besides distributing Winkhorst’s *outré* pornography, the Elders of Minraud spread sound recordings that, based on the cybernetic principle of feedback, further weaken the resistance. “Take two opposed pressure groups—”, the narrator says, “Record the most violent and threatening statements of group one with regard to group two and play back to group two—Record the answer and take it back to group one—Back and forth between opposed pressure groups—This process is known as ‘feed back.’”¹⁷³ The former Nova Mob assassin turned freedom-fighter, Uranian Willy The Heavy Metal Kid, retaliates against the Elders with “recordings to be picked up by control stations while they are free for a few seconds to organize underground activities—Largely the underground is made up of adventurers who

privity to top-secret information, drew the strip from an article on cyclotrons published in a 1935 issue of *Popular Mechanics*. “Six-Million Volt Atom Smasher Creates New Elements,” *Popular Mechanics* Vol. 65, No. 4 (April 1936), 580.

¹⁷¹ Charles Baudelaire, *The Flowers of Evil and Paris Spleen: Selected Poems*, translated by Wallace Fowlie (Mineola, NY: Dover Publications, 2010 [1963]), 13.

¹⁷² Burroughs, *Nova Express*, 53.

¹⁷³ Burroughs, *Nova Express*, 53-4.

intend to outthink and displace the present heads—”¹⁷⁴ A body-less, super-intelligent species, the Elders are heads stored in glass enclosures whose calculating speed recalls the metaphor of an “electronic brain,” a 1950s term for computers that symbolized a possible future of automated labor that might one day render the human body obsolete.¹⁷⁵

Explicit Informatics: Coordinate Points and Juxtaposition Formulae

The rhetoric of computation fills the pages of *Nova Express*, as when the virus enters a body through so-called “coordinate points.” These are not so much physical locations on the body as statistical arrays of information about a targeted host’s sexuality, physical mannerisms, and culinary preferences. The Elders calculate coordinate points by feeding “transparent sheets with virus perforations like punch cards into the host’s body to find a weakness to infection.”¹⁷⁶ Once inside, a virus recording overtakes the host’s memory and plays “a disgusting act sharply photographed and recorded” back to the host’s consciousness over and over. It then copies the host’s own memories of mistakes, experiences of abuse, and sexual inadequacies and plays these back—an interior cinema that ultimately subordinates the host’s agency. The Elders index and archive these memories in electromagnetic storage easily searched to find recordings to exploit the host subject’s specific personality profile: “Any situation that causes rage will magnetize rage patterns,” the narrator explained, “and draw around the rage word and image recordings.”¹⁷⁷ Hosts subjected to the intrusive rationalization of their memories have involuntarily submitted information to a database the Elders use to control them.

More than distributors of nuclear-strength pornography, Death Dwarfs also reproduced speech and texts in ventriloquism-like ways to confuse prospective host’s bodies. “These

¹⁷⁴ Burroughs, *Nova Express*, 69.

¹⁷⁵ Burroughs, *Nova Express*, 69.

¹⁷⁶ Burroughs, *Nova Express*, 72.

¹⁷⁷ Burroughs, *Nova Express*, 73.

noxious dwarfs,” Nova Police agent K9 remarked, “can spit out a newspaper in ten seconds imitating your words after you and sliding in suggestion insults—That is the entry gimmick of the Death Dwarfs: supersonic imitation and playback so you think it is your own voice.”¹⁷⁸ Sent on a mission to disrupt the Elders’ communication network, “which run the cold wires to an array of calculating machines feeding instructions to the Death Dwarf in the street,”¹⁷⁹ To repair the damage Death Dwarves inflict, K9 calls in technical sergeants to sort, sift, and appropriate recorded objects into juxtaposition formulae for fighting the control virus. “Our technicians learn to read newspapers and magazines for juxtaposition statements rather than alleged content—,” K9 explains, “We express those statements in Juxtaposition Formulae—The Formulae of course control populations of the world.”¹⁸⁰ By the time Burroughs described the juxtaposition formulae in *Nova Express* they had passed through a period of experimentation with appropriated texts and recorded voices.

“Here is the System According to Us”: Cut-Ups’ Origination and Expansion

Burroughs credited the Swiss-born painter Brion Gysin (1916-1986) with discovering the cut-up technique he dedicated many years of his life to elaborating. The two men first met in Tangiers in 1953, and while Burroughs found him a good receiver for his routines by 1957,¹⁸¹ Gysin’s influence began in earnest in the spring of 1958 after they renewed their friendship at a chance meeting in Paris near the Place St. Michel. Fluent in seven languages, Gysin had studied at the Sorbonne and was invited to show in a Surrealist exhibition at *Galerie Quatre Chemins*

¹⁷⁸ Burroughs, *Nova Express*, 83.

¹⁷⁹ Burroughs, *Nova Express*, 83.

¹⁸⁰ Burroughs, *Nova Express*, 86.

¹⁸¹ “In short most people are plain bone stupid, and right now I am in urgent need of routine receivers. Whenever I encounter the impasse of unrequited affection my only recourse is in routines. Really meant for the loved one, to be sure, but in a pinch somebody else can be pressed into service. And Brion really digs my routines. But he is leaving tomorrow.” “Unpublished letter from William S. Burroughs to Jack Kerouac,” April 22, 1957, Barry Miles Papers, Columbia University.

until André Breton dismissed him prior to the opening.¹⁸² He spent parts of World War Two making costumes in New York City and in Canada studying Japanese calligraphy, which he incorporated into hypnotic landscape paintings that made his name as an artist.¹⁸³ An interdisciplinarian *avant le lettre*, Gysin published a book about Josiah Henson, the U.S. abolitionist born into slavery who inspired Harriet Beecher Stowe's novel *Uncle Tom's Cabin*.¹⁸⁴ While residing in Tangier from 1950 to 1957 he operated The Thousand and One Nights restaurant, then abandoned it to practitioners of Crowleyan magic John and Mary Cooke, convinced an occult spell had been cast on him.¹⁸⁵

In Paris, both artists lived at 9 rue git le Coeur in the so-called Beat Hotel. Gysin soon informed Burroughs that writing was fifty years behind painting and several months later he happened on a corrective measure. "While cutting a mount for a drawing in room #15," Gysin recalled in 1960, "I sliced through a pile of newspapers with my Stanley blade and thought of what I had said to Burroughs some six months earlier about the necessity for turning painters' techniques directly into writing."¹⁸⁶ The results of Gysin's inadvertence intoxicated him: "At the time I thought them hilariously funny and hysterically meaningful. I laughed so hard my neighbors thought I'd flipped."¹⁸⁷ Convinced that chance methods would bring writing in line with visual art, Gysin used the cut-up method to compose the poem "Minutes to Go," 1959:

Pick a book any book cut it up
cut up
prose

¹⁸² Terry Wilson, "Brion Gysin, a Biography/Appreciation," *Research #4/5*, (San Francisco, CA, 1982), 39-40.

¹⁸³ For biographical information, see Jason Weiss's introduction to Brion Gysin, *Back in No Time: A Brion Gysin Reader*, edited by Jason Weiss (Middletown, CT: Wesleyan University Press, 2001), ix-xiv.

¹⁸⁴ Brion Gysin, *To Master—A Long Goodnight: The Story of Uncle Tom*, (New York: Creative Age Press, 1946).

¹⁸⁵ Nicholas Campion, *The New Age in the Modern West: Counterculture, Utopia, and Prophecy from the Late Eighteenth Century to the Present* (London: Bloomsbury Academic Press, 2016), 116.

¹⁸⁶ Brion Gysin, "Cut-Ups: Project for a Disastrous Success" in William S. Burroughs and Brion Gysin, *The Third Mind* (New York: Viking Press, 1978 [1960]), 43-4.

¹⁸⁷ Gysin, *The Third Mind*, 44.

poems
 newspapers
 magazines
 the bible
 the koran
 the book of mononi
 la-tzu
 confucius
 the bhagavad gita
 anything
 letters
 business correspondence
 ads
 all the words
 slice down the middle dice into sections
 according to taste
 chop in some bible pour on some Madison Avenue
 prose
 shuffle like cards toss like confetti
 taste it like piping hot alphabet soup
 pass yr friends' letters yr office carbons
 through any such sieve as you may find or invent [...]

piece together a masterpiece a week
 use better materials more highly charged words
 there is no longer a need to drum up a season of
 geniuses be your own agent until we deliver
 the machine in commercially reasonable quantities
 we wish to announce that while we esteem
 this to be truly the American Way
 we have no commitments with any government
 groups
 the writing machine is for everybody
 do it yourself until the machine comes
 here is the system according to us¹⁸⁸

The cut-up offered a salutary alternative to authorial conventions like genius, originality, and authenticity. His invitation to regard pre-existing texts from high and low cultural sources as a treasure trove of raw material to appropriate and cut-up into new arrangements had an obvious corollary practice in *détournement*. In fact, Gysin's cut-up and Debord's theory of *détournement*

¹⁸⁸ William S. Burroughs, Brion Gysin, Sinclair Beiles, Gregory Corso, *Minutes To Go* (Paris: Two Cities Editions, 1960), 3-5.

display such overt similarities that, given the artists' proximity and shared friendships with the British writer Alexander Trocchi and French sound poet Henry Chopin, they imply a possible exchange of ideas. But no meaningful associations between Debord's circle and the Beats seemed to take place. Certainly, language differences, the Beats' preference for gay bars, and the Situationists' gravitation to straight milieus all represented barriers to socializing.¹⁸⁹ What's more, any chance of cooperation between the groups vanished early in the Beats' Paris residency after the June 1958 issue of the Situationists' journal took note of their esotericism. "The rotten egg smell exuded by the idea of God," the unsigned piece read, "envelopes the mystical cretins of the American 'Beat Generation.'"¹⁹⁰

Quickly smitten by Gyson's cut-ups, Burroughs proselytized for the technique. "I have met my first master in Brion Gysin," he gushed to Ginsberg in late 1959.¹⁹¹ In January of 1960 he insisted to Irving Rosenthal that cut-ups soon "will catch on in a big way."¹⁹² In June he begged the skeptical Ginsberg to at least try it out on a copy of the letter he included in the envelope: "Take the enclosed copy of this letter. Cut along the lines. Rearrange putting section one by section three and section two by section four. Now read aloud and you will hear My Voice. Whose voice? [...] Don't think about it. Don't theorize. Try it. Do the same with your poems."¹⁹³ Gyson and Burroughs's celebration of the technique as a writing machine for everyone earned little respect. In fact, it scandalized Burroughs's associates and brought no end

¹⁸⁹ U.S. author Terry Southern, however, recounted an evening out on the town in the company of Trocchi, Algerian Situationist Midhou Dahou, and Debord. Andrew Scott, *Alexander Trocchi, The Making of the Monster* (Edinburgh: Polygon, 1996), 71. Sam Cooper's forthcoming book *The Situationist International in Britain: Modernism, Surrealism, and the Avant-Gardes* (New York: Routledge, 2017), which will consider geography's role in shaping the S.I.

¹⁹⁰ "The Sound and the Fury," unsigned editorial, *International Situationist* #1 (Paris, June 1958); reprinted in Knabb, *Situationist International Anthology*, 41.

¹⁹¹ "Letter to Allen Ginsberg dated October 30, 1959," in William S. Burroughs, *Rub Out the Word: The Letters of William S. Burroughs* edited by Bill Morgan (New York: HarperCollins, 2012), 10.

¹⁹² "Letter to Irving Rosenthal dated January 24, 1960," Burroughs, *Rub Out the Word*, 19.

¹⁹³ "Letter from William S. Burroughs to Allen Ginsberg dated June 21, 1960" in *Rub Out the Word*, 31.

of professional grief. Already in 1960, Beat poet Gregory Corso disavowed it in a postscript he demanded Ginsberg and Burroughs include alongside cut-up poems he published alongside of theirs in *Minutes to Go*: “To the muse I say 'Thank you for the poesy that cannot be destroyed that is in me'—for this I have learned after such a short venture in uninspired machine-poetry.”¹⁹⁴

Ambivalent over ceding authorial control to a technique, Ginsberg confided to Jack Kerouac in 1963, “Burroughs about killed me off with his cut-ups.”¹⁹⁵ The New York Times threatened to lock away his scissors and advised him to terminate his association with Ginsberg.¹⁹⁶ If these rebukes were not enough, at a restaurant in Paris with publishers Barney Rosset and Maurice Girodias, Samuel Beckett joined in. “That’s not writing,” he quipped, “it’s plumbing,”¹⁹⁷ dismissing cut-ups for diluting the modernist aesthetic of originality and authorial integrity Beckett prized and that seemed inviolable at mid-point between the discourse networks of 1900 and 2000.

Undeterred by the incomprehension of persons they admired, Burroughs and Ginsberg did not stand pat with the methodology Burroughs described to Ginsberg, and between 1959 and 1962 they expanded cut-ups with new techniques. First, Ginsberg composed “Poem of Poems,” 1959, on a tape recorder, borrowing phrases from Shakespeare’s *Sonnets*, 1609, St. John Perse’s *Anabasis*, 1924, and writings by Aldous Huxley. While “Poem of Poems” expressed none of *Educative Value*’s sharp critique, it expressed a noteworthy stylistic *frisson* with Debord’s radio

¹⁹⁴ Gregory Corso, “Note for my Contribution to the Cut-Up System,” Ginsberg, Burroughs, Beiles, and Corso, *Minutes To Go*, 63.

¹⁹⁵ Letter from Allen Ginsberg to Jack Kerouac dated June 17, 1963, *The Letters of Allen Ginsberg*, edited by Bill Morgan (Philadelphia: Da Capo Press, 2008), 288.

¹⁹⁶ “[I]t is as if Burroughs has taken hold of his flaws, weaknesses, errors and indulgences, and instead of dealing strictly with them, has made them the subject of his aesthetic intention,” thundered Herbert Gold. “I would like to lock up his scissors and paste and make him tell it straight from beginning to end, as if he were on a train trip with a new friend [i.e., someone other than Brion Ginsberg].” Herbert Gold, “Books of the Times,” *The New York Times* (March 20, 1966), 288.

¹⁹⁷ Ted Morgan, *Literary Outlaw: The Life and Times of William S. Burroughs* (New York: Avon Books, 1985), 323.

piece.¹⁹⁸ But while Gysin introduced audiotape recording in 1959, he remained fixated on chance, even regarding as the culmination of a burgeoning art genre he must have become aware of from U.S. composer John Cage's well-publicized residency at the Darmstadt Ferienkurse that year. "Surely this is, at last," he wrote of cut-ups in 1960, "the 'artless art' the Zen-zooters are pushing. You can't call *me* the author of those poems, can you? I merely undid the word combination, like the lock on a piece of good luggage, and the poem made itself."¹⁹⁹ Chance's role in cut-ups diminished throughout 1960, and by December Gysin composed *Let the Mice In*, which also featured an audiotape recording played back while he painted a canvas in front of an audience assembled at London's Institute for Contemporary Art (ICA).

I talk a new language. You will understand.
I talk about the springes and traps of inspiration.
IN SPIRATION—what you breath in You breathe in words. Words breathe you
IN. I demonstrate Thee, the Out-Word in action both visual and aural, racing
away in one direction to sounds more concrete than music and, in the other, to
paintings like television screens in your own head. I am better than Transducer for
I show you your own interior space.²⁰⁰

Too well formed to be the product of chance alone, its maniacal fluctuations in tone, occult incantations, and musical snippets reflected the second significant expansion of the cut-up technique.

That expansion came about as Burroughs was swept by a tsunami of creative inspiration fuelled by cut-ups and by texts on biology, genetics, and virology he devoured from December 1958 to January 1960.²⁰¹ The crystalline Double Helix discovered to hold and order genetic material in 1953 particularly captured Burroughs's attention. Although seemingly far afield from

¹⁹⁸ Gysin, "Poem of Poems," *Back in No Time*, 102-112.

¹⁹⁹ Brion Gysin, "Cut-Ups Self-Explained," *Back in No Time: The Brion Gysin Reader*, 131-2.

²⁰⁰ Brion Gysin, "Let the Mice In" in Burroughs and Gysin, *The Third Mind*, 61-70

²⁰¹ Burroughs's "*annus mirabilis*," according to his literary executor. James Grauerholtz, "Interzone" in *Word Virus: The William S. Burroughs Reader*, edited by James Grauerholtz and Ira Silverberg (New York: Grove Press, 1998), 117.

early cut-ups' poetical form, James Watson and Francis Crick's surmise that the mutability of genetic structure might allow for new permutations of living matter caught fire in Burroughs's imagination. "Self-duplicating process will be found," they predicted, "to involve the alternative formation of complementary chains."²⁰² If irregular assemblages of nucleotides could be altered to change an organism's physical attributes, Burroughs resolved that the principle was just as applicable to art and literature. In 1960, he made the connection between genomics and cut-ups explicit by pasting sections of a newspaper article about viruses into the body of a poem:

ANYONE CAN RECORD WORDS—CUT UP your own hustling
 myself Do you identity? "Yeah but why?" Working on
 Virus

Biologist Changes Position of Genes

by Robert C. Toth

New York, Jan. 29 [1960] (Past Time) A German virologist has succeeded in modifying the basic hereditary material of a virus in such a way as to be able to identify its effects on future generations perhaps the most significant set-up to date in deciphering the language of life.

"Sooner or later this will lead to an understanding of The Language of the virus which is the language of life," he said. "The entire message of life is written in four words with our genes" Dr. Stanley explained--adenine guanine thiamin or cytosine [...] Dr. Stanley sees the entire code being cracked "We will be able to write the message that is you"²⁰³

Published in the *New York Herald Tribune*, Toth's article reported on Dr. Gerhard Schramm's presentation in New York City on January 25, 1960; however, a language barrier between the German-speaking doctor and U.S. journalists led both the *Tribune* and *Times* to quote physician Wendell Stanley on Schramm's work.

"Sooner or later this will lead to an understanding of the language of the virus, which is the language of life. The entire message of life is written out four-letter words in our genes," Dr. Stanley explained. "Each letter is actually a molecule—adenine, guanine, thymine, or cytosine—which are built into the long chain-like

²⁰² F.H. Crick and J.D. Watson, "The Complimentary Structure of Deoxyribonucleic Acid," *Proceedings of the Royal Society* # 223 (1954), 95.

²⁰³ William S. Burroughs, "WORDS RECORDED BY William Seward Burroughs" in William S. Burroughs, Brion Gysin, Sinclair Beiles, Gregory Corso, *Minutes To Go*, 60-61.

gene. The order of these links in the chain—whether it be one, two, three, four; or one, two, four, three, for example—determines what we look like, how resistant we are to certain diseases, etc. Geneticists always have been looking for ways of determining the precise way these links, or letters, are arranged to spell out man.”²⁰⁴

Although the details of Schramm’s argument that mutating viruses with nitrous acid and using the result to inoculate patients against viral diseases got lost in translation, the correlation between language and viruses was apparently crystal clear to Burroughs.²⁰⁵ In a second cut-up of Toth’s article, Burroughs hinted cut-ups need not be strictly confined to texts or tape recorded texts Debord and Gysin had product; the multi-sensory capabilities of technological reproducibility might effectively operate on “thoughts feelings and *apparent* sensory impressions.”²⁰⁶ Whether composed of reality or the apparently “real,” cut-ups executed with recording technology would operate upon the individual affectively to manufacture ideology, world view, personality, and so on in the same way that television, radio, and cinema did.

With the genomic metaphor in mind, to maximizing cut-ups potential to alter perception required expanding the technique once again—this time with a brilliant device Burroughs called the “fold-in.” “A page of text—my own or someone else’s,” he explained, “—is folded down the middle and placed on another page—The composite text is then read across half one text and half the other—The fold-in method extends to writing [and] the flashback used in movies to enable a writer to move backward and forwards in time.”²⁰⁷ Fold-ins allowed an artist to slide pages until felicitously recombined phrases emerged. Suddenly, the hands-on tactility of celluloid film had a

²⁰⁴ Robert C. Toth, “Solving the Riddle of Life Comes a Step Closer,” *New York Herald Tribune* (January 26, 1960), 25; see also Harold M. Schmeck Jr., “Mutation Agent Held Clue to Life,” *New York Times* (January 26, 1960), 30.

²⁰⁵ The idea is discussed in Rudi Rott, “The Post-Loeffler-Frosch Era: Contribution of German Virologists,” *100 Years of Virology: The Birth and Growth of a Discipline*, edited by Charles H. Calisher and M.C. Horzienek (Vienna: Springer-Verlag, 1999), 48-9.

²⁰⁶ William Burroughs and Brion Gysin, *The Exterminator* (San Francisco: The Auerhahn Press, 1960), 10.

²⁰⁷ Burroughs and Gysin, *The Third Mind*, 96.

textual equivalent that radically subordinated chance to selection, for the artist made on-the-fly revisions and, most importantly, generated semantically coherent results. “I edit, delete, and rearrange as in any other method of composition,” he noted. “Perfectly clear narrative prose can be produced using the fold-in method.”²⁰⁸ Now, however, Burroughs looked beyond texts and into the auditory channel of radio and television broadcasting, where realities of the 1950s were manufactured in the form of ideology.

The Move Into Auditory Suturing: *Handkerchief Masks*

The impetus to extend the cut-up once more arrived in the form of a new relationship. In 1959 Burroughs acquired an intellectual and romantic partner named Ian Sommerville (1940-1976), a slender, nineteen-year-old man on break from Cambridge University and working for the summer in Paris to renovate Le Mistral Bookstore’s electrical system. An exacting student-mathematician with many aptitudes, Sommerville brought invaluable skills to the Beat Hotel’s literary and art-minded residents. He immediately repaired the Revere audiotape deck Gysin bought in 1953 and helped Gysin construct “Poem of Poems” for the 1960 ICA performance.²⁰⁹

Sommerville likely alerted Burroughs to the possibilities of audiotape traditional writing tools offered no corresponding capacity to match. These included auditory perception’s grasp of simultaneities whereas text may only be read one at a time. Second, magnetic tape allowed an operator to change playback speed, pitch, and coherence by lightly laying a finger on the spool feeding into the playback head or by advancing the take-up spool.²¹⁰ On the minus side, at only

²⁰⁸ Burroughs and Gysin, *The Third Mind*, 96.

²⁰⁹ Barry Miles, *The Beat Hotel* (New York: Grove Press, 2000), 213.

²¹⁰ According to Genesis P-Orridge, Burroughs, Sommerville, and Gysin called this practice “inching,” but it is better known today by the name hip hop producers gave to it, “scratching.” P-Orridge, liner notes for William S. Burroughs, *Nothing Here Now But the Recordings* (London: Industrial Records, 1981), LP sound recording.

one-quarter inch wide and razor thin, audiotape defied scissor-and-glue editing that paper texts and the photographic image in still and moving applications so easily submitted to.

By autumn 1959 Burroughs began to cut-up news reportage he recorded from the radio. His often cited as a primary inspiration *The Drunken Newscaster*, an audiotape recording of scrambled news broadcasts a bookstore owner named Jerry Newman played for him in 1953.²¹¹ “You can evoke the Drunken Newscaster right where you are sitting now. Record a few minutes of news broadcasts. Now rewind and cut in at random short bursts from other news broadcasts. Do this four or five times over. Of course, where you cut in words are wiped off the tape and new juxtapositions are created by cutting in at random.”²¹² Notably, the cut-up technique, as he wrote of it in this 1960 essay, still emphasized chance as the key tactic and did not reflect the advantages of applying the fold-in to audiotape recordings.

In December 1960, however, mature audiotape cut-ups emerged after Sommerville quit his studies at Cambridge University and returned to Paris with his own audiotape recorder.²¹³ Soon afterward, another resident of the Beat Hotel donated a third machine to the collective media project forming among Burroughs, Gysin, and Sommerville. With three tape decks, the artists could capture sounds from the radio on two decks, fast-forward to specific sounds, and then play these while a third machine recorded them in the new sequence. “Life begins with two tape recorders,” Gysin told Terry Wilson in an interview, “because with two you can make

²¹¹ Efforts to locate *The Drunken Newscaster* have come up empty, leading to speculation that Burroughs may have fabricated the tale. See Douglas Kahn, “Where Does Sad News Come From?” in *Cutting Across Media: Appropriation Art, Interventionist Collage, and Copyright Law*, edited by “Kembrew McLeod and Rudolph Kuenzli (Durham and London: Duke University Press, 2011), 94-117.

²¹² Burroughs and Gysin, *Third Mind*, 89.

²¹³ According to Cambridge University archivist Robin Myers, Sommerville “does not figure hugely in our records. All I can tell you is that he came up to Corpus [Christi College] in 1958 to read Mathematics, was awarded a II in Part I of the mathematical Triplos in 1960 and then disappeared from our records,” Letter from Robin Myers to the author dated June 16, 1998. In de-jargonized terms, Sommerville partially completed a three-year course of study with passing grades.

copies. Experiment begins with three tape recorders, where you can really get things going back and forth.”²¹⁴ By carefully positioning tape-recorded words into coherent phrases with multiple machines, the artists extended folding-in into technological reproducible media. Presence-signifying voices diverted from any necromantic aura-space of recording could be revived in another as critique.

This lent Burroughs’s tape-recorded cut-ups a new complexity and power still audible in *Handkerchief Masks*, 1964. Likely assembled in London from radio news items about a burglary, the Vietnam War, and a speech by then-U.S. president Lyndon Johnson, *Handkerchief Masks* conveyed the impression that a conspiracy between bankers, Wall Street financiers, corporate military contractors, and a sitting U.S. president had taken place to divert funds to support covert guerilla activities. It opens with the voice of a newscaster announcing that Johnson had just been caught breaking into a hotel room where he held three employees hostage with a firearm:

Hoodlums put on handkerchief masks, arm themselves—[brief Spanish-language broadcast]—most of his criticism for Red China rather than North Vietnam [sound of typewriter keys clicking]—Johnson addressing a meeting of editorial cartoonists at the White House—held three maids at gun point and proceeded to ransack the apartment.²¹⁵

This sutured version of reality next implies that Johnson was already being indicted for lying to a grand jury and exposed his incorrect assumption that China and Vietnam, two avowed enemies, had aligned to threaten capitalism in the West. Moreover, Burroughs’s ventriloquism implies that Johnson diverted money to Scrofane and Gittleson, individuals managing a covert war fought by guerillas who disguised themselves as U.S. marines while attacking targets in Vietnam. In return for money he sends to support this false flag operation, Johnson receives jewelry:

²¹⁴ Brion Gysin, cited in *The Beat Hotel*, 214.

²¹⁵ Burroughs, *Nothing Here Now But the Recordings*, n.p..

Once peace was established—he offered to support an Asian development bank to help finance economic progress, and the president added—on trial for perjury for allegedly lying to a grand jury about the Dunkin Parking Meter—union in helping—send jewelry—This late word: the House Education and Labor—Councils in Washington are showing interest—about Scrofane's getting the money [, which] was made by Gittleson to form—a textile factory on the outside of Saigon.—That daring attack mounted by guerrillas masquerading as South Vietnamese marines—cease fire policed by an afran....[sound of tape reversing]—would prove that Scrofane actually got the money—²¹⁶

Continuing to implicate the powerful in wrongdoing, the reporter's voice offers breaking news that a protracted stalemate in negotiations was actually arranged by aristocratic elites who profited from making sure the hostilities continued:

Southwest of Saigon a battalion of guerrillas pinned down Vietnamese troops with small arms fire (fifteen government soldiers) [...]—it was advanced in London at a meeting that the owners started evacuating their wives and children from the North Vietnamese capital. The North Vietnamese fear that the city may come under American air attack—and an assortment of Vice Counts and Barons *listened* but no action was taken, almost a regal amalgamation—²¹⁷

In *Handkerchief Masks*, Burroughs continually cuts banal weather reports into serious reportage on fate of proposals to end the Vietnam War as if these were equally relevant news items when, of course, they are not. He on several occasions lampoons wealthy individuals' fears that war's cessation might adversely effect financial markets, shuffling phrases from one news story into another to expose a hidden truth—that war is waged for economic reasons, not ethical ones:

W.I.N.S. Newstime—reported only to Austria or certain other countries—a pleasant afternoon high well into the 70s, these are the developing stories—President Johnson repeats his peace proposal—to the Chinese communists in a

²¹⁶ Burroughs, *Nothing Here Now But the Recordings*, n.p.

²¹⁷ Note how even though the city reported on is Hanoi in the north of Vietnam, the cut-up seemed to presage the U.S. military's shambolic evacuation of Saigon in military helicopters, an event witnessed by millions of television viewers on April 29, 1975. Burroughs, *Nothing Here Now But the Recordings*, n.p.

White House address to a group of editorial cartoonists. His remarks—he'll be—
New York's desperate financial—suicide—repaying later²¹⁸

Humorously, the newscaster's voice reports that Johnson, during a speech on peace negotiations, suddenly changed the subject to weather, altering the listener to the fact that informational and interstitial filler-type programming exists on broadcast formats to distract attention from more politically relevant and disturbing news. In another farcical, yet wholly believable twist on standard reportage, the voice reports that war profiteers have negotiated a backroom deal with Chinese officials to sabotages peace negotiations for their own capital gains:

“Mr. Johnson renewed his call for unconditional peace talks and emphasized—the weather.—[commercial featuring cheerful female voice:] Draft's Chocolate Ice Cream—This afternoon, the high—thanks China for blocking Vietnam peace negotiations—”²¹⁹

Handkerchief Masks concludes with an adroit, multi-tracked collage of news and sound effects. The newscaster reports that rebel snipers in the Dominican Republic kill a U.S. soldier, setting off a chain of events that culminate in a murder of Connecticut suburbanites. Dubbing a cacophony of static and sirens with the multi-recorder method, Burroughs crafted a realistic, on-the-scene report of violence during a diplomatic debate at the United Nations building:

Rebels snipers have killed another Marine in The Dominican Republic. The Marine's death brought to 18—[blast of static]—[police sirens]—destroys a Connecticut home of a new York executive claiming three lives.—The UN Security council resumes debate—as the sniping continued, representatives of the Organization of American States were at work trying to find—[simultaneous radiophonic voices]—²²⁰

As an absurd reality crafted to seem as real as possible to sharpen apperception, *Handkerchief Masks*' turned out to be quite real after several major political scandals it depicted actually took place. First of all, it anticipated the Watergate Hotel burglary by operatives authorized by U.S.

²¹⁸ Burroughs, *Nothing Here Now But the Recordings*, n.p.

²¹⁹ Burroughs, *Nothing Here Now But the Recordings*, n.p.

²²⁰ Burroughs, *Nothing Here Now But the Recordings*, n.p.

president Richard Nixon, which led to his resignation from office in 1974 after a protracted congressional investigation. Second, in the Iran-Contra affair, a national security agency operative, Oliver North, diverted proceeds from illegal arms sales to Iran finance a guerilla force trying to overthrow Nicaragua's democratically elected, socialist government in 1980.

Even though it came true Burroughs's sutured radio artwork proffered a reality inimical to the messages embedded in the broadcasts he built it from; as such, it proved that critics' necromantic despair over recorded bodies, voices, and spaces was not a death sentence for the recording-based art. Burroughs had reanimated the newscaster's voice and made it speak salutary truths about political corruption. Without resorting to literary devices, he placed a resistive message inside of a radio voice that had delivered politically retrograde news day in and day out.

In 1969, Burroughs explained how the cut-up technique reversed oppressive ideological formations:

Image and word are the instruments of control used by the daily press and by such news magazines as *Time*, *Life*, *Newsweek*, and their English and continental counterparts. Of course, an instrument can be used without knowledge of its fundamental nature or its origins. To get to the origin we must examine the instruments themselves; that is, the actual nature of word and image. Research along these lines is discouraged by those who use word and image as instruments of control.²²¹

The implications of suturing in the auditory channel for Burroughs's mature cut-up novels are clear: the Nova Mob's liberation struggle with the Elders of Minraud employed cut-ups to battle the noxious films of pain and hate distributed by Death Dwarves, a thin veil for the elite social class that, as far as Burroughs was concerned, controlled the electromagnetic frequency spectrum of radio and television like the barons and vice counts who stage-managed world historical events in *Handkerchief Masks*. Later in the twentieth century, more suture artists worked in the

²²¹ Daniel Odier, *The Job: Interviews with William S. Burroughs*, (New York: Penguin Books, 1974), 59.

auditory channel, of course, often with better tools than Burroughs had at his disposal. Without question, his and Debord's interventions, crafted on inexpensive magnetic audiotape recorders, brought the discourse network of 1900's auditory channel up to speed with the appropriative sophistication filmmakers displayed in the 1920s.

Chapter 2, Original in Every Way it Matters: Recording, Automation, and Chance in Richard Maxfield's New York City Art Music, 1958-62

Modern calculating machines are not pure automata; they are technical beings which, over and above their automatic adding ability (or decision-making ability, which depends on the working of elementary switches), possess a very great range of circuit-commutations which make it possible to program the working of the machine by limiting its margin of indeterminacy.

--Gilbert Simondon, 1958²²²

In a February 4, 1967 letter to John Cage, the forty-year old composer Richard Vance Maxfield (1927-1969) defended his submission to a volume of experimental music scores, most of them graphical and conceptual, which Cage was readying to publish as *Notations*, “Aside from the twelve tone chamber score I sent, which I affirm to be original (in the only way it matters), I can think of no alternative (more original).”²²³ Presumably, Maxfield’s comment responded to a concern that the score he submitted was too conventional, maybe even too unoriginal, to fit alongside those Cage selected. The phrase “original in the only way it matters” had a dual meaning that referred to both authorship and stylistic originality. Maxfield *had* written it; but, as he acknowledged in so many words, the score *was* unoriginal insofar as it was a vestigial remnant of the twelve-tone musical style Maxfield had long since abandoned to fashion a body of magnetic audiotape-centered music composed with chance techniques. Why he sent Cage a superannuated work may never be known, but personal and professional difficulties Maxfield experienced while teaching at San Francisco State University affected a number of decisions he made in 1967. He evidently acceded to Cage’s request for an experimental score, sending along *Dream*, 1967, a piece for three electronically-altered voices—the first treated to sound resonant

²²² Gilbert Simondon *On the Mode of Existence of Technical Objects*, translated by Ninian Mellamphy (Paris: Aubier, Editions Montaigne, 1958), 5.

²²³ Richard Maxfield, unpublished letter to John Cage dated February 4, 1967. The John Cage Correspondence Collection, Northwestern University.

and musical, the second to resemble popular vocalist Peggy Lee; and a third to mimic the compressed audio frequencies of a transistor radio. The oblique, grammatically jumbled postscript “An Unique Copy” referenced important questions that had, perhaps more than any other artist of the period, preoccupied Maxfield for a solid decade, e.g., “How had technological reproducibility and automation changed musical composition and performance?” and “How should artists respond to new conditions such changes had wrought?”

Most obviously, *Dream* disclosed Maxfield’s knowledge of electronic signal processing, recording’s transformative potentials for art, and the composer’s affinity for Lee (yet to sing the Stoller-Lieber penned camp classic “Is That All There Is?”). Less obviously, it exemplified the “event art” format scientist-artist George Brecht pioneered as a student in Cage’s 1958 New School composition class, the watershed year Brecht, Allan Kaprow, Dick Higgins, and Maxfield all attended. Despite *Dream*’s technological and conceptual sophistication, Maxfield likely knew it did not shine with the pristine grace and originality of his earlier compositions. To his credit, Cage published *Dream* anyway—perhaps if only as a symbolic gesture to a friend in difficult straits.²²⁴ Maxfield’s work and life matched well the social and disciplinary crises of the late 1950s, a period when artists openly used drugs, openly explored their sexualities, and openly disdained traditional material or technical supports (e.g., paint, canvas, clay, bronze, musical pitch) to embrace drama, film, sound recording, performance, chance operations, and so on. Yet, his work’s value, now obscured by decades of neglect, is relevant to artists working with digital recording technologies, which harbor in their innards characteristics that set arbitrary limits on creative potential.

²²⁴ Richard Maxfield, *Dream*, in *Notations*, edited by John Cage (New York: Something Else Press, 1969) n.p.

This would be a familiar problem to Maxfield, who sixty-six years ago [Image 2.1] aimed to reconcile technological reproducibility and machine automation with chance and musical indeterminacy. And while it is known that artists began to explore chance in the cosmopolitan centers by 1958, and that mainline conceptualists would employ it much later, few art historians have acknowledged chance's importance in post-1945 art. To fill in the lacunae that surround Maxfield's life and work, this chapter recounts his artistic training and European excursions, details his aesthetic radicalization in 1958, analyzes his transitional and primary compositions, evaluates his writing about technological reproducibility, disambiguates his ideas on chance from Cage's, and considers the role of visual art and science in his works. As this project progressed, paying attention to younger artists' deployments of Maxfield's innovations became unavoidable, as did the need to investigate the circumstances of his sadly premature death in 1969. Lastly, practitioners frustrated with the discourse network of 2000's digital tools may find Maxfield's work with chance methods a valuable for subverting chipsets and software that sometimes limit creative possibilities. He was, perhaps foremost, a hacker *avant l'lettre*, operating in the domains of physics, electronics, recording, cybernetics, cryptology, environmentalism, and psychoacoustics—practically in the shadow of new and bold computational possibilities his music reflected and subverted.

Agency and Automation: Maxfield's Stake in Composition, Recording, and Performance

A childhood musical prodigy who played the clarinet in Seattle's All Youth Orchestra, and who wrote a complete symphony while still in high school,²²⁵ Maxfield's musical aptitude did not stop him from enlisting in the Navy at the age of seventeen during the last year of World War Two. After obtaining an early release, he studied music at Stanford University in 1946, but

²²⁵ William Dawes, "Richard Maxfield", accessed July 23, 2014, available at <http://melafoundation.org/rm01.htm>.

transferred to U.C Berkeley in 1947 to work with Roger Sessions after hearing the atonal music Sessions composed for *The Trial of Lucullus*, 1947, Bertolt Brecht's libretto about a Roman general whose spirit confronts a judge and jury deliberating as to whether his soul should spend eternity in Hades, or the Elysian Fields.²²⁶ Sessions, a twelve-tone composer and formerly the teacher of U.S. born Lincoln Brigand Conlon Nancarrow, nurtured Maxfield by recommending him for U.C. Berkeley's Holbrook Scholarship, and, in his senior year, the Hertz Prize.²²⁷ The Hertz award funded Maxfield's studies with Ernst Krenek in Los Angeles in the summer after graduation and a European excursion from 1951 to 53, about which little is known, but where he probably met Pierre Boulez, Herbert Eimert, and Luigi Nono, composers extending twelve-tone concepts into new areas of music and establishing roles for two promising new technologies.²²⁸ First of all, magnetic audiotape recorders fixed sounds in a linear format that made storing, retrieving, editing, or erasing sounds easy and precise. Second, voltage-driven oscillators made from naturally occurring and perfectly periodic crystals, resistors, capacitors, and transformers allowed numerically calculated signals to become customizable sounds of potentially unlimited duration.

The propitious timing of Maxfield's trip abroad afforded him a bird's eye view of how these inventions were altering Western art music, both conceptually and practically. Hardly sprung full-blown like Athena from the head of Zeus, musical automation was linked to numerous scientific and historical debates of the 1950s and '60s. Automation was, in those years,

²²⁶ Although Brecht's libretto had been published as a radioplay in 1937, Stockholm radio refused to air the work before Hildung Rosenberg composed music for it. Paul Dessau set Brecht's text to music in 1949 for debut at the Berlin *Staatsoper* where, ironically, Socialist Unitary Part bureaucrats deemed the work too formal. See Hans Peter Obermayer, "Yes to Nothingness' *The Condemnation of Lucullus*—An Opera of Peace by Bertolt Brecht and Paul Dessau" *International Journal of the Classical Tradition*, Vol. 8, No. 2 (Fall 2001), 217-33.

²²⁷ "Richard Maxfield, *Curriculum Vitae*," John Cage Correspondence Collection, Northwestern University.

²²⁸ Dawes, n.p.

one of the anticipated benefits of logic-driven electronic servomechanisms that would, as Norbert Wiener predicted in his book *Cybernetics*, 1948, be applicable within the medical, defense and communications industries, a prediction that seemed to come true when, by 1955, tape-operated Computer Numerically Controlled manufacturing implied the wholesale replacement of human labor.²²⁹ It was, however, no social panacea. On the one hand, automation promised a future of open-ended leisure for persons relieved of onerous work; on the other hand, no one was sure if an aftermath of catastrophic unemployment awaited the automation of labor.²³⁰

Hardly immune from the sweeping social and economic consequences of computation, experimental musical composers and performers provided an important test population for the automation of cultural production, particularly after 1952, the year voltage-controlled wave generators and high fidelity magnetic audiotape recorders were available to electronic studios such as Cologne's *Westdeutscher Rundfunk*, Paris's *Radiodiffusion Francaise*, and, after 1954, to Milan's *Studio di Fonologia*. Wittingly or not, these recording studios were positioned to foster a key transition away from the situation where performers resonated acoustical instruments in a shared acoustical space to one in which composers themselves, or with assistance from an engineer, generated electronic sounds directly onto magnetic audiotape. While tempted to simply copy the sounds of traditional musical instruments, and therefore replace musicians, several of automation's early post-1945 adherents harbored ambitions well beyond that. Indicative of the

²²⁹ Hartley E. Howe, "Teaching Power Tools to Run Themselves," *Popular Science* (August, 1955), 106-9, 222-4.

²³⁰ This concern survives into the twenty-first century's digital economy, which allows some firms to rake in immense profits while employing few people. "In 1964," *The Atlantic Monthly* noted, "the nation's most valuable company, AT&T, was worth \$267 billion in today's dollars and employed 758,611 people. Today's telecommunications giant, Google, is worth \$370 billion but has only about 55,000 employees—less than a tenth the size of AT&T's workforce in its heyday." Derek Thompson, "A World Without Work," *Atlantic Monthly* (July/August, 2015), 53.

hubristic mentality subtending automation, the co-founder of the WDR electronic music studio in Cologne, Herbert Eimert, observed in 1958, “Only in coming to electronic music can we talk of a real musical control of nature.”²³¹

As Maxfield would have learned in Europe, Eimert’s rhetoric referenced the perceived challenges electronic music posed to aristocratic patronage systems and the theatricality of Western art music performances. Historically, composers and musicians received remuneration to write, rehearse, and publicly perform compositions to meet the expectations of audiences who assembled, in a single space, to *observe* the performance as much as to *listen*. Despite music’s highly collaborative and interpretive processes, compared to the enormous complexities of, say, narrative filmmaking, musical composition had remained a stable authorial object for centuries. Disputes over a composition’s authorship were rare, but the score written by a composer’s hand always necessitated interpretation by a conductor and performers whose participation was just as theatrical as it was musical in the live context. Electronic oscillators and audiotape machines threatened to eradicate theater from music, but they offered composers and interested visual artists important compensatory benefits. First, and most obviously, the tools of automated production allowed music to be generated, committed to a stable linear medium, edited, reproduced, broadcasted, and sold in an object form without the potential hazard of a human interpreter.

It merits noting that automation arose in an era of atonal, twelve-tone or serial music characterized, at the simplest level, by the rule that a pitch could not be reused until each of the other eleven were employed. Needless to say, performers of conventional classical music did not

²³¹ Herbert Eimert, cited in Barry Schrader, *Introduction to Electro-Acoustic Music* (Englewood Cliffs, New Jersey: Prentice-Hall, 1982 [1958]), 79-80.

always share, or even comprehend, modern composers' aesthetic objectives. A second by-product of automation was the game-changing proliferation of recorded objects that, as Jacques Attali observed, inverted the relationship of document and event.²³² Whereas the recording was once thought to document a meritorious performance, musicians began to perform rote imitations of their recordings to promote sales and to placate audiences who expected the performance to sound exactly like a recording with which they were familiar. A third, presumably undesired consequence of automation was that the recording technology implied the live concert's actual extinction. The danger it posed to performance, as Maxfield must have known, highlighted the unacknowledged role within music of theater. A question that went unasked during the twentieth century, "Why would collectives assemble to hear music if sound alone was the singular object of interest to audiences?" is one the present study will address, largely because Maxfield made a concerted effort to ask and answer it in his art music.

By 1950, three generations of inventors and composers had heralded musical automation, an idea discovered by chance in 1879, when a Massachusetts physician, C.G. Page, discovered that his battery, coil, and magnets produced a faint whine when in close proximity.²³³ U.S. inventor Thaddeus Cahill created one of the first automated instruments, the Telharmonium, "the latest gift of electricity to civilization, an art which, while abolishing every musical instrument, from the jew's-harp to the 'cello, gives everybody cheaply, and everywhere, more musical than they ever had before."²³⁴ At a weight of seven tons and astronomically expensive to build, Cahill's device remained in the prototype phase. Automation entered musical practice only after

²³² "What irony: people originally intended to use the record to preserve the performance, and today the performance is only successful as the simulacrum of the record." Attali, *Noise*, 85.

²³³ See Barry Schrader, *Introduction*, 63 and Lowell Cross, "Electronic Music," *Perspectives of New Music*, Volume 7, Number 1 (Autumn-Winter, 1968), 34.

²³⁴ Thomas Commerford Martin, "The Telharmonium: Electricity's Alliance with Music," *The American Monthly Review of Reviews*, Volume 33, Number 4 (April 2006), 421.

Lee DeForest introduced a third filament to the vacuum tube, substantially increasing its power. The so-called Audion was, DeForest insisted, “to the sense of sound what the microscope is to the sense of sight.”²³⁵ It allowed weak electronic signals to be calibrated and amplified, and a cavalcade of tube-powered oscillating electronic instruments like the Theremin and Ondes Martinot, appeared in its wake. Inspired by these electronic instruments, in the 1910s, ‘20s, and ‘30s, experimentation-minded composers Luigi Russolo, Edgar Varese, and George Antheil expanded Western art music’s vocabulary by introducing mechanical and electronic sounds into compositional practice. In 1937, the Mexican composer Carlos Chavez’s book *Toward a New Music: Music and Electricity* inaugurated a rhetoric of “new sounds” John Cage adopted in his article, “The Future of Music, Credo,” a publication that stamped electronic sound generation and playback with the imprimatur of a *bone fide* post-1945 avant-garde artist. Nearly coincident with Chavez and Cage’s ideas, French composer Pierre Schaeffer pioneered techniques of altering the speed, and direction in time, of sounds recorded with phonograph disc-cutting equipment, transforming recordings of ordinary sounds into harmonically complex noises resistant to musical notation. Calling the results of his experiments *musique concrete*, in 1948 Schaeffer switched over to magnetic audiotape recorders because, unlike phonographic disks, audiotape could be erased, rerecorded, sped up, slowed down, and edited countless numbers of times, finally allowing composers to treat the semiotic and material capabilities of sound that visual artists had enjoyed for one hundred years with photography and for fifty years with film.

Musique concrete, however, represented only one half of the emerging style known in the mid 1950s as Electronic Music. The other one-half, spoken for by proxy in the 1950s by

²³⁵ Lee DeForest, quoted in Mike Adams, *Lee DeForest: King of Radio, Television, and Film* (New York: Springer Science and Business Media, 2012), vii.

Germans, Eimert particularly, emphasized sounds of purely electronic origin as compositional material, and signaled the automation of musical production in ways quite different from the technological reproducibility that was magnetic audiotape's affordance. A key individual in electronic music, Werner Meyer-Eppler (1913-1960), was not a composer at all, but rather a physicist with a background in cybernetics who had labored in the 1940s to simulate human speech mechanically. In 1951, Meyer-Eppler and Eimert collaborated to place electronically fabricated sounds in the repertory of composers, not unlike Duchamp's ready-made physical objects. While neither wished to eradicate musical performance *per se*, both recognized the utility of generating sounds electronically and storing them magnetically. With assistance from Robert Beyer, Meyer-Eppler and Eimert built Cologne's West Deutsche Rundfunk radio broadcasting facility. Meyer-Eppler's book *Elektronische Klangerzeugung: Elektronische Musik und Synthetische Sprache*, 1949, served as template for engineers who incorporated signal-generating black boxes into Western art music throughout European and North America.²³⁶

As a probably visitor of the facilities where electronic oscillators replaced traditional orchestration in works by Schaeffer, Eimert, and Karlheinz Stockhausen, Maxfield witnessed several musical fault lines breaking wide open. First of all, *music concrete* blasted open causal relationships between performers, instruments, and sounds, miring audition in unprecedented semiotic ambiguity—a condition the writers Michel Chion, Trevor Wishart, and Brian Kane have called the *acousmatic*, “the apprehension or appreciation of a sound object independent of, and detached from, a knowledge or appreciation of its source.”²³⁷ Even purely electronic sounds,

²³⁶ Warner Meyer-Eppler, *Elektronische Klangerzeugung: Elektronische Musik und Synthetische Sprache* (Bonn: F. Dümmler, 1949).

²³⁷ Trevor Wishart, *On Sonic Art* (Amsterdam: Overseas Publishers Association, 1996), 67. Brian Kane's book on Pierre Schaeffer traces the origins of the *acousmatic* back to Pythagoras and appraised its reintroduction into

shorn of recognizable timber, failed to cohere in the ears of listeners with those made by traditional musical instruments and therefore qualified as *acousmatic*.

Experiences at Princeton, Milton Babbitt on Chance

On returning to the U.S. in 1953, however, Maxfield's compositions bore no influence of his European trip besides, perhaps, a renewed commitment to serialism. He studied with Aaron Copeland at the Tanglewood Music Center in upstate New York and, in the fall of 1954 entered Princeton University's M.F.A. program in musical composition, where he was reunited with Sessions, by then on the faculty. At Princeton, Maxfield also took instruction from the influential and intellectually formidable U.S. composer Milton Babbitt, whose mathematical background evidently brought him into contact with cryptology-related military projects during the Second World War, alongside mathematician Paul Erdős and, possibly, Claude Shannon and Alan Turing, who studied problems in cryptology at Princeton and discussed digital computers over lunch.²³⁸

Unusually for a prolific composer, Babbitt also published scholarly articles on the compositional techniques he adopted from European sources and employed in his work, even once commending Maxfield, evidently an excellent student, by name in a 1955 publication.²³⁹ Like the Europeans Boulez and Stockhausen, Babbitt subjected not just pitch, but also rhythm, duration, dynamic range, and timbre to serial methods in works that were not popular with even skilled concert musicians thanks to their extreme difficulty. Regardless of geographical location,

scholarly discourse. Brian Kane, *Sound Unseen: Acousmatic Sound in Theory and Practice* (Oxford: Oxford University Press, 2014), 4-7.

²³⁸ Babbitt discussed his classified work for the military in footage for the documentary film *Milton Babbitt: Portrait of a Serial Composer*, shot in the mid-1990s by his former composition student, later a journalist and queer activist, Robert Hilferty. Following Hilferty's death in 2009, Laura Karpman completed the film in 2011.

²³⁹ He was one, according to Babbitt, Milton Babbitt, "Some Aspects of Twelve-Tone Composition [1955]," *The Collected Essays of Milton Babbitt* (Princeton: Princeton University Press, 2003), 39.

serial composers sought musicians virtuosic and patient enough to capably perform their works. Perhaps more frustrated by the fallibility of interpreters than other academic composers, Babbitt had already resorted to automation in 1938, the year he tried to write music directly on optical-sound-film celluloid, yet another of Deforest's patents.²⁴⁰ Inspired to pursue this format's possibilities further, Babbitt asked the Radio Corporation of America to build an electronic tone generator with variable attributes, opening a dialogue that culminated, many years later, with assistance from a 1959 Ford Foundation grant, in the monolithic RCA Mark I and II Synthesizers that were housed in the Columbia-Princeton Electronic Music Studio on West 128th Street in Manhattan.²⁴¹

A major figure in 1950s U.S. art music composition openly hostile to John Cage, Babbitt rejected chance-based art or music on the grounds it was, as he wrote with characteristic rigor,

a possible attribute only of an infinite sequence, and the finite subsequences to which our discussion, in all realism, must be limited also must be viewed always in the light of this crucial emendation; for randomness is a property of a collection or ensemble of events, not a description of how the collection was produced or generated, since it is fundamentally characteristic of a random sequence that it can contain any sequence.²⁴²

Concerned solely with the final form of fixed notation, not the incidental, experiential daily life events highlighted in the *frisson* of intention and chance that emerges when Cage's works are performed, Babbitt regarded chance results as the mere artifacts of an intentional universe. A random occurrence was but one potential outcome of an infinitely large set of possibilities; and, as such, chance harbored no redeeming aesthetic quality. Informed by a deterministic philosophy

²⁴⁰ "To be sure, most of the electronic instruments of the first half of this century offered little beyond limited sonic novelty, primarily because they were 'instruments,' to be performed in the usual sense. But the 'handwritten sound-track' of the movies where the 'instructions' were provided by wave forms directly drawn on film, possessed—potentially, at least—all of the properties of today's electronic media." Milton Babbitt, "The Revolution in Sound, 1960," *Collected Essays*, 70-1.

²⁴¹ Milton Babbitt, "Brave New Worlds [1994]," *Collected Essays*, 450.

²⁴² Milton Babbitt, "Contemporary Music Composition and Musical Theory as Contemporary Intellectual History [1972]," *Collected Essays*, 288.

of mathematical intentions and resultants, unwilling to confer aesthetic value on accidents, and a rationalist who perceived reality as an unbreakable chain of causal events, Babbitt's position stood diametrically opposed to the Chinese view of reality C.G. Jung discussed in his forward to the Bollingen Press edition of *I-Ching*, 1950. "While the Western mind carefully sifts, weighs, selects, classifies, isolates," Jung observed, "the Chinese picture of the moment encompasses everything down to the minutest nonsensical detail, because all of the ingredients make up the observed moment."²⁴³ Whereas this edition of I-Ching, gifted to Cage, liberated his art music decisively, Babbitt would hear none of it. "Why take a chance," he asked, "with chance?"²⁴⁴

Christian Wolff, the Fulbright Year Abroad, Bruno Maderna and Werner Meyer-Eppler

It was, of course, the young U.S. composer and future classics scholar Christian Wolff (b. 1934) who had given Cage the first complete English language translation of *I-Ching*, 1950, the second century B.C.E. Chinese oracle for divining the future. Wolff's own father, Kurt Wolff, a German national who in the 1920s had been Franz Kafka's European publisher, released the *I-Ching* on the Bollingen Press, an imprint he founded in New York City after twice fleeing fascism, first to Italy, where he fled to begin doctoral studies, and then from Italy to the U.S.²⁴⁵ While only a teenager, Christian Wolff studied with Cage at his Lower East Side apartment on Monroe Street, where he was accepted as a junior colleague by Cage, Morton Feldman, Earle Brown and David Tudor, members of the close knit fraternity of composers becoming known as the New York School.²⁴⁶

²⁴³ Carl Gustav Jung, "Forward" to *The I-Ching or Book of Changes*, translated by C.F. Baynes, (Princeton, NJ: Bollingen Foundation and Princeton University Press, 1950), xxiii.

²⁴⁴ Babbitt, *Collected Essays*, 291.

²⁴⁵ Kurt Wolff, *Kurt Wolff: A Portrait in Essays and Letters*, translated by Deborah Lucas Schneider and edited by Michael Ermarth (Chicago: University of Chicago Press, 1991), 53-67.

²⁴⁶ Cage's friends were no musical auxiliary of the abstract expressionist painters known as the New York School. Dore Ashton's *The New York School: A Cultural Reckoning* (New York: Viking, 1973) says little about music, but

Five years later, in the spring of 1955, Wolff listened on as Richard Maxfield explained his contempt for Cage's music on a ship bound from New York City to Genoa, Italy.²⁴⁷ Both had received Fulbright Scholarships that year, and were traveling to Florence, Wolff to prepare for graduate studies in Classical literature and philosophy at Harvard University. Maxfield's second trip abroad was supposed to put him in the company of the Italian composer Luigi Dallapiccola, although Wolff's recollection of events is that Maxfield saw little of Dallapiccola, but remained in Italy after his Fulbright funding expired to study in Milan with Bruno Maderna (1920-1973). While his early works retained affinities with Maxfield's conservative training at Berkeley and Princeton, Maderna led a musically adventurous double life, having collaborated, for instance, with Werner Meyer-Eppler in a Bonn recording studio to produce *Music in Two Dimensions I*, 1952, a composition for flute, percussion, and train station noises recorded onto audiotape and subjected to electronic manipulations by Meyer-Eppler.²⁴⁸ Soon after, Maderna became the first *enfant terrible* at Darmstadt's Summer school when *Music in Two Dimensions I's* electronically altered noises, uneasily wedded to parts performed live on flute and cymbal, scandalized journalists covering the event in 1952.²⁴⁹

Working with Meyer-Eppler at Bonn provided Maderna with knowledge he used to oversee the construction of an electronic music studio in Milan, the *Studio di Fonologia*, which opened in 1954. [Image 2.2] Like the WDR, the *Studio di Fonologia* housed signal-producing electronic oscillators, band-pass filter circuits, and audiotape decks that composers used to

Cage's agonistic relations with the Ab-Exes, particularly Jackson Pollock, was in some ways paralleled by Morton Feldman's distaste for Philip Guston after Guston shifted from an abstract to a figurative painting style in 1970.

²⁴⁷ Letter from Christian Wolff to the author, July 20, 2014.

²⁴⁸ Lowell Cross, "Electronic Music, 1948-1953" *Perspectives of New Music* Vol. 7 No. 1 (Autumn/Winter, 1968), 61.

²⁴⁹ Gunter Engler, "Musik der jungen Generation? Experiment und Manier bei den 'Ferienkursen,'" *Neue Zeitung* (July 23, 1952), cited in Iddon, *New Music at Darmstadt*, 86.

generate and refine raw sonic material into finished works. As they labored to create musically desirable timbres, pitches, and amplitudes mechanically, musical instrument manufacturers began to make new electronic instruments that imitated orchestral instruments. But instead of solving problems, these actually prevented the fine calibrations of duration, rhythm, and dynamic range experimental composers wanted to apply serial techniques towards. In 1951, for instance, Karlheinz Stockhausen rejected Friedrich Trautwein's Monochord and Harold Bode's Melochord, state-of-the-art electronic instruments at the WD, because neither allowed the minute timbral adjustments critical to serial techniques. Convinced that electronic replications of orchestral instruments' circuitry and interfaces prohibited vital experimentation, Stockhausen turned to simple, infinitely variable signal producing oscillators electricians used to test radios and televisions with to complete the now-classic works *Studie I*, 1953, and *Studie II*, 1954.²⁵⁰

An understudied part of vibratory modernism, the relatively inexpensive, mass-produced electronic signal oscillators Stockhausen preferred descended from William Hewlett's Variable Frequency Oscillation Generator, 1939, [Image 2.3] his Stanford University M.A. project in engineering and the initial product offered by the firm Hewlett-Packard.²⁵¹ Oscillators resonated in stable waveforms over long durations and allowed signals to be divided into sine, square, triangle, or saw tooth frequency shapes, each possessing a distinct sonic character. In spite of their precision and adjustability, oscillators posed several challenges. First of all, because an oscillator produces one waveform at a time, a composer needed multiple units in an acoustic space to create simultaneities; more commonly, they layered signals on multiple tracks of

²⁵⁰ Michael Kurtz, *Stockhausen: A Biography*, translated by David Toop (London: Faber and Faber, 1994), 62.

²⁵¹ W.R. Hewlett, Variable Frequency Oscillation Generator, U.S. Patent 2,268,872, filed July 11, 1939 and issued on January 6, 1942.

magnetic audiotape.²⁵² Second, the mathematically pure waveforms lacked acoustic instruments' ear-pleasing overtones—attempts to incorporate these into electronic circuits and interfaces are what caused Stockhausen to reject the Monochord and Melochord.

It seems that Meyer-Eppler advised composers how to fabricate pitches and timbres unavailable from either acoustical instruments or prefabricated electronic ones. His background left him well suited to the task, having studied cybernetics as a graduate student at the University of Bonn in the 1940s, applying its principles within acoustics, harmonic analysis, and the relatively new field of electronic cryptography. In fact, Meyer-Eppler's dissertation analyzed a key invention in the history of automation called the Voder, short for Voice Operating Demonstrator, 1928. The Voder was an manually operated electronic speech synthesizer Bell Laboratories engineer Homer Dudley conceived by imagining his voice as a radio station—his larynx would be the transmitter and his mouth, tongue, and lips the loudspeaker.²⁵³ Manually operated with a keyboard and foot pedals, the Voder produced intelligible speech by employing a “relaxation oscillator” that produced vowels and nasal sounds, a gas tube for sibilants (“s” or “t” sounds), and ten band pass filter circuits that shaped its frequencies into the range of the voice. [Image 2.4] At New York City's 1939 World's Fair, audiences flocked to the spectacle of a talking machine, not least for the gender dissonances unleashed when a female performer, who appeared to be a stenographer, tapped a keyboard and foot pedal and cut loose a highly amplified and very masculine voice. [Image 2.4] While non-binary gender identities had to wait seventy-five years for recognition, Dudley's patent application of 1935 analogized human speech and

²⁵² Tape recorders with two tracks enable sounds to be deployed in a stereo field. The capacity to add, mix, bounce, and multi-track potentially unlimited numbers of tracks onto audiotape was developed in the 1950s, '60s, and '70s, usually at the cost of signal degeneration, even as audiotape grew wider to accommodate space for up to 48 tracks to be encoded simultaneously on a single reel.

²⁵³ Dave Tompkins, *How to Wreck a Nice Beach: The Vocoder from World War Two to Hip-Hop, The Machine Speaks* (Brooklyn, NY and Chicago: Melville House/Stop Smiling, 2011), 40-1.

oscillation. “The vocal system is, in principle, like the ordinary electrical oscillator mounted in a box as a fixed piece of apparatus, the variability being obtained by switches for starting the oscillator and for choosing the desired inductances, by continuously variable dials for selecting the capacitance, and by step variable dials for adjusting the resistances controlling the output.”²⁵⁴ Like many other electronic inventions, the Voder underwent military conscription in the Second World War, when allied forces rechristened it “the Vocoder” and, with assistance from Bell Laboratories, repurposed it to encrypt sensitive telephone communications. Attached in this capacity to the SIGSALY Encryption system, the Vocoder compressed glottal sounds into digital impulses that were scrambled, transmitted over telephone lines, and reassembled at a reception point into intelligible speech. To prevent the longstanding issue of unwanted eavesdropping in telephony, the Vocoder featured two randomizing variables: phonograph-recorded sounds and a random number generator.²⁵⁵

After being conscripted into the Nazis’ war effort himself, the fruits of Meyer-Eppler’s study of the Vocoder received an early public airing in a 1951 radio broadcast from WDR’s newly constructed Cologne studio. Other attempts to launch electronic music included Eimert and Stockhausen’s journal *Die Reihe*, 1955-1962, usually translated in to English as *The Row*, was named in reference the techniques of serial composition. In *Die Reihe*’s first issue, Eimert explained activities going on in the WDR’s studio. “By the radical nature of its technical apparatus,” he observed, “electronic music is compelled to deal with sound phenomena unknown to musicians of earlier times. The disruption by the electronic means, of the sound world we have known it leads to new musical possibilities, the ultimate consequences of which can hardly be

²⁵⁴ Homer Dudley, Signal Transmission, U.S. Patent 2,151,091, filed October 30, 1935 and issued on March 21, 1939.

²⁵⁵ The fascinating history of SIGSALY, beyond the scope of this dissertation, is best described in Tompkins, *How to Wreck a Nice Beach*, 52-94.

known.”²⁵⁶ In the same issue, Meyer-Eppler discussed electronic music in more statistical and acoustical jargon, paying attention to aleatoric or random-seeming elements of musical performance with a vocabulary he derived from the studying the Information Theory of Claude Shannon.²⁵⁷ While the Germans’ theories placed them in the forefront of a growing movement to fully automate music, even if they had no idea where it might lead, Maderna’s embrace of electronics kept more under the radar as he abandoned traditional instruments to compose *Notturmo*, 1956, a work that made use of only electronically-generated sounds on magnetic audiotape while Maxfield was, if Wolff’s recollect is correct, studying with him in Milan.

David Tudor’s 1956 Darmstadt Seminar; New York City in 1957

Despite being at loggerheads over Cage’s methods of composition and performance, Wolff and Maxfield remained on friendly terms in Florence from 1955 to ‘56. Wolff visited Maxfield’s apartment to use a piano it housed, a fortuitous accident for Wolff, who was already moonlighting from his academic career to write music, in part because Cage and his associate David Tudor were performing his compositions in the mid-1950s at concert venues around the world. In 1954, for instance, they oversaw a performance of Wolff’s *For Prepared Piano*, 1951 at a major German music festival in Donaueschingen that likely brought Wolff to the attention of Edward Wolfgang Rebner, a musicologist who discussed *For Prepared Piano* at lecture he gave on experimental music in 1954 at the Darmstadt musical colony.²⁵⁸ The premier European venue for experimental music in the post-1945 period, each year at Darmstadt students selected from an international pool of elite applicants attended seminars by leading artists in a city that had been

²⁵⁶ Herbert Eimert, “What is Electronic Music?” *Die Reihe* No 1 (Bryn Mawr, PA: Theodore Presser Company, 1955 [1952]), 1.

²⁵⁷ In Latin, *alea* means “dice.” Werner Meyer-Eppler, “Statistic and Psychologic [sic] Problems of Sound,” *Die Reihe* No 1, 55-61.

²⁵⁸ See Amy C. Beal, *New Music, New Allies: American Experimental Music in West Germany from the Zero Hour to Reunification* (Berkeley & Los Angeles: University of California Press, 2006), 64-68.

largely destroyed by allied bombings. As city of Darmstadt underwent physical reconstruction, the modernist sensibility Nazis tried to permanently banish incubated in the form of adventurous music.

When Darmstadt's organizers sought a representative practitioner of U.S. experimental music for the summer session of 1956, they approached Tudor, not Cage. In fact, Tudor received two invitations to the 1956 event. The first came from his former teacher Stephan Wolpe, a composer who asked him be his amanuensis for a talk he planned to give about modern music. The second invitation, likely occasioned after Tudor's New York successful presentation of Pierre Boulez's difficult *Second Piano Sonata*, 1948, spread across Europe,²⁵⁹ arrived courtesy of Stockhausen, who asked Tudor to demonstrate new compositions he admired. Concerned by what Wolpe might say in his speech about his associates Brown, Cage, Feldman, and Wolff, Tudor accepted Stockhausen's offer, demonstrating the New York School's methods and, for political reasons, he also performed compositions by Stockhausen and Boulez.²⁶⁰ He fastidiously explained Cage's *Music of Changes*, 1951, Wolff's *Suite*, 1954, Feldman's *Three Pieces for Piano*, 1953, and Brown's *Perspectives*, 1952. An uncomfortable fit in Darmstadt's overarching paradigm of serial music, the U.S. composers extolled a looser approach that offered performers measures of choice and chance, employing some improvisation—verboten among the serial composers—and increasingly focusing on what Cage was starting to call “chance operations.”

²⁵⁹ For a discussion of Tudor's early fame as a performer, see Kenneth Silverman, *Begin Again: A Biography of John Cage* (New York: Alfred A. Knopf, 2010), 92-94

²⁶⁰ “[Wolpe] will talk about American music (including Cage etc.), and I frankly do not know whether I will be able to correct all the misinformation he will undoubtedly spread.” Letter from David Tudor to Karlheinz Stockhausen, *Karlheinz Stockhausen bei den Internationalen Ferienkursen für Neue Musik in Darmstadt 1951-1996 : Dokumente und Briefe / im Auftrag der Stockhausen-Stiftung für Musik*, edited by Imke Misch und Markus Bandur (Kürten: Stockhausen-Verlag, 2001), 131.

According to British musicologist Martin Iddion, Richard Maxfield was one of thirty-four students registered for one or more of Tudor's 1956 Darmstadt seminars.²⁶¹ Passing through the campus for only a single day, Wolff does not recall seeing Maxfield and did not attend Tudor's presentation. Eyewitnesses have, however, recounted an energetic dispute that erupted as Tudor described New York School compositions, particularly Cage's *Music of Changes*, 1951, the first work written with chance methods. Journalist Inge Schlosser wrote of a heated discussion about chance.²⁶² According to Stockhausen, Tudor's description of how Cage had used the *I-Ching* to write music led to a sharp disagreement between Tudor and Boulez, with Tudor eventually laughing off Boulez's stinging denial that chance could have any useful role in music. This set to fire a latent but high stakes feud between Cage and Boulez that had festered since 1954.²⁶³ Maxfield's presence at Tudor's seminar fits into Wolff's recollection that he remained in Europe in part to maintain his personal connections to gay and bohemian communities of Florence, no doubt a far cry from the buttoned-down atmosphere at Princeton. Maxfield's *curriculum vitae*, however, places him in Milan from 1956 to '57 and apprenticing with Bruno Maderna at the *Studio di Fonologia*.²⁶⁴ In spite of the large gaps in the narratives of Maxfield's European trips, experiencing Tudor's introduction to chance at Darmstadt and living in two cosmopolitan Italian cities offered Maxfield just enough distance from academic composition to rethink and retool his practice.

²⁶¹ Martin Iddon, *New Music at Darmstadt* (Cambridge: Cambridge University Press, 2013), 179.

²⁶² Iddon, 179.

²⁶³ Once close friends who corresponded avidly about chance techniques between 1949 and 1954, Boulez had announced his distaste for chance quite openly. "Obviously we disagree as far as that goes—I do not admit—and I believe I will never admit—chance as a component of a completed work. I am widening the possibilities of *strict* or *free* music (constrained or not). But as for chance, the thought of it is unbearable." *The Cage-Boulez Correspondence*, translated and edited by Robert Samuels (Cambridge and New York: The Cambridge University Press, 1993), 148.

²⁶⁴ Maxfield's CV indicates he stayed in Europe for two years, from 1954 to '56. "Richard Maxfield CV," Cage Correspondence files, Northwestern University, 2015.

On returning the U.S. and relocating to New York City in the summer of 1957, he worked as an on-staff recording technician at the classical music record label Westminster Records. In 1959 receive the New York Philharmonic's Gershwin Award for *Five Movements for Orchestra*, c. 1957. However welcome it may have been, the recognition was a dead letter to a past Maxfield had already abandoned and would incur significant personal and professional consequences for doing so.

The turning point arrived in the summer of 1958 when Maxfield attended John Cage's "Composition of Experimental Music" course at the New School for Social Research in the company of George Brecht, Allen Kaprow, and Dick Higgins, Al Hansen, Larry Poons, and Jackson Mac Low, all emerging but soon-to-be prominent New York City artists and poets. Taught more like a graduate seminar than a typical studio art or music composition class, Cage fostered exchanges of ideas among peers about their own works, introduced his compositions and works of other modern composers that shared points of contact with the students' own concerns.²⁶⁵ Whether by counting cars in the street, rolling dice, or learning to consult the *I-Ching*, he encouraged students to incorporate non-human-centered events into their musical, visual, or textual compositions.²⁶⁶ When Cage took a leave of absence to speak at Darmstadt in 1958, he entrusted the teaching of two sessions to Morton Feldman and Maxfield. Maxfield, future Fluxus artist Dick Higgins wrote, "gave objective information, about sine waves, square waves, saw-tooth waves, ring modulators (then unknown), sum- and difference tones" and "filled

²⁶⁵ John Cage, "The New School," *John Cage*, edited by Richard Kostelanetz (New York: Praeger Publishers, 1970), 118-120.

²⁶⁶ Lisa Moran, "The Wind is a Medium of the Sky," *Intermedia: The Higgins Collection at UMBC*, edited by Rosemary Klein, (Baltimore: University of Maryland, Baltimore County, 2003), 15.

us with things to think about, then capped it off by playing pieces of electronic music of all sorts.”²⁶⁷

The permissive context Cage established and opportunity to teach what he had learned in Europe about electronic music proved inspirational, and Maxfield embarked on an entirely new direction in two compositions, *Sine Music (A Swarm of Butterflies Over the Ocean)* and *Stacked Deck*, 1958. Composed entirely of electronically generated sounds and bearing a resemblance to Maderna’s *Notturmo*, *Sine Music*’s title punned on the homophones “sign” and “sine,” apparently a joking dual reference to the mathematical purity of oscillators and the semiotic ambiguities of electronic music. However much he knew about electronic music, Maxfield’s an absence of available electronic music equipment limited his compositional practice and teaching. Babbitt’s RCA Mark I or II synthesizers were not yet operative at Columbia, so Maxfield’s works of 1958 were born of a playful ingenuity and willingness to accept the ordinary and the random. Whereas Stockhausen had WDR’s state-of-the-art electronic instruments, Maxfield worked and taught with radio and television test equipment. The archivist William Dawes recorded in Maxfield’s surviving gear a number of hand-built *apparate*: “several kit-built, sine-square wave generators, two tape recorders, a homemade mixer and a homemade turntable, microphones, a ‘Dynamic Spacexpander,’ possibly some filters, and inexpensive switches, amplifiers and speakers.”²⁶⁸

The oscillators Dawes described were Heathkit models IG-10 or IG-18 silkscreened with the text “Sine-Square Wave Generator.” [Image 2.5] Maxfield would have needed two audiotape decks to manipulate in the *musique concrete* style the tape speed of one deck to deepen or raise pitches as a second deck recorded. An important but little noticed aspect of human acoustical

²⁶⁷ Dick Higgins, cited in *John Cage*, 123-124.

²⁶⁸ Dawes, n.p.

experience, reverberation describes the perception of decay that sounds produce as they ricochet inside architectural and natural physical spaces. By the 1920s, recording engineers preferred the acoustic responses of “live” rooms, i.e. those with hard, sonically reflective walls for the spatial effect these impart to a musical recording, often recording an instrument in a tiled bathroom by placing a microphone in a toilet bowl. This so-called “wet” signal was mixed into a tape recorded “dry” signal captured close to the musical source.²⁶⁹ Fatigued by this imprecise, architecturally-dependant process, musical engineers and producers began to purchase the German firm Electro-Mass-Technik’s six-hundred pound steel plate reverb device, which could be dampened to taste with an adjustable pad.²⁷⁰ For a do-it-yourself type of composer like Maxfield, plate reverberation was overkill. Already in 1940, Hammond electric organs featured a compact reverb that passed signal through a swaying steel spring, remixed the result with a dry copy, and delivered the output to a loudspeaker. Patterned after Hammond’s reverb technology and promising to “literally create living concert hall acoustics in your own home,”²⁷¹ Maxfield’s Dynamic Spaceexpander [Image 2.6] was, almost literally, an audiophile’s wet dream. But, fitted with a potentiometer to proportion the level of wet to dry signal, it suited the needs of an independent electronic composer who, having heard art music in Europe’s best concert halls, was preparing a new recording-based practice many would judge anathema to European art music.

Sine Music and Stacked Deck Up Close: Recorded and Electronic Sounds at the New School

Maxfield’s early works in his new style recalled his teacher Maderna’s *Notturmo*, but also diverged from it in crucial ways. Harvesting foreboding tensions from the *Studio di Fonologia*’s

²⁶⁹ Engineers called the reverberant signal “wet” for it’s watery timbre and the sense of distance it imposed, which was adjustable by varying the amount of electrical current applied.

²⁷⁰ For a short introduction, see Elizabeth McClanahan, “EMT 140 Plate Reverb,” *Designing Sound* (December 11, 2012), available at <http://designingsound.org/2012/12/emt-140-plate-reverb/>, accessed on May 15, 2015.

²⁷¹ “The Fisher Dynamic SpaceExpander,” advertisement in *Audio Magazine* (September, 1960), 15.

complex oscillators, band-pass filters, plate reverb, and audiotape manipulations, *Notturmo* mapped a brave new sonic world long in the making.²⁷² Its austerity evoked a midnight reverie and, for electronic music enthusiasts, a sense of the wonder that automated music would soon deliver. At the same time, however, those unaware of its mode of production heard only the traditional evocation of a nighttime reverie. In fact, the seamless, noiseless, and artful sonic mélange intentionally conveyed to the listener a feeling that musicians had been involved—an effect clearly intended by the composer, who carefully concealed evidence of tape edits and the electronic origination. Furthermore, the listener hears no untoward tape noises, timbral artifacts, or oscillations. On the other hand, while Maxfield's *Sine Music* shared *Notturmo*'s fully electronic origins and tactic of recording oscillators directly to audiotape, it sounds acutely different because Maxfield retained the sounds of magnetic audiotape edits and the non-musical clicks, pops, and distortions his homemade devices produced.²⁷³ *Sine Music*'s abrupt cuts from one electronic pitch to another throughout its six-minute duration resemble the jump cuts that impart a sensation of spatial dynamism in the cinema. His detectable authorial intervention imbues *Sine Music* with a graceful inquisition of electronic apparatuses' materiality suppressed in Maderna's more polished *Notturmo*.

While ostensibly reversing the suture technique cultivated in Debord and Burroughs's auditory art, Maxfield's exposure of the apparatus worked well in a musical context for two reasons. First of all, as Umberto Eco pointed out, music is a semiotic system without a semantic dimension. As a source material for montage-based practices, music offers the artist less purchase on the indexical world than recorded speech, film, or photography. The jump cuts

²⁷² Accessed on May 9, 2015 at <https://www.youtube.com/watch?v=3tp05zqyECY>

²⁷³ Accessed on May 9, 2015 at https://www.youtube.com/watch?v=_CJW1W3uJl0

audible in *Sine Music* did, however, point out that bureaucratic manipulations of musical recordings were becoming a commonplace. The second, albeit related, reason is that Maxfield's gesture honored both the dangers and utopian promise of automation. Expressing this duality in musical terms, *Sine Music*'s recursive lilt balances delicate but robotic-sounding sounds with noises usually avoided or edited out. The divergence from *Notturmo* was driven, at least in part I believe, by Maxfield's desire to subvert his day job editing recorded music into final form for transfer to polyvinyl chloride discs—a process known as mastering. Mastering required him to quickly differentiate and organize up to several dozen performances of a single movement or song for incorporation into a final “master” audiotape. He spliced silent leader tape between pieces destined for the same LP record and monitored master tapes for noises and amplitude variations. In another part of mastering, Maxfield eradicated perceptible errors electronically with band-pass filtering or by editing audiotape, sometimes even by splicing together the best parts of different performances. Splicing events created at different times into a seamless unity, competent mastering engineers effectively redistributed the temporalities of performance in a way analogous to the electronic oscillator's displacement of musicians with automated tones. That he did this work professionally makes the intentionality of noises heard in *Sine Music* completely obvious.

Maxfield's other key work of 1958, *Stacked Deck*, was composed for an opera Dick Higgins wrote a libretto for and choreographed. [Image 2.7] In what was probably the first electronic multimedia performance anywhere—presaging, for instance, Phillip Glass, Robert Ashley, and Woody Vaskula's better known operas—Higgins wrote *Stacked Deck* with methods formulated in Cage's course, perhaps as a critical response to the idea of pure chance, for which he wanted to substitute constant change. Performers remained attentive to colored lights placed

around a proscenium stage and to sounds Maxfield produced through a multi-loudspeaker public address system. In *Stacked Deck*, Higgins wrote, “any event can take place at any time, as long as its cue appeared. The cues are produced by colored lights. Since the colored lights could be used wherever they were put and audience reactions were also cuing situations, the performer-audience separation was removed.”²⁷⁴ Interestingly, Higgins employed Surrealist automatic writing to hand draw maps he reproduced on enormous polyurethane sheets that covered the floor of an entire stage. He then asked performers to follow zigzagging patterns from one place to the next on receiving cues. When Maxfield’s sounds activated different colored lights, actors performed acts noted in the script. Simultaneously flashing blue and green lights, for instance, prompted performers to choose between dialoguing with one another or, alternatively, carrying out physical actions. Higgins discouraged audiences from identifying with the characters; he tried instead to reveal his performers as static bourgeois types—a technique that, he felt, dissolved the actor-audience opposition and offered a platform for social satire.²⁷⁵ [Image 2.8] Even so, by not cohering as dramatic dialogue *Stacked Deck* frustrated narrative interpretation, substituting a feeling of randomness in the viewer that was, however, also interspersed with references to Marilyn Monroe and other pop culture icons. According to Lisa Moren, the alienating distance from conventional drama may have had its genesis in the anti-literary experiments Antonin Artaud championed in *Theater and Its Double*, 1938, a book that inspired Cage to incorporate theater into his own compositions in the early 1950s.²⁷⁶

²⁷⁴ Dick Higgins, “Synesthesia and Intersenses: Intermedia,” *Horizons, the Poetics and Theory of the Intermedia* (Carbondale, IL: Southern Illinois University Press, 1984), 156.

²⁷⁵ “Any narrative [perceived in *Stacked Deck*] was in the mind of the viewer,” Higgins wrote. “As a form it worked out to be an excellent medium for social satire.” Dick Higgins, unpublished notes on *Stacked Deck*, Dick Higgins Papers, Getty Museum.

²⁷⁶ Lisa Moren, “The Shape of the Stone: Between The Generations of Dick Higgins and David Rokeby,” *Performance Research* Vol. 9, No. 3 (2004), 76.

Built as an amalgamation of automatic writing, the graphical scores of the composers John Cage and Henry Cowell, Kaprow's collage-form art performance Happenings, and contempt for the seventeenth-century conventions still operative in modern theater, *Stacked Deck*, as Higgins put it, "declared war on the script as a set of sequential events." It avoided all dramatic and musical conventions to operate on the viewer "as if time and sequence could be utterly suspended, not by ignoring them (which would simply be illogical) but by systematically replacing them as structural elements with change."²⁷⁷ On April 30, 1960 *Stacked Deck* received its premier at New York City's Kaufman Concert Hall as a part of the *Music in Our Time* series. The *New York Times* concluded, "*Stacked Deck* may or may not be an opera, but whatever it is, it contains the makings of a compelling stage work."²⁷⁸

On Cage's recommendation Maxfield assumed his New School instructorship in 1960. The proto-conceptual studio art class soon after became an electronic music course notable New York artists took. The twenty-four old composer La Monte Young, a student at Berkeley and the recipient of a Hertz Prize in 1959, met Maxfield while passing through New York to Darmstadt. That fall Young organized and performed concerts of Maxfield's music in the San Francisco bay area and, when Young moved to New York City in the fall of 1960, he attended Maxfield's course as teaching assistant for the semester. After taking Maxfield's course, future Fluxus mainstay George Maciunas wrote the humorous *Homage to Richard Maxfield*, 1961, an event score that conveyed a sense of his teacher's commitment to electronics and sound recording:

²⁷⁷ Dick Higgins, "Intermedia," *Something Else Newsletter* Volume 1, Number 1 (February 1966), n.p.

²⁷⁸ Allen Hughes, "Unusual 'Opera' is Offered at 'Y'," *New York Times* (May 2, 1960), 35.

HOMAGE TO RICHARD MAXFIELD, by George Maciunas, Jan.12 1962
(performance to follow performance of any tape composition of R.M.)

1. While rewinding the previously played master tape of R. Maxfield, switch on the tape recorder the “erase” switch.
2. A chicken variation on the same theme: just rewind the previously played tape of R. Maxfield without erasing.²⁷⁹

Threatening to erase one of Maxfield’s tapes recalled Nam June Paik’s leap from the stage to cut off John Cage’s tie and paste him with shaving cream at Mary Bauermeister’s Cologne atelier while performing his *Etude for Pianoforte* in 1960.²⁸⁰ While hardly the symbolic castration Paik imposed on Cage, *Homage* helps to recover the perception of Maxfield in the early 1960s as a rising star in New York City’s art and music circles influential enough to merit the piece’s gentle parody. In 1960, Maxfield gave a concert at the Living Theater [Image 2.9] with George Brecht, Al Hansen, Allen Kaprow, John Cage, and Robert Rauschenberg, and presented his electronic art music at the Reuben gallery during an evening of performances by Kaprow, Brecht, Jim Dine and Robert Whitman [Image 2.10], Happenings and Event artists who had taken to heart Cage’s desire to merge art and life.

Maxfield’s profile received a significant boost in the proto-Fluxus, proto-conceptual downtown New York art scene when Young performed his music on April 28 and 30, 1961 as part of Yoko Ono’s Bank Street loft concert series. Robert Morris, newly relocated in New York City, designed an elegant concert announcement for his 1961 Carnegie Hall concert [Image 2.11] and Maciunas’s Fluxus catalog [Image 2.12] sold his music. The infectious energy and charisma he displayed brought him a coterie of friends and admiring fellow artists. “Maxfield hosted a

²⁷⁹ This composition appeared on a Fluxus ink print along with Maciunas’s five other homage pieces, one each to La Monte Young, Dick Higgins, Walter de Maria, Jackson Mac Low, and Philip Corner. George Maciunas, *Homage to Richard Maxfield* Archives of the Museum of Modern Art, New York, The Gilbert and Lila Silverman Fluxus Collection, 1962.

²⁸⁰ Paik’s oedipal assault on Cage is described in Douglas Kahn, “The Latest: Fluxus and Music” in *In the Spirit of Fluxus*, edited by Janet Jenkins (Minneapolis: Walter Art Center, 1993), 104.

salon of sorts in his apartment in the evenings,” the composer Joseph Byrd recalled. “His works possessed a sensuality other contemporary experimental music lacked and seemed to myself and other young composers like the realization of Cage’s desire to liberate sounds.”²⁸¹

One factor in Maxfield’s work that differentiated it from a-technological, proto-Fluxus art was his formal training in musical automation and electronics, which he managed to smuggle into Event-type structures. Whereas George Brecht’s *Drip Music*, 1959, specified the pouring of water from one vessel into another, Maxfield displayed an active interest in electronic recording technology’s capacities for surveillance, networking, and cybernetic feedback. *Mechanical Fluxconcert*, c. 1962, for instance, exposed a live audience to a real-time feedback loop:

Microphones are placed in the street,
outside windows or hidden among
audience and sounds are amplified to the
audience via public address system.

--Richard Maxfield²⁸²

Deceptively simple, *Fluxconcert*’s bold deployment of microphony and amplification exploited the metaphorical possibilities of a feedback system at the same time Hans Haacke exhibited his comparable *Condensation Cube*, 1963-65. In that work, Haacke addressed looming ecological and social crises by displaying in a museum context condensation that formed on the walls of a clear plastic cube. But *Fluxconcert* explored feedback’s effects on human sociality by subjecting audience members’ activities to public scrutiny, gesturing toward a future society networked by instantaneous electronic signals. Yet, at the same time, *Fluxconcert* probed conservative audiences’ rejections of his and others’ innovative musical works—a vexatious problem New York City’s experimental composers confronted throughout the 1960s, to which Maxfield was

²⁸¹ Joseph Byrd, Liner Notes to Richard Maxfield, *Electronic Music*, 1969.

²⁸² Richard Maxfield, *Mechanical Fluxconcert*, reproduced in *The Fluxus Performance Workbook*, a digital supplement to *Performance Research* Vol. 7, No. 3 (September, 2002), edited by Ken Friedman, Owen Smith, and Lauren Sawchyn (London: Routledge/Taylor & Francis/Performance Research Publications, 2002), 82.

particular sensitive. In fact, Byrd's *Two Pieces for Richard Maxfield*, 1960, [Image 2.13] addressed his discouragement head on, directing performers of *Hiss* to produce sounds solely with their mouths and noses, but without vibrating their vocal cords, which yields sounds used, as Byrd observed, "when summoning a waiter or showing displeasure at a concert."²⁸³ *Clap*, its companion piece, also spoofed concertgoers' distaste for adventurous art music, directing performers to each loudly clap one time yet refrain from "whistling, stomping feet, booing, etc."²⁸⁴

A Composer's Confessions: Maxfield's Writings on Recording, Electronics, and Performance

No matter how striking the lacuna of 1950s-era scholarly literature on technological reproducibility may appear today, if time travel for the purpose of conducting interviews were possible, few artists or composers active in 1960 would deny that a reconfiguration of Western art and music was underway, due, in large part, to indexical recording, storage, and retrieval technologies that captured objects, people, sounds, and activities. In that same year, Maxfield devised thoughtful works that forged technological reproducible means with the tactics of chance and indeterminacy. While these tactics rose to international prominence after Cage's Darmstadt appearance in 1958, both were already incubating among artists who would soon exhibit performance-based artwork now categorized as Happenings, Fluxus, and Multimedia.

But others besides Cage advocated for chance and indeterminacy. In the autumn of 1960, editors of the journal *Beatitude*, founded by San Francisco literary Beat poets Bob Kaufman and William Margolis, asked La Monte Young to compile material for an issue about experimental art in New York City, where he had relocated after graduating from U.C. Berkeley. Having transformed his own compositional practice from notational music to conceptual, poetical, event-

²⁸³ Joseph Byrd, *Two Pieces for Richard Maxfield*, text score, Getty Center Collection.

²⁸⁴ Byrd, *Two Pieces for Richard Maxfield*, Getty Center Collection.

type text scores after visiting Darmstadt in 1959, Young and New York City poet Jackson Mac Low planned to devote the one-off issue of *Beatitude* entirely to chance-based art.²⁸⁵ Over the next two and one half years, they solicited contributions from internationally and disciplinarily diverse practitioners, and while the issue of *Beatitude* never materialized, Young and Mac Low published the material as a standalone book entitled *An Anthology of Chance Operations*, 1963.

Perhaps best known for George Brecht's *Sundown Motor Vehicle Event*, 1960, and Henry Flynt's essay *Concept Art*, 1962, *An Anthology of Chance Operations* also included submissions from Ray Johnson, Yoko Ono, Walter de Maria, Robert Morris, Simone Forti, Jackson Mac Low, Emmett Williams, Diter Roth, Christian Wolff, Earl Brown, Cage himself, and Richard Maxfield. George Maciunas, whom Maxfield introduced to Young,²⁸⁶ designed its graphics and would later publish submissions *An Anthology's* leftovers in newsprint editions that inaugurated the Fluxus movement. Whereas nearly all of the other artists submitted event scores, poems, or musical compositions, Maxfield contributed two expository essays on his compositional practice and its public reception.

Neglected for decades, Maxfield's essays are a missing link in the arts of technologically reproducibility for several reasons. First, they register the standoff between Western art music's conservatism and composers like Maxfield who wanted to utilize the tools and codes of musical automation. In "Composers, Performance, and Publication," he criticized audiences and performers' ongoing enthusiasm for Western art music's standard device of building gradually toward an emotionally cathartic *denouement*. Repeated so frequently that its aesthetic impact was

²⁸⁵ Hannah Higgins places Young in Cage's New School Course in 1957, but this was not possible. See Higgins, "Boarder Crossings: Three Transnationalisms of Fluxus," *Not the Other Avant-Garde: The Transnational Foundations of Avant-Garde Performance*, edited by James M. Harding and John Rouse (Ann Arbor, MI: University of Michigan Press, 2006), 270.

²⁸⁶ Hannah Higgins, "Eleven Snapshots of Dick Higgins," *Intermedia: The Higgins Collection at UMBC*, edited by Rosemary Klein (Baltimore, MD: Albin O. Kuhn Library and Gallery, 2003), 29.

now exhausted, Maxfield argued that this technique had marginalized contemporary efforts to keep pace with rapidly changing technological and scientific standards. This was not an idle or flippant criticism, but one that, I believe, reflected his experience as the sound engineer for the New York Philharmonic's presentation of John Cage's *Atlas Eclipticalis*, 1961, a score Cage produced by transposing maps of star constellations into musical notation he arranged for performance by a full orchestra. At Cage's behest, Maxfield fitted orchestral instruments with contact microphones and then amplified their sounds. Discombobulated by what they regarded as insipid musical phrases and distracted by the electronics' noisy feedback, the Philharmonic's musicians purposefully sabotaged performances of *Atlas Eclipticalis* even though Leonard Bernstein, a powerful force in Western art music, produced and conducted the concert.²⁸⁷

If Maxfield needed further inspiration to mount a defense of post-Cage experimentation in his *An Anthology* essay, he needed to look no further than *The New York Times*' hostile reviews of his own concerts at Caspary Auditorium, the Composer's Forum, and Carnegie Hall from 1960 to 1962.²⁸⁸ Given a platform by Young and Mac Low, Maxfield replied to this criticism as if from inside of a city under siege. He bitterly asked venues to stop programming experimental music altogether, because including it alongside traditional art music was tantamount to exhibiting paintings from different historical periods together under the false

²⁸⁷ Benjamin Piekut, *Experimentalism Otherwise* (Berkeley: University of California Press, 2011), 22-65.

²⁸⁸ "A realistic recording of traffic noises, over which he had asked the violinist to play... [T]he net result was that of sound effects long since canned for instant (and frequent) use in Hollywood," Allen Hughes, "Electronic Music Heard in Concert," *New York Times* (December 1, 1960), 42. "The more often Mr. Maxfield's music gets itself heard, the obvious becomes the paucity of genuine inventiveness behind it," Alan Rich, "Program of Music by an Icelander," *New York Times* (December 18, 1961), 40. See also E.S., "Buzz Buzz Recital Gets a Loud No Clap," *New York Times* (February 24, 1962), 22. When a *New York Times* critic, ironically named Schoenberg, professed no awareness of younger composers, Maxfield protested, "I don't pretend to know all the best of my generation, but I will share with you the names of those I do know well enough to state with certainty that 'something seems to be going on:' Earle Brown, Morton Feldman, John McDowell, Terry Riley, Gunther Schuller, Ralph Shapey, Ezra Sims, Christian Wolff, Charles Wuorinen, La Monte Young." Richard Maxfield, "Letter to the Music Editor," *New York Times* (February 4, 1962), 111.

premise that everything conformed to an unchanging Platonic ideal.²⁸⁹ Composers might even, he considered, warn audiences away from their own concerts. “Then,” Maxfield wrote, “only those who are receptive to the extraordinary will come and the atmosphere will be alert and open;” word of mouth praise spread by informed individuals would, he surmised, “draw other like-minded persons.”²⁹⁰ In one of his more authoritative points, Maxfield argued that the composer must use automating technologies to,

produce his [sic] own musical performance without dependence on anybody else for interpretation and execution. (And he gains in the bargain access to the whole continuum of sound for his palette instead of being limited to acoustic inventions a few centuries old and the agility with which they can be bowed, plucked, beaten, and blown.) Working directly with sound with his new sensitive electronic tools, he has no further need of the universal but obsolete symbols on score paper.²⁹¹

Cognizant that technological reproducibility pointed beyond the notational score, Maxfield also lauded the fact that by objectifying as a recording, music could now “be trotted out like a piece of sculpture to show anybody.”²⁹² If ease and portability of storing sounds on phonograph records and magnetic audiotapes was one of the technological media’s most salutary aesthetic potentials, electronic oscillators promised to save adventurous art music from musicians like those who undermined *Atlas Eclipticalis*.²⁹³

Maxfield’s second *An Anthology* essay, “Music, Electronic and Performed,” however, aimed to remedy the perception that electronic music—the terminal object of which was a

²⁸⁹ He compared the smorgasbord approach to concert programming to “[a] baroque or rococo piece or two, a Gainsborough, a popular van Gogh, a dutiful representation of Bauhaus, and a rousing nude or lovely sunset to cap it off at the end.” Richard Maxfield, “Composers, Performers, and Publishers” *An Anthology of Chance Operations*, edited by La Monte Young and Jackson Mac Low (New York: Young and Mac Low, 1963), n.p.

²⁹⁰ Maxfield, “Composers,” n.p.

²⁹¹ Maxfield, “Composers,” n.p.

²⁹² Maxfield, “Composers,” n.p.

²⁹³ The logic of personalization and portability reached its *ne plus ultra* in the MP3 digital file format, described from its origins in cybernetics and information theory to the diminution of quality imposed by mathematical compression schemes in Jonathan Stern’s *MP3: The Meaning of a Format* (Durham: Duke University Press, 2012).

phonographic disk or audiotape—was too rigid to satisfy audiences’ appetite for liveness. Comparing recorded objects’ ontologically new formats to writing and visual art’s traditional material supports, Maxfield refused to engage in a kneejerk reaction to the debate rifling through experimental music circles about the superiority of performance to recording. “A rigid structure,” he observed, “is a property rather than a fault. Writing, painting, and sculpture preserve fixed shapes, while theater, dance, and sculptural mobiles are intended to change in certain respects.”²⁹⁴ Unlike composers for whom an electronic recording studio enabled endless revisions, he further explained, a live performer enjoyed no such prerogative, for his or her reputation lay on the line with every strike of the pedal, key, or fret. To his credit, Maxfield offered a suggestion that crossed the potentially Manichean divide between recording and performance. The “risk of catastrophe, degrees of indeterminacy, or mobility of detail may also be obtained in electronic music,” he wrote,²⁹⁵ by splicing silent leader into audiotape works, which could circumvent the numbing repetition recording implied—an idea that hybridized chance with the rote fixity of sounds recorded on magnetic audiotape.

Additionally, “Music, Electronic and Performed” addressed the music artists working in electronic recording studios should compose. Merely replicating traditional instruments was a bridge to nowhere, he insisted, because it sacrificed automation’s aesthetic potential to financial expedience; in that paradigm, replacing musicians with electronic oscillators yielded musical results indistinguishable from an ordinary performance. By the same token, however, introducing recordings of musical instruments into the concert situation for musicians to perform alongside of was undesirable for a different reason. “[I]f the soloists have to coordinate with the tape,

²⁹⁴ Richard Maxfield, “Music, Electronic and Performed,” *An Anthology of Chance Operations*, n.p.

²⁹⁵ Richard Maxfield, “Music,” n.p.

following its rhythm and nuance like an accompanist,” he wrote, then “lost is the tape’s freedom to transcend the old ensemble limitations and the live performer is effectively straitjacketed in the bargain.”²⁹⁶

To illustrate the better options available, Maxfield composed two works in 1961 that ingeniously incorporated recording with performance, *Piano Concert for David Tudor* and *Perspectives II for La Monte Young* for Tudor the pianist, and for Young on the violin. In both cases, the performer played acoustical instruments alongside of recordings Maxfield made beforehand of them playing these same instruments, but which he radically altered with band-pass filters, tape speed manipulations, direction changes, and reverberation. Both works staged an encounter in the live setting between a live performer and an *acousmatic* soundscape he had been partly the author of was unprecedented in 1961.

While retrograde audiences rejected his provocation in these works out of hand, Maxfield’s advocacy for recording may also point to a subtle rift with Cage, whom Maxfield may have argued with between the lines of “Music, Electronic and Performed.” Taking the tack that performance is not intrinsically necessary to music, he declared, “It seems to me that pure electronic music is self-sufficient as an art form without any visual added attractions or distractions. I view as irrelevant the repetitious sawing on strings and baton wielding spectacle we focus our eyes upon during a conventional concert.”²⁹⁷ The statement appeared to take issue with Cage’s embrace of the experimental music genre of Live Electronic Music, which eschewed recorded sounds to feature microphony and amplification. In his first foray into Live Electronics, *Cartridge Music*, 1960, Cage transformed phonograph needles into hand held transducers

²⁹⁶ Richard Maxfield, “Music,” n.p.

²⁹⁷ Richard Maxfield, “Music,” n.p.

connected to amplifiers and loudspeakers. When a performer rubbed the needle across the surfaces of physical objects—flowers, seashells, desktops, cacti, papers, sculptures, windows, etc.—subtle movements over unlikely objects might produce ferociously loud sounds, electrifying in more ways than one the performance situation with sophistication and humor.

But if *Cartridge Music* retrenched Cage’s art in theater, it signaled his departure from a long and substantive engagement with magnetic audiotape.²⁹⁸ Maxfield, on the other hand, argued that both theater *and* recording offered materials that could be successfully integrated. In fact, he claimed that theatricality had occupied an under acknowledged niche in musical practice since time immemorial, but was not formally recognized until Haydn’s *Farewell Quartet*, 1771, which instructed musicians to depart the stage as a part of the performance.²⁹⁹ Improvisation was another repressed quantity Maxfield valued, once again varying from Cage, whose distaste for jazz bordered on racism and was sometimes interpreted as exactly that.³⁰⁰ *Piano Concert for David Tudor* and *Perspectives for La Monte Young* integrated, he wrote, “the distinctive stage personality of the soloist[s]” with recordings, paying homage to jazz artists like Miles Davis and John Coltrane.

Instead of building a *cordon sanitaire* to inoculate performance, Maxfield invented a computational approach to working with recorded sounds that assigned a key role to chance by archiving recordings sounds and admitting improvisation. First, he compiled recordings of Tudor and Young in a library of material much larger than needed for any single concert or composition

²⁹⁸ Beyond the scope of this chapter, Cage’s complex relationship to technological reproducibility has become a subject of scholarly research. For a nuanced and fair discussion, see Dave Grubbs, *Records Ruin the Landscape: John Cage, the Sixties, and Sound Recording* (Durham, NC: Duke University Press, 2014).

²⁹⁹ Richard Maxfield, “Music,” n.p.

³⁰⁰ “Music as discourse (jazz) doesn’t work. If you’re going to have a discussion, have it and use words,” John Cage, *A Year from Monday* (Middletown, CT: Wesleyan University Press, 1967), 12. Cage was comfortable enough with this observation to allow it to appear on the back cover of the book. Not surprisingly, African-American members of Wesleyan’s Music Department faculty refused to participate in the 1987 *Cage at Wesleyan* festival to celebrate Cage’s involvement with the university, which dated back to 1960.

so that, as he put it, “for each new presentation I could select a fresh combination from the collection to be treated anew in montage and electronic manipulation.”³⁰¹ Far from the stultifying reiteration of the same recording again and again in performances, Maxfield’s recorded archive allowed for limitless variations. Second, chance entered into these works because Tudor and Young were not allowed to hear the recordings and formulate responses beforehand. A musician performing with tape accompaniment should not, Maxfield wrote, “be forewarned as to how I have structured his sounds, nor, indeed, which of them are to appear on the occasion.”³⁰² Archiving’s variations were therefore matched by the practice of keeping musicians in the dark about the material they encountered in a performance, ensuring a randomness that diverged from both classical music *and* jazz, which employs on a number of standard chord progression for a soloist to improvise over.

The results may be gleaned from a 1962 recording of *Piano Concert for David Tudor* that sounds quite adventurous even today. No recognizable instrumental sounds emerge until the eight and one-half minute mark of the twelve-minute performance.³⁰³ As the “live” Tudor thumped the piano’s lid, sides, and soundboard, Maxfield’s pre-recorded doppelgänger of Tudor confronted the listener with torrents of noise that challenged the metaphysical comfort of musical sounds that matched with acoustical instruments. This innovation was not lost on the sculptor and jazz musician Walter de Maria, who in 1972 remembered Maxfield as among the first artists to work with sound recording when “this was utterly blasphemous in all the composition departments or academic music departments in the world or this country.”³⁰⁴ In 1961, another

³⁰¹ Richard Maxfield, “Music,” n.p.

³⁰² Richard Maxfield, “Music,” n.p.

³⁰³ It may be found here, <https://www.youtube.com/watch?v=w9wPh4IM4NI>, accessed on July 15, 2015.

³⁰⁴ Paul Cummings, “Oral History Interview with Walter de Maria, October 4, 1972, Archives of American Art, Smithsonian Institution, accessed on June 12, 2016 at <https://www.aaa.si.edu/collections/interviews/oral-history->

Bay Area composer, Terry Riley, performed *Piano Concert for David Tudor* at the San Francisco Conservatory of Music in a concert organized by San Francisco Tape Music Center co-founders Ramon Sender and Pauline Oliveros, who showcased Maxfield as a contemporary rising star. With the condescension that wore on Maxfield's nerves, *The San Francisco Chronicle* called it "wacky but interesting," describing Riley's performance as the work of a man "dressed in a tuxedo and wearing a stocking cap and dark glasses, [who] poured marbles into the piano, set its strings vibrating with a child's gyroscope, and dropped all manner of objects into some sheets of foil over the strings."³⁰⁵

"The Only Possibility is to Hypothesize": Maxfield on Uncertainty, Cryptology, and World Building

Riley's performance expanded on notoriety Maxfield acquired in 1960, when he travelled to Berkeley to attend the concert of his music Young organized and performed. While in California, Maxfield spoke on air with Pacifica radio station KPFA's musical director and fellow composer Glen Glasow, who offered him an extended platform to explain chance methods and describe his audiotape work *Cough Music*, 1959, in great detail. *Cough Music* began with a friend's request that Maxfield edit coughing and throat clearing noises that ruined a concert of his own music given in Hartford, Connecticut. After removing the unwanted audience noises, Maxfield spliced together the weed-like detritus of magnetic audiotape slivers on his studio floor and then exposed the results to *musique concrete* techniques and electronic signal processing. Besides altering tape speeds to raise or lower pitches and changing tape direction to reverse the sounds, Maxfield employed his hand-built band pass resistor-inductor-capacitor circuits to filter

[interview-walter-de-maria-12362](#). De Maria said Maxfield fit into "the neurotic school of electronic composition where the tones would jump around and be very erratic," a topic he and Young discussed at length in the early 1960s, presumably as Young reoriented his music away from chance and event scores toward highly deterministic explorations of pitch relationships, psychoacoustics, and architectural space.

³⁰⁵ Alfred Frankenstein, "New Music—Wacky and Interesting," *San Francisco Chronicle*, June 15, 1961, 36.

out some frequencies and enhance others at the level of electronic signal. Unlike the multi-tape decks Burroughs used in Paris, Maxfield's devices passed signal back and forth through input and output jacks that prevented signal degradation and preserved the recorded sounds' fidelity. Filtering played a key part in transforming coughing noises into *acousmatic* sounds he then captured on a second tape recorder. It, for instance, allowed Maxfield to draw out certain harmonic overtones, pitches mathematically related to a fundamental tone that imbue sounds with a pleasing complexity not heard in *Sine Music*'s "pure" sine tones. Yet, by adding pure tones together, as Meyer-Eppler taught the Germans composers and Maderna, harmonically complex results akin to those produced by musical instruments or, even more interestingly, new sounds with no musical correlative would result. In 1959, Maxfield was experimenting with the latter option in 1959: "A cough slowed down eight times with highs filtered," he explained to Glasow, "gives you white noise."³⁰⁶ In fact, "white noise" implies the simultaneous resounding of mathematically uncorrelated frequencies, but in mathematics, it often refers to stochastic processes MIT engineering professor Norbert Wiener identified in Brownian Motion and from which he developed predictive formulae to eradicate randomness or "white noise." If Wiener's cybernetic governor eradicated random misfiring of artillery from warfare, by transforming coughing into white noise Maxfield reversed Wiener's mollification of chance and reactivated the physical world's uncertainty. Similarly, *Cough Music* confounded Claude Shannon of Bell Laboratories, whose theory of information described signal communications in such precise mathematical terms that it allowed noise and uncertainty to be erased from digital communications.³⁰⁷

³⁰⁶ Richard Maxfield interviewed by Glen Glasow, KPFA Berkeley, 1960.

³⁰⁷ Claude E. Shannon, "A Mathematical Theory of Communication," *The Bell System Technical Journal*, Vol. 27 (July & October, 1948), 379–423, 623–656.

Maxfield's KPFA interview put him in contact again with a patronizing attitude, this time from his fellow composer Glasow, who implied, subtly, that chance, electronics, and magnetic audiotape were compositional gimmicks. The discussion verged on a confrontation between new and old schools of musical thought and practice when Glasow, realizing that *Cough Music* had left behind the Western system of tonality, asked if traditional musical instruments were simply too depleted to be useful to young composers. Irritated by the question, Maxfield replied that disparaging standard instrumentation signaled a failure of imagination, noting that even sixteenth century musical styles still held promise.³⁰⁸ *Cough Music* was not, Maxfield claimed, an avant-garde negation of musical tradition but a work modeled on the scientific discoveries of Werner Heisenberg and Albert Einstein, referring of course to the Uncertainty Principle and Relativity Theory. Regarding it as an emissary of uncertainty in the sense Heisenberg had described: "It is impossible to determine accurately both the position and the direction and speed of a particle at the same instant."³⁰⁹ Chance was, Maxfield speculated, probably most valid organizing principle within the universe and certainly the one the physical world most closely corresponded to. The 1960s would be years, he predicted, of accelerating, uncontrollable change completely unlike historical periods characterized by dogmatic allegiance to a single religious creed or scientific paradigm. Indeed, if Einstein had been forced to revise relativity within his own lifetime, then certainty itself was null and void. "No final truth is on offer in either the physical or mental

³⁰⁸ In truth, Cage did express reservations about musical culture's conservatism. "The musical recognition of the necessity of space is tardy with respect to the recognition of space on the part of the other arts. It is indeed astonishing that music as an art has kept performing musicians so consistently huddled together in a group." John Cage, *Silence* (Middletown, CT: Wesleyan University Press, 1961), 39-40.

³⁰⁹ Werner Heisenberg, *Nuclear Physics* (New York: Philosophical Library, 1953),

worlds in the last analysis,” he concluded. “Everything is an imponderable; the only possibility is to hypothesize.”³¹⁰

If a chaotic universe resisted determinism as forcefully as Heisenberg and Einstein’s theories implied, then artists, Maxfield argued, must find methods that suited it, not reshuffle shopworn traditions of determinism and causality. In this respect, Maxfield seemed to regard nineteenth-century music’s emotional climax as roughly coeval with the “pregnant moment” of eighteenth-century painting, wherein the beholder is arrested, according to W.J.T. Mitchell, “in front of a passing, ephemeral scene of decision.”³¹¹ A desire to circumvent this convention drove Maxfield and others in Cage’s circle to adopt a philosophy of radical doubt toward the existing scientific and cultural orders—indeed, if chance and randomness were reality’s *sine qua non*, all self-expressive acts missed the point and asserting one’s own authorial motives resided almost beyond the pale.

In *Cough Music*, however, Maxfield diverged from even Cagean orthodoxies. First of all, he built up an archive composed of untreated and transformed coughing sounds based not entirely on chance, as he admitted, but rather on his personal preferences as a trained composer. He then, however, subjected archived sounds to chance-based procedures for a reason worth noting: “I firmly believe that personal taste is not sufficient to deal with the unknown, because we haven’t formed sufficient experience from previous compositions to deal with a new sound we’re just exploring.”³¹² Put differently, Maxfield felt the perceptual apparatus was as of yet unable to grasp *acousmatic* sounds because it lacked the cultural prehistory of harmonic and contrapuntal knowledge composers employed to write music. Essentially, Maxfield confronted

³¹⁰ Maxfield, KPFA interview, 1960.

³¹¹ W.J.T. Mitchell, *Image Science: Iconology, Visual Culture, and Media Aesthetics* (Chicago: University of Chicago Press, 2015), 132.

³¹² Maxfield, KPFA interview, 1960.

the listener whose perceptual apparatus, already confused by *acousmatic* sounds' lack of sonic referents, encountered an added level of disorientation when chance was added into the equation.

Still, composing music by chance with the fixed means technological reproducibility imposed upon recorded sounds proved a daunting challenge even for Maxfield. To randomize approximately four hundred short taped segments of coughing, some milliseconds in duration, he first placed both recognizable and *acousmatic* sounds into a large bowl, intending to randomly pick one out at a time for inclusion in a master tape. However, because the smallest tape pieces sifted to the bottom and became concealed there by larger ones, proceeding in this fashion would impose a clearly audible order; as sounds of longer duration gave way to shorter sounds, the listener would hear an increasingly intense staccato effect. The tedious work of interjecting true chance into this process was, Maxfield said, like arranging grains of sand into a specific pattern—an apt analogy in that, like sand grains, the individual pieces of audiotape bore no differentiating visual markers. Unwilling to abandon the project because audiotape's physical properties militated against it, he told Glasow he acquired “a random number table that goes up to four hundred to select an order and allow this [work] to serialize by random process.”³¹³

[Image 2.14] After he individually numbered each segment of tape, Maxfield consulted the first three digits in a column of random numbers to obtain a value. If the value was between 1 and 400, he spliced the segment with the corresponding number from the bowl into the master tape, but if the table specified a value greater than 400, he scanned over the next three digits, repeating this activity until all of pieces were incorporated into more thoroughly randomized master tape.

³¹³ Maxfield, KPFA interview, 1960.

The random number table he used was likely one of hundreds in L. H. C. Tippets's book *Tracts for Computers*, 1927,³¹⁴ the ghostly columns of which recall a time when computers were not logic-driven electronic chipsets but human cryptographers who manually encoded messages into ciphers their intended recipients would need a deciphering key to uncode and read. Such cryptographic tasks had been carried out for millennia until Deforest's Audion and a transatlantic cable connection from U.S. to Europe made electronic intercontinental transmissions possible. Afterwards, cryptologists faced the challenge of securing messages sent electronically and, in particular, those directed to and received from Europe. In 1919 Bell Laboratories engineer Gilbert Vernam invented a coding method known as the One-Time Pad or "Vernam Cipher." Vernam's One-Time Pad cryptography used a telegraph with a modified transformer to accept text typed in while a second transformer mechanically generated a key code of randomized numbers.³¹⁵ [Image 2.15] Non-repeating and random, the numerical key code needed to unscramble the message printed on either a piece of paper or combustible nitrocellulose film stock. Presumably, this was done so that if a Mission Impossible-type crisis situation befell an individual charged with transporting it, he or she could quickly destroy the cipher key with a lit match.³¹⁶

The electronic automation of cryptology anticipated the electronic automation of music in several ways. First of all, Vernam's invention was an inspiration Homer Dudley knew of and drew upon to devise the Voder. Second, both One-Time Pad cryptography and the Voder utilized

³¹⁴ L.H.C. Tippet, *Tracts for Computers No. XV: Random Sampling Numbers* (Cambridge, UK: Cambridge University Press, 1927).

³¹⁵ A former MIT student, Vernam received a patent for his voltage controlled cryptograph device featuring a paper key in 1919. After U.S. Signal Corp captain Joseph Mauborgne suggested adding random numbers to the encoding process, the resulting code was proved later to be unbreakable by Claude Shannon. David Kahn, *The Codebreakers: The Comprehensive History of Secret Communication from Ancient Times to the Internet* (New York: Schribner, 1996 [1966]), 395-405.

³¹⁶ Kahn, *The Codebreakers*, 663.

voltage-driven signals to perform acts once accomplished only through manual labor: Vernam's device automated the encoding of messages and Dudley's automated the voice. Third, both of these black boxes contributed to the U.S. military's war efforts. The One-Time Pad produced unbreakable telegraphy codes during the First World War and Dudley's Vocoder's encrypted radiophonic and telephonic voice communications as part of the SIGSALY system that, taken alongside of the breaking of Germany's Enigma, helped to ensure an Allied victory. After 1945, however, military researchers sought peacetime uses for these and other wartime inventions after 1945. A participant in this enormous retooling process, Meyer-Eppler repurposed the Voder to expand the pallet of sounds available to European composers, but his efforts had, by and large, enabled the serialist composers' quest to rationalize all musical parameters. On the other hand, Cage, Wolff, and Maxfield opposed the deterministic mindset of European electronic music. "We thought they were on the wrong track," Wolff remarked.³¹⁷ *Cough Music's* transformation of weedy, reedy noises into chance-ordered *acousmatic* sounds was an act of political opposition to the predominance of European and U.S. serial composers, notably his ex-teacher Milton Babbitt, one that retrofitted computational systems for eradicating noise to match a universe in flux and acclimatize audiences to a new musical vocabulary.

Moreover, by contending with audiotape's frail materiality and balancing recording's innate fixity with chance, Maxfield joined a small coterie of 1950s artists who conceptualized technological reproducibility as an arena wherein the demarcation between material and process was becoming fluid. It might be said that Maxfield interrogated electronics and recording media in a manner analogous to the way Fluxus event scores interrogated language. In the larger framework of modern art this was, of course, Duchamp's innovation, but it was one that Cage,

³¹⁷ Letter from Christian Wolff to the author dated May 17, 2015.

friends with Duchamp since the 1940s, transmitted to associates in the 1950s and. It was, moreover, a tradition that still resists art historical interpretation. Fluxus text scores, for example, may be called poetry, music, choreography, or performance, but not without sacrificing much of their intrinsic interdisciplinarity. “This conceptual ambiguity,” Liz Kotz noted, “derives from the use of the *text as score, inseparably both writing/printed object and performance/realization.*”³¹⁸ My aim is not to debate what a text score is, but to point out that Maxfield employed technologically reproducible means in a conceptual way on the fringes of the Fluxus and Happenings movements, which are too often regarded as strictly performative, not least of all because the artists themselves gravitated to atechological materials and situations, as in Mieko Shiomi’s *Fluxversion I*, 1963, the performance of which featured musicians tossing concert programs at the audience from the stage. Happenings, too, featured technological reproducibility even if this fact evaded art historical attention for decades afterward.

It may even be said that Cage ceded technologically reproducible techniques and processes to Maxfield, who to his credit refused to carry on Cage’s work verbatim. Rather, in *Cough Music* he developed novel and elegant procedures that balanced chance, intention, performance, electronic processing, and magnetic audiotape with an insightfulness concealed for too long by his art historical marginalization. What has been lost in Maxfield’s deletion from the historical record is, I believe, his view of chance as a metaphor for building alternative worlds thorough technological reproducibility, automation, and computation. When, for instance, the always-skeptical KPFA’s Glasow questioned chance’s validity as an artistic technique, Maxfield called chance a generative magma artists must employ. “Establishing the facts or the axiomatic elements of the universe of discourse,” he said, “is an act of creative imagination.”

³¹⁸ Liz Kotz, *Words to be Looked At: Language in 1960s Art* (Cambridge, MA: MIT Press, 2007), 57.

If you wanted to imagine the universe as created a finite number of years ago by an initial act in such a manner that a number of processes flow from that initial act by statistical operations of this same sort, it would be impossible to predict which elements of dust collected with which other elements of dust because this would be the result of chance, but everything followed naturally from [...] what was originally created, and I look upon that as an actual possibility of the creation of new music.³¹⁹

To renew artistic and musical practices in 1960, artists must recognize the universe's mysterious and perverse primordial charge as one of chaos, disorder, and uncertainty. More than an empty rhetorical stance, Maxfield actually modeled its disorder in a more original and faithful way than Cage—most of all by allotting human agency a constitutive role. “The process of chance,” he told Glasow, “is not the end of a composition, it is the middle.” As a composer, he said he could “not remain aloof from the situation and accept anything that may happen as a result.” Rather, he added, “I feel that the composer is after all trying to create a structure and that he is able to use any technique that will assist him [sic].”³²⁰ And although he learned at Darmstadt that Cage had arrived at chance by consulting the *I-Ching* and accepting the result as a pat musical composition (*Music of Changes*, 1952), Maxfield told Glasow how he dissatisfied he was at the first version of *Cough Music*:

The sounds were fantastic but of course I had chosen them very carefully. So the thing was that “chance” was not very spectacular and it required some kind of control, and what to do seemed fairly obvious. I generally go through the resulting superimposition at this point and try to very quickly and spontaneously improve upon it by editing and alteration.³²¹

Placing chance “in the middle” between intentional acts assigned the artist a sense of agency that Cage had denied in the attempt to channel pure chance within his art, although the particulars of

³¹⁹ Maxfield, KPFA interview, 1960.

³²⁰ Maxfield, KPFA interview, 1960.

³²¹ Maxfield, KPFA interview, 1960.

Cage's compositional practice, divided between composition and performance, are wide open to a debate that would extend beyond the present discussion.

Indeterminacy, Visual Art, Intermasters and Phasing: *Fermentation and Amazing Grace*

During the KPFA interview, Maxfield also distinguished between the concepts of chance and indeterminacy and further explained magnetic audiotape's role in live performance, in part by defending it from detractors like Cage himself, who after 1960 felt that recordings' reification of the live situation ruined its theatricality. The huge divide that seemed to open up between recording and performance puzzled Maxfield, who resolved to keep some indeterminacy alive in his own music. While this term is still thought by many to be Cage's invention and personal property, neither point was true: indeterminacy was a longstanding musical attribute Maxfield characterized as a performer's unrepeatable one-time interpretation of a score as he or she strove for perfection or "virtuosity." "In a Beethoven symphony," he explained, "if a horn player needed to hit an A-sharp, sometimes he does it and sometimes he does not."³²² As such, the listener evaluated a performance independently from the composition itself, as one might an actor in a play or a dancer in a dance. But automation—the fruit of ratiocination, cybernetics, and computation—had placed indeterminacy's survival in doubt, a problem Maxfield sought a solution for.

He derived several possible answers from the fine visual arts. That a symphony could be interpreted in many different ways by a conductor and performers, he remarked, "causes that symphony not to exist until it is performed," a subtle thought he illustrated by analogizing music to the sculptures of Alexander Calder (1898-1976):

³²² Maxfield, KPFA interview, 1960.

Every time [music] is performed it is something like a Calder mobile in a different state of rotation. To me, this enables one to continue looking at the Mozart symphony longer than if it were simply frozen into one shape. This is a fresh thing that keeps the music living and plastic. There would be something lost in doing away with this plastic element.³²³

Importing what he admired about Calder's physical mobiles into the comparative immateriality of voltage-driven signals and magnetic audiotape was no easy task, but he envisioned, as he put it, "a composition with two independent voices and the time dimension subject to great variability."³²⁴ From this insight he conceived of operating two tape decks loaded with Intermasters, an archive of prerecorded sounds stored on reels of audiotape produced, archived, and catalogued in advance for use while composing or for in concert situations. Intermasters lent a new modularity and variability to Maxfield's compositional practice that may be heard in *Fermentation*, 1960. This was an audiotape piece with no acoustical accompaniment that La Monte Young performed the evening Maxfield granted KPFA an interview. While explaining the Intermaster's role in his compositions to Glasow, Maxfield emphasized the importance of timekeeping in an automated work.

I have two tapes, each of which is one half hour long, each with different recorded material but meant to be played together. The rules are that the performer will have two tape recorders to be fed into one or two speakers. He has to play part but not all of these two tapes together. [...] The way I've determined it, if you look at your second hand, it will be at some given rotation, at the thirty-second mark, for instance. If the second hand is at fifteen, he starts his tape at 1/4 of the way through it duration. This is a convenient way of starting each tape that yields an infinite set of possibilities.³²⁵

The temporal dimension, while seemingly random and off the cuff, allowed the performer to obtain a Calder-like variability in each performance. Keeping starting and stopping points so loosely calibrated in a concert performance precluded any chance of duplicating a performance

³²³ Maxfield, KPFA interview, 1960.

³²⁴ Maxfield, KPFA interview, 1960.

³²⁵ Maxfield, KPFA interview, 1960.

and elegantly mimicked a Calder mobile's ever-changing appearance in space, for as anyone who tries to synchronize two identical audiotape recordings soon learns, the tapes quickly desynchronize, resulting in the acoustically distinctive "phase shift" effects composer Steve Reich harnessed in *It's Gonna Rain*, 1965, and *Come Out*, 1966, audiotape compositions that illustrated African Americans' struggles against apartheid in the United States. Ingeniously, *It's Gonna Rain* employed two decks loaded with identical recordings of a street preacher's voice, looped so as to repeat again and again the titular phrase. Then, as the tapes moved progressively out of phase, the speech grows less intelligible, wholly abstract, and gradually synchs-up to predict a calamitous rainfall. Hailed as an electronic music masterpiece for its political sensitivity and great originality, five years before Reich composed *It's Gonna Rain*, Maxfield's Intermaster work *Amazing Grace*, 1960, had featured the recorded speech of African-American revivalist minister James G. Brodie, whose voice sounds as if it had been subjected to the phase shifting process Reich made famous. It is likely Maxfield stumbled upon the disorienting characteristics of phase relationships Reich exploited in a more organized work of art.³²⁶ In what was perhaps another coincidence, Reich studied at The Julliard School in Manhattan from 1958 to '61, when *The New York Times* reviewers regularly pilloried Maxfield's concerts, and again at the San Francisco Bay Area's Mills College from 1961 to '63, when he mingled with the San Francisco Tape Center composers who supported Maxfield's work.³²⁷

The mobile was not the only concept Maxfield's appropriated from the visual arts. The Intermaster's partitioning of prerecorded sounds into modular auditory parcels, as he explained

³²⁶ For a nuanced discussion of Reich's tape pieces, see Juan Suarez, *Still Moving: Between Cinema and Photography* (Durham: Duke University Press, 2008), 81-83.

³²⁷ With the exception Maxfield's *Night Music*, 1962, published on a 1967 LP recording with *Come Out*, Reich denies knowledge of Maxfield's work in a letter to the author, dated June 26, 2015, sent via his agent Richard Stokar.

to Glasow, owed something to the abstract expressionist painter Jackson Pollock (1912-1956). The recurring vertical lines in Pollock's *Energy Made Visible*, 1947 [Image 2.16]—in which Mexican muralist David Orozco's angularity marinated in a wash of Surrealist automatism—served as a model for how spatial forms could be expressed as a recorded object. As a composer dedicated to making electrical energy audible, Maxfield recognized in Pollock's mural a pleasing analogue to his own artwork. Like Allen Kaprow, Maxfield balanced an admiration for Pollock's gestural painting practice with the influence Cage's accomplishments. Even the practice of marking time with wristwatches Maxfield utilized in *Fermentation*, for instance, was borrowed from Cage's *4'33*, " 1952, the silent piece composed of three movements a performer opened and closed the piano's cover to mark the beginning and end of.

What Maxfield believed Intermaster pieces shared with both Pollock and Cage was that randomized starting and ending points excluded any chance that a performance could have an emotional *dénouement*. "Literally, no climax is necessary," Maxfield explained to Glasow, adding that "[t]he need for it was terribly monotonous and destructive of the form of music."³²⁸ He bolstered his conclusion by pointing out that "Pollock, Mondrian have no climax."³²⁹ And, obviously, Cage's entire artistic circle axiomatically regarded affective *dénouements* an unwelcome hangover from nineteenth-century music, a shibboleth Cage had first slain in 1948 by championing the cerebral and procedural music of Erik Satie over Beethoven at Black Mountain College. And while Maxfield did not mention Cage to Glasow by name, Cage's lover Merce Cunningham's *bon mot* "Climax is for those who are swept away by New Year's Eve"³³⁰ resonates throughout the KPFA interview as a reminder of these artists' dedication to resolving

³²⁸ Maxfield, KPFA interview, 1960.

³²⁹ Maxfield, KPFA interview, 1960.

³³⁰ Merce Cunningham, quoted in Michael Nyman, *Experimental Music* (Cambridge, UK: Cambridge University Press, 1999 [1974]), 29.

the life-art dichotomy in the late 1950s. Indeed, foregoing self-expression for chance might, they felt, bring the salutary benefits of non-alienated labor, chosen relationships, and the replacement of one's personal preferences with the exuberant acceptance that the cosmos that was, in the end, neither controllable nor controlling, but indifferent to all of humanity's striving, yet all the more wondrous and beautiful for it.

Combination Tones: Psychoacoustics, Informatics, and the Natural Environment in *Pastoral Symphony* and *Night Music*

Maxfield's psychoacoustic experimentations did not end with *Fermentation*'s phase relationships. Rather, he intensified this aspect of his art practice in 1960, when he recorded to audiotape purely electronic frequencies built from exactly configured harmonic multiples and submultiples of fundamental tones. While Maxfield was said to have played these works in his collaborations with the dancers Forti, Aileen Passloff, and the choreographer James Waring,³³¹ there is no way to know for certain that he did, but the distinctive sounds he generated with this method produced a distinctive, bird-like warbling that resulted from the sum, or difference, of two frequencies resounding together in a physical space physicists call combination tones.³³² Described by the eighteenth-century composer Georg Andreas Sorge (1703-1778) and violinist Giuseppe Tartini (1692-1770), combination tones provoked an unlikely controversy the between scientists Georg Ohm and August Seebeck, who argued in the nineteenth century whether these existed in the physical world or were an artifact produced by the inner ear itself.³³³ The physicist of perception Hermann von Helmholtz (1821-1894) demonstrated in his foundational book on

³³¹ Charles Amirkhanian, "The Music of Richard Maxfield," an undated episode from his KPFA radio contemporary music program, which aired from 1969-1992. Amirkhanian succeeded Glen Glasow as musical director of KPFA.

³³² A part of Cybernetic research in the 1940s and '50s, one early book on Psychoacoustics noted, "recent improvements in high-frequency generating devices have made it possible to produce super-audible sound-waves at very high intensities." Stanley Smith and Howell Davis, *Hearing: Its Psychology and Physiology* (New York: John Wiley and Sons, 1960), 199.

³³³ See Joseph Peterson, *Combination Tones and Other Related Auditory Phenomena*, unpublished doctoral dissertation, The University of Chicago, 1908.

acoustics *Sensations of Tone*, 1863, that both Ohm and Seebeck were correct. While parts of the inner ear vibrated sympathetically when stimulated from without, combination tones also existed objectively in physical space. Alerted to this psychoacoustic phenomenon from his training at U.C. Berkeley or, more likely, by his work in Milan's Studio di Fonologia, Maxfield used it to create sweeping oscillations that seem to cross one another in spatially-perceptible glissandi, but also happen inside the inner ear, that is to say, with no spatial component whatsoever.³³⁴

In the hands of a lesser composer, sum and difference tones might have become a mere novelty, but Maxfield transformed it into his best known work, *Night Music*, 1960. Consisting of sounds he created by mixing a tape-recorder's supersonic bias output to an oscillator-generated tone, Maxfield effectively combined a supersonic wave and a second variable frequency, but also beneath the audible range, to an oscilloscope's synchronizing input. "The sub-audio pulse continually knocked the oscilloscope output through multiples and sub-multiples of the locking signal," Maxfield wrote in a text that described *Night Music* with a metaphor of reflectivity: "The bias frequency of the tape recorder interacted with oscilloscope signal to produce inverted reflections throughout and beyond the audio frequency range."³³⁵ Altering the sub-audible low frequency by turning a dial with his hand, he bumped the difference tone through the entire register of partials or sub-harmonics for each of the tones he fed into this system. Assisted in the recording studio by David Tudor and George Enfer, Maxfield employed an archival method,

³³⁴ The perception of these tones, according to Linguistics professor Stanley Gelfand, "supports the concept that combination tones actually exist as distinct entities within the cochlea once they have been generated by non-linear processes. The exact nature(s) of these distortion process(es) have yet to be unquestionably understood." Stanley Gelfand, *Hearing: An Introduction to Psychological and Physiological Acoustics* (New York: Marcel Dekker, 1998), 361.

³³⁵ Richard Maxfield, Liner Note for Richard Maxfield, Steve Reich, Pauline Oliveros, *New Sounds in Electronic Music*, LP Record (Odyssey, 1967), n.p.

building up a reservoir of difference tones onto spools of magnetic audiotape he then bounced onto a different multi-track recorder to layer the sounds.

Named for its resemblance to antiphonal natural sounds Maxfield heard at twilight in Manhattan's Central and Riverside Parks, when played at high volumes *Night Music* activates the inner ear's non-linear capacities that allow for remarkably fast perceptual differentiation of sounds. Residing both inside and outside the head—and evoking science and nature in equal measure —*Night Music* made a considerable impression on Maxfield's peers. Alvin Lucier, who gave concerts alongside Maxfield in the 1960s, called his combination tone pieces “a magical idea” and marveled at their similarity to the sounds crickets and cicadas make by feats inaccessible to the eye and impossible for human beings to replicate.³³⁶ It provoked Robert Morris to speculate as to whether science, as an emblem of culture, was truly separable from its nominal subject and discursive foil “nature.”³³⁷ La Monte Young seemed to adopt Morris's sense that the nature-culture divide was more rhetorical than factual when, in the summer of 1960, as he presented Maxfield's compositions in Berkeley, Young's *Lecture 1960*, 1960, borrowed Cage's anti-anthropomorphism and the rhetoric of world-building Maxfield expounded upon in his interview with KPFA's Glasow.

I could see that sounds and all other things in the world were just as important as human beings and that if we could to some degree give ourselves up to them, the sounds and other things that is, we enjoyed the possibility of learning something new. By giving ourselves up to them, I mean getting inside of them to some extent so that we can experience another world.³³⁸

³³⁶ Alvin Lucier, *Music 109: Notes on Experimental Music* (Middletown, CT: Wesleyan University Press, 2012), 105.

³³⁷ “The tapes he made reminded me of sounds in nature.” Robert Morris, letter to the author, June 10, 2015.

³³⁸ La Monte Young, “Lecture 1960” in *Happenings and Other Acts*, edited by Mariellen R. Sanford (London and New York: Routledge, 1995), 79.

As a meditation on the natural world conceived in New York City, where the powerful developer Robert Moses sundered cohesive neighborhoods and ecosystems to build the Brooklyn Queens Expressway, Lincoln Center, and the Verrazano Bridge, *Night Music*'s avian and insect sounds evinced a blossoming environmental awareness soon to-be galvanized by the publication of Rachel Carlson's *Silent Spring*, 1962, a book that exposed chemical pollution's damaging effects upon myriad bird and insect species.³³⁹ Ironically, Maxfield's noisome evocation of the natural world employed a number of scientific developments that strove to eradicate noises he made poignant in *Night Music*. In 1924, for instance, Bell Laboratories' Harry Nyquist identified the major constraints on telegraphy as fluctuations in electronic circuits' efficiency, static, and inadequately low applied voltages. Nyquist, perhaps the first individual to imagine that sine waves might carry telephonic and radiophonic transmissions, mechanically synthesized a voice that intelligibly pronounced words on a networked telephone system.³⁴⁰ Several years later Ralph Hartley, another Bell engineer, proposed that low band pass filters could remove redundant frequencies from amplified signal transmissions.³⁴¹ In 1948 Claude Shannon credited Nyquist and Hartley's contributions to his foundational discovery of Information theory—that entropy, randomness, and data compression were all mathematically quantifiable phenomena that could be employed to eradicate uncertainty—i.e. “noise”—from electronic communications.³⁴² Indeed, the eradication of noise and standardizing of commercial communications formats as consumer

³³⁹ “There was a strange stillness. The birds, for example—where had they gone? Many people spoke of them, puzzled and disturbed. The feeding stations in the backyards were deserted. The few birds seen anywhere were moribund; they trembled violently and could not fly. It was a spring without voices. On the mornings that had once throbbed with the dawn chorus of robins, catbirds, doves, jays, wrens, and scores of other bird voices there was no sound; only silence lay over the fields and woods and marsh.” *Silent Spring* (Boston: Houghton Mifflin, 1962), 2.

³⁴⁰ Harry Nyquist, “Certain Factors Affecting Telegraph Speed,” *The Bell System Technical Journal*, Volume 3, No. 2 (April 1924), 335.

³⁴¹ Ralph Hartley, “Transmission of Information,” *The Bell System Technical Journal*, Volume 7, No. 3 (July 1928), 553-563.

³⁴² Claude E. Shannon, “A Mathematical Theory of Communication,” *The Bell System Technical Journal*, Vol. 27 (July & October, 1948), 379–423, 623–656.

products have long driven the science of electronics, even if, in the transition from analogue to digital *dispositifs*, engineers of the MP3 sound recording format inadvertently inaugurated a significant threat to the industry of recorded music.³⁴³ The MP3's self-defeating effect upon industry notwithstanding, the overwhelming energy spent to streamline noise from technological reproducibility in the electronic era continues on apace in digital interfaces that may require a hacker's ethic to create exciting artwork with.

Now that so much fine visual art shares the quicksilver materiality of electricity and its accompanying nomenclature of transduction, phase shifting, band-pass filtering, equalization, modulation, amplification, voltage regulation, and signal encoding and decoding, this may be a salutary time to reexamine first principles. The first post-1945 artist to immerse himself in the interdisciplinary spaces where technological reproducibility, electronics, dance, conceptualism, performance art, and psychoacoustics melded, Maxfield suffered the fate of a shipwrecker—his fate was written only in water. Many soon followed, and nearly all received recognition he did not. In 1959, the filmmakers Jordan Belson and Henry Jacobs constructed a sophisticated audiovisual studio in San Francisco, the Vortex Theater, to showcase electronic art. In 1961, the composer James Tenney (1934-2006) employed Max Mathews' software to write computer music at Bell Laboratories' Murray Hill, NJ campus.³⁴⁴ Soon after programming *Piano Concert for David Tudor* in 1961, Ramon Sender and Morton Subotnick established the San Francisco Tape Music Center. In 1963, after supplying electronic sounds for Milton Cohen's *Space*

³⁴³ Jonathan Sterne nuanced history of digitally recorded music does not fully attribute blame for the widely-available but free musical recordings made possible by the high-compression MP3 format to so-called digital "piracy" (e.g., file sharing software like Napster et. al.), but to the multi-factorial forces of claims to music made by holders of intellectual property rights, the accidental public disclosure of MP3 software, and the special affordances of so-called "container technologies." Jonathan Sterne, *MP3* (Durham, NC and London: Duke University Press, 2013), 184-226.

³⁴⁴ Max Matthews, "An Acoustical Compiler for Music and Psychological Stimuli," *Bell System Technical Journal* Volume 40 (April 1961), 677-694.

Theater, 1958-64, an environment of automated walls, mirrors, electric lights, and projected films intended “to free film from its flat and frontal orientation and to present it within an ambience of total space,”³⁴⁵ the young electronic composer Gordon Mumma (b. 1935) constructed a University of Michigan-funded iteration of Maxfield’s home recording facility, The Cooperative Studio the Sonic Art Union of electronic composers congregated around soon after.³⁴⁶

Maxfield’s Death and Subsequent Influence

Since his gritty but innovative art music not only predated later efforts but stands on its own, the present is a worthy historical time to recognize and appreciate Maxfield’s technological *détournements* as models for artists hoping to re-deploy a measure of randomness and noise in arid digital devices hampered, more often than not, by normalizing features that circumscribe creativity rather than inspire it. The prefabricated option sets on digital moving image capture and sound generation software need a conceptual upgrading that is more likely to be supplied by users (hackers) than corporate manufacturers. If the tedious work of cutting audiotape passed into oblivion with the rise of computer workstations, one might ask: Where is the artwork that may be compared to Maxfield’s? Do digital platforms harbor ideological barriers to electronic experimentation Maxfield pioneered in the analogue era? Has engineering wrested control of noise away, once and for all, from artists disposed toward interventions in the homogeneity Internet users are so inured to or placated by? Although it may be premature to look back upon superannuated analogue platforms to acquire purchase on computer interfaces, artists have something to learn from the virtuosity Maxfield acquired by engaging apparatuses physically.

³⁴⁵ Milton Cohen, cited in Gene Youngblood, *Expanded Cinema* (New York: P. Dutton & Company, 1970), 371-374.

³⁴⁶ See Gordon Mumma, “An Electronic Music Studio for the Independent Composer,” *Journal of the Audio Engineering Society*, Vol. 12, No. 3 (July 1964), 240-244.

Terry Riley once described him as an “incredible electronic music teacher and master engineer,” adding that:

I used to go up to his mixing studio when he worked at Westminster Records in 1960-61 and observe him editing those old reel-to-reel tapes. He was the most amazingly adept tape handler I have ever seen. He worked so fast his hands and the tapes were a constant blur... He really understood electronics; he was very creative and experimental. He taught electronics and composition at the highest level.³⁴⁷

A generous friend to his colleagues, Maxfield introduced Riley to CBS Records’ David Behrman, who published Riley’s *In C*, 1969, to immediate and worldwide acclaim.³⁴⁸ But unlike Riley’s swift assimilation into a professional career, Maxfield’s personal eccentricities and resentment at being overlooked as an artist stood in his way. Perhaps it was with respect to these factors that Joseph Byrd recalled him loosening the reins on his performances in the mid-‘60s, inviting audience members onstage to examine his scores, mingle with performers, and even drink wine.³⁴⁹ While his defiance of concert etiquette accorded well with the easygoing Fluxus artists, it also signaled the onset of future difficulties. *Bacchanale*, 1963, a tape piece with live performers Terry Jennings, Ed Fields, Robert Block, Nicolas Roussakis, and “Fahrad Machkat,” exuded a precarious laxity absent from his earlier compositions. In it, someone named Fields, who is not to be confused with the New York City poet Edward Field,³⁵⁰ reads an astrological text over a dense and shifting collage of ethnographic field recordings borrowed from the composer Henry Cowell, a former New School instructor and mentor to John Cage in the

³⁴⁷ Terry Riley, “Invisible Jukebox” *Wire Magazine* Issue No. 188 (October 1999), 20.

³⁴⁸ Mark AlBürger, “Shri Terry: Enlightenment at Riley’s Moonshine Ranch,” *Twentieth-Century Music*, Volume 4, Number 3 (March 1997), 14.

³⁴⁹ “Increasingly, Richard was choosing not to edit and manipulate his materials, save for the distortions of a band-pass filter.” “It was his idea, for example, that electronic music—far from the eyes-closed cerebrally focused concentration desired by Stockhausen—was the ideal situation for visual counterpoint. Thus, not only the performers but the audiences were encouraged to interact vitally with the environment [...] wonder in and out [while] examining the scores, even participating if they wanted to. Byrd, liner note to *Electronic Music*, 1969.

³⁵⁰ Edward Field, telephone interview with the author on May 26, 2015.

1940s.³⁵¹ To this mélange, Maxfield added recordings of jazz music he made in the West Village nightclub The Five Spot, sections of his compositions *African Symphony*, and *Wind*, 1961, film soundtrack excerpts, typewriter noises, and electronic and *acousmatic* sounds. In subsequent years Maxfield subjected unmusical sounds from daily life to audiotape manipulations. “One year he brought this piece out to play called *Dishes*,” Riley told *The Wire* magazine in 1999. “He was washing dishes one night and turned his tape recorder on, so he was making found object pieces, too.”³⁵² Compared to works that capitalized so effectively on automation, recording, and psychoacoustics, Maxfield’s dish music may have represented a banal form of *musique concrete* shorn of the serious technological and acoustical experimentation that had made his name as a composer in 1960.

A recreational drug user of long standing in a downtown art scene besotted with amphetamines, cocaine, and heroin, the *New York Times* described Maxfield as interrupting a performance of his own work, grabbing a microphone, and asking over the P.A. system if anyone in the audience knew the whereabouts of a blue coat.³⁵³ According to Wolff, Maxfield grew increasingly eccentric and obsessive as the 1960s wore on.³⁵⁴ After leaving the New School in 1963 over what Byrd described from second hand knowledge as “a particularly controversial concert,” Maxfield obtained a teaching position at San Francisco State University. Notified of Maxfield’s hiring in California by Dick Higgins, S.F.S.U. student and future Fluxus artist Ken Friedman took one year of courses in electronic music with him. Impressed by his new teacher, Friedman recalled Maxfield’s unshakable confidence in his own artistic trajectory as tempered

³⁵¹ Legendary for its scope, Cowell’s recorded archive is still available to researchers at New York Public Library as “The Henry Cowell Collection.”

³⁵² Terry Riley, “Invisible Jukebox,” *The Wire*, No. 188 (October, 1999), 20-21.

³⁵³ E.S., “Buzz Buzz Recital Gets a Loud No Clap,” *New York Times* (February 24, 1962), 22.

³⁵⁴ Christian Wolff, letter to the author on July 20, 2014.

by a social awkwardness that made academic hierarchies difficult to negotiate.³⁵⁵ Conflicts with his colleagues and a conservative dean, J. Fenton McKenna, whom Friedman felt disapproved of Maxfield's homosexuality and open use of Marijuana, Hashish, and Amyl Nitrates, led to his being let go from the music department under what he described to Cage as the pretexts of tardiness and too-radical music.³⁵⁶ Students' letters in support of Maxfield to administrators and a petition circulated to protest his firing failed to secure his position.³⁵⁷ Now in desperate circumstances, Maxfield sought letters from Cage and Tudor to support his candidacy for academic positions at the University of Buffalo and the University of Hawaii, but apparently received no offers.³⁵⁸ In 1969 Maxfield moved for a short time into his mother's Laguna Beach home, but he became upset after perplexed residents expressed distaste for his music, not least of them his parent's,³⁵⁹ he relocated to the Figueroa Hotel in downtown Los Angeles and worked near-by as a retail-level shoe salesman.

News of Maxfield's suicide by self-defenestration from a Figueroa Hotel window on June 27, 1969 surprised artists on both U.S. coasts. A Long Play recording of Maxfield's works on the Advance Recording label, *Electronic Music*, 1969, under preparation when he died, secured his reputation among experimental composers and a few music critics, as have, to a lesser degree, La Monte Young's infrequent performances of Maxfield's music in New York City. Recalling the late composer's energetic and optimistic persona, Diane Wakoski's poem *The Story of Richard*

³⁵⁵ Ken Friedman, letters to the author on August 27 and 28, 2015.

³⁵⁶ "Owing to a late arrival and my too radical music for San Francisco State College I was soon ousted from the music department there and went home to my mother absolutely broken hearted." Richard Maxfield, "Letter to John Cage" dated January 18, 1969. The John Cage Correspondence Collection, Northwestern University.

³⁵⁷ Ken Friedman, letters to the author dated August 27 and 28, 2015.

³⁵⁸ Richard Maxfield, "Letter to John Cage" dated February 3, 1969. The John Cage Correspondence Collection, Northwestern University.

³⁵⁹ Maxfield, "Letter to John Cage" dated January 18, 1969.

Maxfield sounds an aptly bewildered tone, implicating drugs, failed romances, and an incipient paranoia as factors in his growing despondency.

Richard was an electronic composer.
He wrote a piece called *Cough Music* made up of the coughs
of hundreds of people at concerts.
And then he fell apart.
He was homosexual and took drugs.
He was brilliant and well organized.
I loved *Cough Music* and could not see how such a fine composer
could fall apart as Richard fell apart.³⁶⁰

Ironically, at least in view of Maxfield's premature death and elegant tapestries of chance, indeterminacy, intention, and automation, Western art music has more than survived the technological challenges of the 1950s poised to render performers and performance obsolete. In fact, it has triumphed. Whether or not fully cognizant of the looming catastrophe oscillators and audiotape represented to a conservative tradition, many electronic composers quickly accepted lucrative commissions to write traditional scores for acoustic instruments that were performed in luxurious concert halls for affluent audiences. As hampered by drug abuse or homophobia as Maxfield's career may have been,³⁶¹ several artists and composers beside Reich developed his innovations into career-making works of art. Young's release of butterflies into a concert hall, *Composition #5 1960*, recalled *Sine Music*'s subtitle "butterflies over the ocean" and the exploded nature-culture binary *Night Music* explored inspired Young to work with sum and difference tones in *Vertical Hearing*, 1967. James Tenny's delightful mangling of rock singer Elvis Presley, *Composition #1 (Blue Suede)*, 1962, seemed to reprise the scrambled recordings

³⁶⁰ "Was he right about the CIA conspiracy and killed by one of them because he knew their plan?" Wakowski asked, reporting a rumor of how, "They say the men he loved destroyed him." Diane Wakowski, "The Story of Richard Maxfield," *Emerald Ice: Selected Poems, 1962-1987* (Santa Barbara: Black Sparrow Press, 1988 [1973]), 214-216.

³⁶¹ According to David Behrman, most recording session producers at CBS avoided Maxfield or asked that he not be allowed to work on their sessions. Telephone conversation with the author on May 20, 2015.

heard in Maxfield's *Amazing Grace*, 1960. Pauline Oliveros created her *I of IV*, 1966, by altering the bias frequency control of tape recorders to access and the musical rhetoric of combination tones. Alvin Lucier's *Vespers*, 1968, which put electronic signal generators called Sondols in the hands of performers who used their clicking noises to mimic bats' echo-locative navigation abilities in what was, perhaps, another elaboration on inter-species, ecological consciousness. Philip Glass and Robert Wilson's quasi-narrative multimedia opera *Einstein on the Beach*, 1975, was not wholly dissimilar in its conception from Higgins and Maxfield's *Stacked Deck* of 1958. A few years later Robert Ashley's *Perfect Lives*, 1979-83, and Woody Vasulka's *The Commission*, 1982-84, once again resuscitated "electronic opera," this time within the formats of videotape recording and television.

Chapter 3, The Reality of *Krapp's Last Tape* and *Film*: Samuel Beckett on a Future of Ubiquitous Recording, Externalized Memory, and Omnivorous Vision, 1957-1964

My dream is to see the photograph register the bodily movements and the facial expressions of a speaker while the phonograph is recording his speech.

--Gaspard-Félix Tournachon, 1888

Possessing a prodigious memory that stretched back, or so he insisted, to recollections of life in his mother's womb, and fearful in adult life of being photographed, the Irish modernist writer Samuel Beckett (1906-1989) grew up the privileged child of a construction industry professional and housewife in a spacious home in Dublin's well-to-do Foxrock suburb. A gifted student in modern languages at Dublin's Trinity College, Beckett obtained a lectureship in English at Paris's elite *École Normale Supérieure* at the age of twenty-two. In 1929 he published the expansive literary essay "Dante... Bruno. Vico... Joyce" in Eugene Jolas's journal *transition*, followed by a collection of poems and a scholarly book on Marcel Proust in 1930. Displeased with teaching, Beckett became a novelist of the unsuccessful kind. Undoubtedly his passion projects, the novels *Murphy*, 1938, *Molloy*, 1951, and *Watt*, 1953, *Malone Dies*, 1956, and *The Unnamable*, 1958, took a backseat in his career after his stage play *Waiting for Godot*, 1952, a bizarre dialogue between two tramps shorn of any recognizable plot, catapulted him to fame as a avatar of absurdist drama.³⁶² Sometimes mischaracterized as an apolitical or miserable individual, Beckett was a passionate connoisseur of art, music, and cinema whose bravery during the French resistance to Nazi occupation led to his receiving the nation's highest distinction, the *Croix de Guerre*, from General Charles de Gaulle in 1945 and the *Médaille de la Reconnaissance*

³⁶² Puzzled by the success of *Godot* and other dramas that "confront their public with a bewildering experience, a veritable barrage of wildly irrational, often nonsensical goings-on that seem to go counter to all accepted standards of stage convention," coined the term. Martin Esslin, "The Theater of the Absurd," *The Tulane Drama Review*, Volume 4, Number 4 (May, 1960), 3.

Français, reserved for individuals who aided the wounded, disabled, or displaced in the absence of any legal or military obligation to do so.³⁶³

Twelve years after *Godot's* improbable success, Beckett wrote his first and only work for the cinema, *Film*, 1964. Its U.S. premier at the New York City Film Festival (NYFF) in October of 1965 went so badly that Alan Schneider, its director, fought back tears as the audience, as he later recalled it, “got up on their hind legs and booed. Lustily.”³⁶⁴ Founded in 1963 by the film programmer Amos Vogel and critic Richard Roud, the NYFF brokered North Americans’ taste for adventurous cinema and made the reputations of young European filmmakers. Well aware of its importance to Beckett’s cinematic aspirations, Schneider was shattered by the crowd’s animus to the work he shot in Manhattan’s Lower East Side in the blistering summer heat of 1964.

He may have found consolation in his established reputation as a theatrical director who had successfully premiered Beckett’s plays in the U.S. or, failing that, because he shared the burden of *Film's* failure with two individuals. The cinematographer Boris Kaufman—architect of both Jean Vigo’s anti-bourgeois *À propos de Nice*, 1930 and Elia Kazan’s anti-union *On the Waterfront*, 1954, as well as a brother of Dziga Vertov—had transposed Beckett’s scenario into a shooting script. What’s more, Beckett himself sojourned to the U.S. to assist Schneider and Kaufman plan the production and stayed on for the filming. While Kaufman and Beckett were implicated, the catastrophe could not be blamed on the audience’s lack of sophistication; many in attendance had lined up to see the Festival’s runaway hit, Jean-Luc Godard’s *Alphaville*, 1965, a film shot hyper-spontaneously with a handheld camera by the *vérite* cinematographer Raoul Coutard at real locations in Paris. Registering the era’s concerns about computation, *Alphaville's*

³⁶³ James Knowlson, *Damned to Fame* (New York: Simon and Schuster, 1996), 19-23, 81-123.

³⁶⁴ Alan Schneider, “On Directing *Film*” in Samuel Beckett, *Film* (New York: Grove Press, 1969), 93.

protagonist Lemmy Caution infiltrates a technocratic society run by Alpha 60 [Image 3.1], an intelligent computer that had banned the ambiguous pursuits of love, conscience, and poetry in the ratiocinated dystopia Alphaville. If New Yorkers' appreciation for Godard's depiction of a society where cybernetics had run amok did not their the mettle of their cosmopolitanism, Vogel characterized his patrons in the *New York Times* as "the people who discuss film at their parties, read the new film magazines, loyally attend art and repertory theaters and are often found at the more specialized museum showings."³⁶⁵ Many awaited a Beckett film with bated breath.

But the work he delivered was deeply weird in its concept and realization. For one thing, Beckett tried to claim *Film* illustrated the philosopher George Berkeley's dictum "to be is to be perceived," but the Berkeley connection was tenuous at best, and quite possibly a ploy to distract the viewer from his real intentions. Second, casting the faded silent screen actor Buster Keaton as *Film*'s star implied that Beckett would showcase the physical talents Keaton perfected forty years beforehand in a string of sophisticated, commercially successful pre-sound feature films. This was not the case: by not including a single gag or pratfall in the script, Beckett dashed any hope of mutuality with Keaton, who was admired by avant-garde artists in the 1920s.³⁶⁶ In yet another of Beckett's galling provocations, *Film* denied the viewer a view of Keaton's face until *Film*'s last seconds. Nearly as famous it as his physical comedy, Keaton displayed his deadpan visage after surviving a dangerous stunt or enduring a humiliating plot twist. And, what's more, while Beckett set *Film* in the past year 1929, coincident with the adoption of optical-sound-on-film as a technological standard to accompany the moving image, it is nearly soundless.

³⁶⁵ Amos Vogel, "Films: Fashion of the Fashionable," *The New York Times* (September 5, 1965), X7.

³⁶⁶ At the height of his fame Keaton earned the admiration of Surrealists Luis Buñuel, Salvador Dalí, Robert Desnos, and Federico García Lorca—who cast Buster Keaton as a character in his play *Five Years Pass*, 1929). Robert Knopf, *The Theater and Cinema of Buster Keaton* (Princeton, NJ: Princeton University Press, 1999), 113-133.

The second half of this chapter considers if *Film* was an allegorical critique of cinema history and as an acute rebuttal of the direction it had taken in 1960. It evaluates Beckett's seeming opposition to the omnivorous scopophilia of New American Cinema, Direct Cinema, *cinéma vérité*, Experimental film, and the New Wave—film movements that rejected stylized mainstream filmmaking and aspired to capture reality instead. “The American cinema has never been so deeply grounded in reality, reacting to it, expressing it, and commenting upon it,” Jonas Mekas observed in 1962,³⁶⁷ attributing filmmakers' thirst for reality in part to a new awareness of the Soviet documentarian Dziga Vertov (1896-1954). By then Vertov's reputation was also on the rise in Europe. In 1963 Georges Sadoul lionized Vertov's *Man with a Movie Camera*, 1929, a non-acted depiction of life in the Soviet Union that belonged to a tradition that merged reality with art, Sadoul claimed, “through the editing, assembly, or collage of recorded or pre-existing elements in which the artist had not personally intervened” adding that,

this idea ‘was in the air’ since the beginning of the twentieth century, in all European avant-garde circles. Thus, during the years 1910-1920, the ‘*papiers collés*’ of Picasso and Braque, the ‘*poèmes conversations*’ (montage of sentences overheard) of Guillaume Apollinaire (who would have liked to use the phonograph as a means of expression), the sculptures assembling manufactured objects (or others) of Duchamp, Max Ernst, etc., Dadaist and surrealist poems, composed of the titles cut out of newspapers, or phrases, or dispatches, or stenograms, etc.³⁶⁸

³⁶⁷ Jonas Mekas, “Notes on the New American Cinema,” *Experimental Cinema: The Film Reader*, edited by Wheeler W. Dixon, Gwendolyn Audrey Foster (London: Routledge, 2002, [1962]), 62. “Cassavetes and his actors created a work that moved freely in what Siegfried Kracauer has called “camera-reality—a film free from literary and theatrical ideas.” Mekas, “Notes,” 56. Kracauer had argued film expressed two specific tendencies: the realistic (e.g., the documentary tradition of Lumiere, to which he assigned the term “camera-reality”) and the formative (e.g., the aesthetic or cinematic tradition of Melies). See Siegfried Kracauer, *Theory of Film: The Redemption of Physical Reality* (Oxford: Oxford University Press, 1960), 28-9.

³⁶⁸ *Créer de l'art par le montage, l'assemblage, ou le collage d'éléments enregistrés ou préexistants dans lesquels l'artiste n'était pas personnellement intervenu, cette idée « était dans l'air » depuis le début du XXe siècle, dans tous les milieux d'avant-garde européens. Ainsi en témoignèrent durant les années 1910-1920 les « papiers collés » de Picasso et Braque, les « poèmes conversations » (montage de phrases entendus) de Guillaume Apollinaire (qui eût voulu pouvoir employer le phonographe comme un moyen d'expression), les sculptures assemblant des objet manufacturés (ou autres) de Duchamp, Max Ernst, etc.,*

While Sadoul's article helped to renew interest in Vertov, it fanned a flame lit ten years before by the film archivist and *Cinémathèque Française* founder Henri Langlois, who had screened *Man with a Movie Camera* on February 28, 1953 to a group of astonished Parisians.³⁶⁹ Likely present that evening, future directors Alain Resnais, Jean Rouch, Jean-Luc Godard, and Chris Marker would all, to one degree or another, make non-acted films about reality with a technique Vertov had called "Life Caught Unawares."³⁷⁰ Indeed, an advocacy of surreptitious recording lay at the center of Vertov's theory of the Kino-Eye, perhaps the most influential piece of writing by an artist in the twentieth century—and to which I will return. But to grasp *Film* one must first comprehend its nearest relative in Beckett's *oeuvre*, *Krapp's Last Tape*, 1958, a stage play that also featured technological reproducibility as both a material object and dramatic subject.

This chapter hypothesizes Beckett's comprehension—in 1957—that the miniaturization and personalization of recording technology might threaten agency, individuality, embodiment, community, and privacy. Part one reviews Beckett's vision of experiential life in a future when memories could be externalized from the body in *Krapp's Last Tape*, compares it to scientific proposals for enhancing or disciplining biological memory, and considers the play in light of the computational brain Alain Resnais envisioned in 1956, ten years before *Alphaville*. As such, it assesses magnetic recording's applicability in sound reproduction and as a type of computational memory, which seemed to imply that computational agency and intelligence were close at hand.

les poèmes dadaïstes puis surréalistes, composés des titres découpés dans les journaux, ou des phrases, ou des dépêches, ou des sténogrammes, etc.

Georges Sadoul, "Actualité de Dziga Vertov," *Cahier du Cinema* No. 144 (June 1963), 24-25.

³⁶⁹ Oliver Barrot, Pierre Billard, Andre-Georges Brunelin, et. al., "Le debat est ouvert sure 'L'Homme a la camera,'" *Cahier du Cinema*, No. 22 (April, 1953), 36-40.

³⁷⁰ For many, the Dziga Vertov Group's founding in 1968 by Jean-Luc Godard and Jean-Pierre Gorin represented the moment when Vertov's influence upon French filmmakers was consolidated, but it happened long before.

Part I—*Krapp's Last Tape*: Recording, Externalized Memory, Indexing, and the “Body”

On the evening of January 13, 1957 bursts of static overwhelmed Beckett's receiver as he attempted to hear his play *All That Fall*, 1957, on the British Broadcasting Corporation's *Third Programme*, a sophisticated, weekly radio serial that aired internationally from 1946 to 1970. Beckett, by then a longtime resident of Paris, requested a sound recording of it from the BBC and, to his surprise, received a reel-to-reel tape deck along with it by mail.³⁷¹ An appurtenance of electronic recording that, unlike the “write-only” phonograph, allowed one to record, edit, archive or erase virtually any sound, magnetic audiotape symbolized the future in the mid-1950s. Cognizant of that futurity, Beckett's hands-on experience at operating it inspired him to imagine a time when pens, paper, typewriters might be obsolete or, better yet, when recordings had become so plentiful in daily life that one might archive one's memories. *Krapp's Last Tape*, 1958, [Images 3.2 & 3.3], a one act, one man play he wrote about these conjectures, features a sixty-nine-year-old man who lives in isolation, kept company by memories he has recorded with a magnetic audiotape recorder on each of his last forty birthdays.

Beckett pondered its temporality in a third draft, which specified that it depicted events twenty-seven years in the future—in 1985.³⁷² Perhaps because audiotape was not available as a personal technology in 1945, he had the better idea of having it take place during “an evening in

³⁷¹ Linda Ben-Zvi, *Samuel Beckett* (Boston: Twayne Publishers, 1986), 152-158. In an alternative account, a letter from Beckett mentioned his encounter with an audiotape recording of *All that Fall* at the BBC's Paris studio in January 1958. According to Knowlson, Beckett asked his friend, the actor Donald McWhinnie, for a user's manual as he was finishing the play, presumably for help understanding the device's tape transport controls governing play, record, fast forward and rewind functions. Knowlson, *Damned to Fame* (New York: Simon and Schuster, 1996), 398-399.

³⁷² The surmise aligned, as it turned out, with the audiocassette's peak popularity as a sound reproduction platform. Andre Millard, “Tape Recording and Music Making,” *Music and Technology in the Twentieth Century*, edited by Hans-Joachim Braun (Baltimore and London: The Johns Hopkins University Press 2000 [2001]), 162.

the future.”³⁷³ The open-ended temporality cast the play forever in the future and helped to secure its popularity with audiences even after magnetic audiotape became superannuated. Thus, its subject is not a specific apparatus, but what happens when memories from inside of the mind are transferred to a machine that allows one to retrieve them. In an added benefit of its future temporality, the play’s depiction of magnetic recording implied changes in biological memory to come.³⁷⁴

Although its temporality still appeals to audiences today, *Krapp’s Last Tape* offers neither a plot nor the traditional character development arc of drama, but makes the protagonist Victor Krapp’s relationship to memories he has externally stored on audiotape the focal point of attention. As it begins, the viewer joins Krapp on the evening of his sixty-ninth birthday in a semi-darkened apartment. Far from a haphazard jumble of audiotapes strewn carelessly about, Krapp has scrupulously indexed his memories by subject, noting their precise locations in an index maintained in an accounting-type ledger book to make the potentially arduous work of finding a specific memory swift and easy. Seated before a reel-to-reel audiotape deck, he peruses the ledger’s entries for a specific memory he wants to listen to and vicariously relive.

As Krapp reads aloud from the ledger, quizzical and brooding facial expressions reveal his emotional investment in his mnemonic recording system. In “Farewell to Love,” the memory Krapp locates, loads, and plays through a loudspeaker and into the theater’s space recounts thirty-year-old events. The audience hears Krapp’s recorded voice scorn his youthful idealism about romantic love, resolve to lead “a less engrossing sexual life,” and pledge to quit

³⁷³ Rosemary Pountney, *Theatre of Shadows: Samuel Beckett’s Drama, 1956-76: from All That Fall to Footfalls* (Gerards Cross Buckinghamshire: Colin Smythe; Totowa, N.J.: Barnes and Noble, 1988), 137.

³⁷⁴ In a sense, the play’s employment of tape recording updates Edison’s notion of automating stenography so as to keep one’s most private thoughts undisclosed. “The main utility of the phonograph, however, being for the purpose of letter-writing and other forms of dictation, the design is made with a view to its utility for that purpose.” Thomas Edison, “The Phonograph and its Future,” *The North American Review*, Vol. 126 (May-June 1878), 531.

drinking.³⁷⁵ Meanwhile, the “live” Krapp listens intently, occasionally nodding in agreement with his younger self’s disdain for love.

The drama, such as it is, charts the living Krapp’s relationship to his technological doppelgänger, and Beckett plumbs a number of the 1950s conceptions of how memory might affect experiential life. First of all, it inspires him to embark on a series of associated thoughts. On hearing his recorded voice describe his mother’s widowhood as a “viduity,” Krapp stops the tape to look up its definition, notes its etymological association to a Weaver Bird’s head, and makes a fatuous joke about a “vidua-bird.”³⁷⁶ Beckett evokes the likelihood that access to a trove of recorded memories or information will help solve problems. As Krapp’s recorded voice starts to recount an insight he has indexed as “The vision, at last,” the live Krapp listens along with the audience, for by the title alone it must hold considerable promise:

This fancy is what I have chiefly to record this evening, against the day when my work will be done and perhaps no place left in my memory, warm or cold, for the miracle that . . . (*hesitates*) . . . for the fire that set it alight. What I suddenly saw then was this, that the belief I had been going on all my life, namely--³⁷⁷

But instead of letting the epiphany play through, Krapp abruptly switches it off, simultaneously denying its benefits to the listener and himself and quickly fast-forwards the tape. He then presses play and alights on the memory he has been searching for at last: “My face in her breasts and my hand on her. We lay there without moving. But under us all moved, and moved us, gently, up and down, and from side to side. *Pause*. Past midnight. Never knew such silence. The earth might be uninhabited.”³⁷⁸ Realizing he has begun in the middle, Krapp rewinds and presses play. True to its title, “Farewell to Love” recounts the demise of a romantic relationship, yet the

³⁷⁵ Beckett, *Krapp’s Last Tape and Other Dramatic Pieces* (New York: Grove Press, 1958), 16.

³⁷⁶ Beckett, *Krapp’s Last Tape*, 18.

³⁷⁷ Beckett, *Krapp’s Last Tape*, 19.

³⁷⁸ Beckett, *Krapp’s Last Tape*, 21-2.

fact that he has returned to it implies a longing for companionship in the present. As it begins, the recorded Krapp recalls leaning over his lover's body to shield her eyes from the sun and the tendered memory of sex they had in a small boat that ran into reeds on a lakeshore:

I asked her to look at me and after a few moments--(*pause*)--after a few moments she did, but the eyes just slits, because of the glare. I bent over her to get them in the shadow and they opened. (*Pause. Low.*) Let me in. (*Pause.*) We drifted in among the flags and stuck. The way they went down, sighing, before the stem! (*Pause.*) I lay down across her with my face in her breasts and my hand on her. We lay there without moving. But under us all moved, and moved us, gently, up and down, and from side to side.³⁷⁹

The double entendres of becoming “stuck” in reeds, “going down,” and “sighing before the stem” amused Beckett but offer the live Krapp no balm of Gilead. Agitated by the recording, he switches the tape off, pulls a banana from his pocket, and, just before the phallic symbolism turns clumsy, places it back. He traipses backstage for a swig of whiskey, returns to the desk, and installs a new audiotape on the machine that will hold the most recent year's memoirs. Predictably, he begins the new tape by attacking his younger self and dismissing the chore at hand as worthless:

Just been listening to that stupid bastard I took myself for thirty years ago, hard to believe I was ever as bad as that. Thank God that's all done with anyway. (*Pause.*) The eyes she had! (*Broods, realizes he is recording silence, switches off, broods. Finally.*) Everything there, everything, all the--(*Realizing this is not being recorded, switches on.*) Everything there, everything on this old muckball, all the light and dark and famine and feasting of . . . (*hesitates*) . . . the ages! (*In a shout.*) Yes! (*Pause.*) Let that go! Jesus! [. . . .] Nothing to say, not a squeak. What's a year now? The sour cud and the iron stool. (*Pause.*)³⁸⁰

Eventually, Krapp recalls purchasing sex from a prostitute, rereading Theodor Fontane's 1894 adultery novel *Effi Briest*, and once attending vespers—a grim year by anyone's standard.

³⁷⁹ Beckett, *Krapp's Last Tape*, 22-3.

³⁸⁰ Beckett, *Krapp's Last Tape*, 25-6.

The sadness of his experience now evident and the machine still recording, Krapp experiences an abrupt, unexpected change of heart; he entertains a different life for himself: “Sometimes wondered in the night,” he grumbles, “if a last effort mightn't—(*Pause.*)”³⁸¹ But Krapp is now at a crossroads: he could forego the virtual reality of his mnemonic archive for a physical existence among community, peers, and an embodied lover whose affection he would not have to purchase. His choice is, however, extremely telling: unable to resist the affective power of his recordings, Krapp decides against a physical and social life and reloads “Farewell to Love,” presses play, and lapses into a reverie. First, he lowers his head in a bow of acquiescence to recording’s power over him. At risk of making the logic of substitution Stentorian, Beckett then directs the alive Krapp to actually embrace the tape machine with both arms as it conveys the reminiscence of sex on the boat into his small apartment.

Then, in a shocking twist, Krapp looks up at audience and begins to stammer silently. The intimation is clear: a neurological or cardiologic ailment, probably a stroke, has rendered him Aphasic, the inability to speak.³⁸² Silenced and his mortality in doubt, Beckett applies the *coup de gras* with Krapp’s own recorded voice, which drones on in a boast that his debilitation has imbued with a mocking irony. “Perhaps my best years are gone,” the forty-year-old recorded Krapp intones. “When there was a chance of happiness. But I wouldn't want them back. Not with the fire in me now. No, I wouldn't want them back.”³⁸³ With the virtual Krapp’s triumph over the embodied man completed, the curtain falls.

³⁸¹ Beckett, *Krapp's Last Tape*, 26.

³⁸² Beckett’s note to the actor reads, “*Krapp's lips move. No sound.*” Beckett, *Krapp's Last Tape*, 28.

³⁸³ Beckett, *Krapp's Last Tape*, 28.

A Remedy for Overtaxed Memory: Vannevar Bush's Memex

Viewed as a personified machine doppelganger, the recording device in *Krapp's Last Tape's* recalls literary automata like Hadaly, the android-woman in Villiers de l'Isle-Adam's Science Fiction novel *The Future Eve*, 1886, and lifelike robots of Karel Capek's *R.U.R.*, 1921. But, wittingly or not, Beckett's play also referenced information systems becoming outmoded by new devices for sorting and sifting through information or keeping track of memories. Melville Dewey's Classification and Subject Index, first implemented in 1873, was by the early twentieth-century the standard for catalogues, indices, and cross-referencing formats throughout the U.S., even though its labyrinth of categorical labeling divided materials into nine Classes and each Class into one hundred Divisions (while also maintaining a one thousand-entry Subject Index). Not even the Dewey's few mnemonic enhancements, e.g., making "China" the sub-category after each "History" heading, helped the millions of researchers who used it professionally.³⁸⁴

Its shortcomings received attention from scientists eager to automate information storage and retrieval systems to make knowledge more easily accessible. Vannevar Bush (1890-1974), an MIT engineering professor who served as U.S. president Franklin Roosevelt's senior advisor on military technology, wanted to apply wartime electronics advances to ease mnemonic burdens. He had pursued this kind of work in 1937 for Eastman Kodak and National Cash Register, companies that archived bank checks on reels of microfilm but kept indices on paper punch cards separated, obviously, from the microfilm images they indexed. To retrieve check copies, clerks first perused paper indices to discover their whereabouts, and rather like Krapp

³⁸⁴ "The arrangement of headings has been sometimes modified to secure a mnemonic aid in numbering and finding books without the Index. For instance, the scheme is so arranged that China is always the number 1. In Ancient History, it has the first section, 931: in Modern History, under Asia, it has 951: in Philology, the Chinese language appears as 491." Melvil Dewey, *Dewey Decimal Classification: A Classification and Subject Index for Cataloguing and Arranging the Books and Pamphlets of a Library* (Amherst, MA: Lake Placid Educational Foundation, 1876), n.p.

physically located the boxes and reels where images were kept. To automate this tedious work, Bush and his MIT graduate student Claude Shannon affixed a four-microdot matrix to microfilm frames; when illuminated with stroboscopic light, the desired checks were automatically retrieved—at least in theory.³⁸⁵

Bush took aim at hierarchical archives like the Dewey Decimal System in a 1945 *Atlantic Monthly* article. Inimical to its faceted scheme, the human mind, Bush declared, “operates by association. With one item in its grasp, it snaps instantly to the next that is suggested by the association of thoughts, in accordance with some intricate web of trails carried by the cells of the brain.”³⁸⁶ To free associative thinking from its fetters [Image 3.4], Bush proposed a personalized recorder called the Memex (from “memory-extender”) to function as “a sort of mechanized private file and library” that provided “an enlarged, intimate supplement to memory.”³⁸⁷ The Memex would record and storing every kind of records—shopping lists, sound recordings, photographs, and so on—with tube powered speech synthesis hardware, a steel wire-type magnetic audio recorder, a microfilm reader, a photo scanner, and two glass screens—one to scan new objects with and another to display materials an operator wanted to retrieve.

The Memex’s most important feature was, Bush insisted, the electronically created and stored data users recorded by pressing a lever to mark information they deemed valuable to their interests, and which similarly inclined individuals could follow like a trail of breadcrumbs.

³⁸⁵ The U.S. military classified the Rapid Selector during and after the Second World War. Today, it is believed that no prototypes were ever manufactured for several reasons. First, microfilm’s material substrate, nitrate cellulose, melted or burst into flames passing across mechanical surfaces at high speeds or in proximity to electric light bulbs. Second, Bush lacked the mathematical background in programming needed to solve intricate problems of recognizing dot codes with projected light. Bush’s Rapid Selector is addressed in Colin Burke, “The Other Memex: The Tangled Career of Vannevar Bush’s Information Machine, The Rapid Selector,” *Journal for the American Society for Information Science* Vol. 43, No. 10 (December 1992), 648-657.

³⁸⁶ Vannevar Bush, “As We May Think,” *The Atlantic Monthly* Vol 176, No. 1 (July, 1945), 106.

³⁸⁷ Bush, 106-07..

When the user is building a trail, he names it, inserts the name in his code book, and taps it out on his keyboard. Before him are the two items to be joined, projected onto adjacent viewing positions. At the bottom of each there are a number of blank code spaces, and a pointer is set to indicate one of these on each item. The user tapes a single key, and the items are permanently joined. [...] Thereafter, at any time when one of these items is in view, the other can be instantly recalled merely by tapping a button below the corresponding code space.³⁸⁸

Not only did the record a user leave behind a copy, as it were, of their associative thoughts, but by following mazes of trails specialists could find new information necessary to solve problems with creative insights. This would remedy what Bush called “a civilization so complex that [man] needs to mechanize his records more fully” and “not merely become bogged down part way there by overtaxing his limited memory.”³⁸⁹ Purveying hyper-rationalized data networks, the Memex represented a functionalist’s dream of the brain’s many complex operations.

But in 1958 Bush gave the Memex a transistor-powered integrated circuit, a magnetic videotape recorder for moving images, and a portable camera “capable of storing all the scenes one sees, and all that one hears, through a long lifetime.”³⁹⁰ Not conceived as an entertainment device, it included an interface with the brain and the maze of associate trails it generated. The interface would operate, as he put it, “in accordance with the dictates of experience in the art of trail architecture,” arguing that associatively linked information could actually remold biologically stored

trails of the user’s brain, as one lives and works in close interconnection with a machine of scanned records and transistors. For the trails of the machine become duplicated in the brain of the user, vaguely as all human memory is vague, but with a concomitant emphasis by repetition, creation and discard, refinement, as

³⁸⁸ Bush, 107.

³⁸⁹ Bush, 108.

³⁹⁰ Vannevar Bush, “Memex II,” *From Memex to Hypertext: Vannevar Bush and the Mind’s Machine*, edited by James M. Nyce and Paul Kahn (Boston: Academic Press, 1991), 168.

the cells of the brain become realigned and reconnected, better to utilize the massive explicit memory which is its servant.³⁹¹

While Bush expected the symbiosis of machine recall and organic memory to offer purchase on information, it seems just as likely to subject the biological brain to unwanted dangers. Was it to be hardwired, like the electrical stimulation Wilder Penfield applied to the temporal lobes of one thousand conscious patients at McGill University to discern sites where memory was localized? “These are the neurone patters that preserve the past,” Penfield claimed, “they hold the pathway of electrical impulse in a facilitated sequence, which can be reactivated as though an electric current were being passed through a tape recorder.”³⁹² About one-half of Penfield’s patients reported bizarre dreams, smells, and visual or auditory hallucinations. Besides the obvious risks of neuropathy and infection associated with such modifications, and even if it were to feature sensory interventions external to the brain, the Memex II’s ethical quandary symbolized the promise of magnetic recording in the 1950s: How did fixing biological memory square with the modern subject’s expectations of autonomy and privacy that mnemonic externalization and rationalization were casting into doubt, not least of all by scientists’ attempts to duplicate the mind’s activities?

Visions of Machine Recall: John von Neumann’s Mnemonic Architecture and the Cybernetic Memory of Norbert Wiener

Had Bush’s Memex II proposal been published in 1958, knowledgeable readers would have found its ideas antiquated. By the mid-1940s, several U.S. scientists, ironically known for poor recall, conceptualized mechanical memory devices that made digital computers practical, aimed to cure memory-afflicting illnesses, and laid the groundwork for a new scientific field to

³⁹¹ Bush, “Memex II,” 169.

³⁹² Wilder. Penfield, “Activation of the Record of Human Experience: Summary of the Lister Oration Delivered at the Royal College of Surgeons of England on 27th April 1961,” *Annals of The Royal College of Surgeons of England* Volume 29 No. 2 (1961), 81.

cultivate machine or artificial intelligence. In retrospect, their aspirations offer a startling contrast to the future of externalized, ratiocinated memory presented in *Krapp's Last Tape* and in Alain Resnais' film *Tout la Mémoire du Monde*.

In the habit of bowing to acquaintances whose names he had forgotten,³⁹³ the Hungarian-born mathematician John von Neumann put magnetic memory into digital computers to speed their processing abilities. In 1944 Neumann configured J. Prosper Eckert and John Mauchly's Electronic Discrete Variable Automatic Computer (EDVAC) to perform calculations that Alan Turing theorized in his 1936 article "On Computable Numbers." Turing proposed to store computed output on runs of paper tape—an idea borrowed from the cinema—and to divide calculations into smaller routines to accord with logical processes he called "mind states."³⁹⁴ Operating with memory stored on external switches and plugs, Neumann came to realize that Turing's own digital computer faced a processing bottleneck. Among the first to advocate storing data in a computer's internal architecture improved speed, eliminated redundant code, and reduced power requirements, Neumann claimed he appropriated the idea from the Iconoscope, [Image 3.5 & 3.6] a tube that stored electrical charges on photosensitive granules glued to a silver-coated mica plate. When a scanning electron beam activated the plate's capacitances a charge cast recognizable moving images on a screen. This format was, Neumann wrote, "entirely free of the awkward temporal sequence in which adjacent memory units emerge from a delay memory."³⁹⁵

³⁹³ Norman MacRae, *John von Neumann: The Scientific Genius Who Pioneered the Modern Computer, Game Theory, Nuclear Deterrence, and Much More* (New York: Pantheon Books, 1992), 8.

³⁹⁴ Andrew Hodges, *Alan Turing: The Enigma* (New York: Simon and Schuster, 1983), 267-78.

³⁹⁵ As a Williams Tube, the Iconoscope did not store memory in any way, but its material set-up and instantaneous operation inspired Neumann to devise the architecture he became famous for. John von Neumann, "First Draft of a Report on the EDVAC," (Philadelphia: Moore School of Electrical Engineering, 1945), 33.

Neumann's new mnemonic architecture cited neuroscientist Warren McCullough and mathematician Walter Pitts's article "A Logical Calculus on the Ideas Immanent in Nervous Activity, 1943."³⁹⁶ Also based on Turing's "On Computable Numbers," their article proposed that neuronal function conceived of as discreet psychical units McCullough called "psychons" could be effectively simulated with logic-controlled electrical impulses.³⁹⁷ Derived from Pitts' studies in mathematical biology and McCullough's neuro-physiological clinical work, their theorization of neocortical operations proved foundational for scientists who aimed to simulate the mind's capacities for thought and reasoning. Although personally disinclined in the 1940s to believe computers could ever think or have agency, Neumann's work accelerated digital computers' calculating speeds to levels that dwarfed biological brains' capacity to reason. A powerful algorithm Neumann wrote to operate with a little internal memory, Merge Sort, broke new ground upon which data sorting programs could be built to function as thought-simulating computer programs.³⁹⁸

The other absentminded memory theorist, Norbert Wiener, wondered MIT's corridors oblivious to students and colleagues.³⁹⁹ Seldom discussed by art historians until quite recently, Wiener's contributions in applied science and as the promoter of cybernetics are difficult to overestimate. Influenced by Josiah Gibbs's questioning of Newtonian physics and applications of

³⁹⁶ Warren McCullough and Warren Pitts, "A Logical Calculus of the Ideas Immanent in Nervous Activity," *Bulletin of Mathematical Biophysics*, Volume 5, Number 4 (1943), 115-133.

³⁹⁷ Emerging from neurological and psychological discourses during the early twentieth century, McCullough regarded the psychon as the simplest possible psychic event, "what an atom was to chemistry or a gene to genetics" that could compound to simulate more sophisticated mind states. Quoted in Tara Abraham, *Rebel Genius: Warren McCullough's* (Cambridge: MIT Press, 2016), 89.

³⁹⁸ As a staple of computer programming, a detailed examination of Merge Sort lies outside this study's boundaries, but its influence on the design of Internet search engines cannot be over estimated.

³⁹⁹ Pesi Masani, *Norbert Wiener, 1894-1964* (Berlin: Birkhauser Verlag, 1990), 349-365.

probability theory to problems in small particle physics,⁴⁰⁰ Wiener established that random-looking movements of pollen grains suspended in a fluid Robert Brown discovered were mathematically predictable. Wiener eradicated signal noise in copper signal transmissions and vacuum tubes known as the Shot Effect, discovering that acoustical sounds and binary electronic signals could be encoded in as sine waves in one location and decoded at their arrival points without out deteriorating the messages they carried. In the Second World War, Wiener applied statistical and predictive analyses to devise artillery that, governed by radar-generated feedback, reduced wasteful errors by human operators.⁴⁰¹ Although some of his colleagues in cybernetic science regarded “thinking” as based less on biological memory than on an organism or machine’s capacity to maintain itself in homeostasis,⁴⁰² Wiener obsessively reviewed telegraph relays, vacuum tubes, chemical process photography, and phosphorescing substances in search of materials that might, potentially store data in new machines that learned as biological brains did.

Noting McCullough and Pitts’ work on changes in inter-neuronal connections over time,⁴⁰³ in 1947 Wiener concluded that memories stored in the brain’s neurons depleted over a period of years. Biological life was, he surmised, “based on the pattern of Balzac’s *La Peau de Chagrin*, and the very process of learning and remembering exhausts our powers of learning and

⁴⁰⁰ Gibbs’s hopeful disclaimer in the preface of his best-known publication may have supplied Wiener’s *raison d’être*: “In the present state of science, it seems hardly possible to frame a dynamic theory of molecular action which shall embrace the phenomena of thermodynamics, of radiation, and of the electrical manifestations which accompany the union of atoms. Yet any theory is obviously inadequate which does not take account of all these phenomena.” J. Willard Gibbs, *Elementary Principles of Statistical Mechanics* (New York and London: Scribner and Sons, Edward Arnold, 1902), ix.

⁴⁰¹ Flo Conway and Jim Siegelman, *Dark Hero of the Information Age: In Search of Norbert Wiener, the Father of Cybernetics* (New York: Basic Books, 2005), 112-128.

⁴⁰² See, for instance, British psychiatrist and cybernetician W. Ross Ashby, designer of the Homeostat, a self-regulating machine composed of repurposed military bomb appurtenances, advocated that memory and homeostasis were roughly analogous, a theory he adumbrated in *Design for a Brain*, 1952. The homeostasis wing of British cybernetics is discussed at length in Andrew Pickering, *The Cybernetic Brain: Sketches of Another Future* (Chicago and London: University of Chicago Press, 2010), 91-156.

⁴⁰³ Walter Pitts and Warren McCullough, “How We Know Universals: the Perception of Auditory and Visual Forms,” *Bulletin of Mathematical Metaphysics*, Volume 9, Number 3 (1947), 127-147.

remembering until life itself squanders our capital stock of power to live.”⁴⁰⁴ He proposed that a Shot Effect-type of signal overload led to both organic and functional ailments, a theory that leveled distinctions between biological and electronic memory. The brain, Wiener immodestly observed, “is not the complete analogue of the computing machine but rather the analogue of a single run on such a machine,” an assumption of “deep significance in psychopathology and in psychiatry.”⁴⁰⁵ Wiener then conjectured that mental illnesses were mere data processing errors that stunted the brain’s problem-solving powers, and he imagined machine protocols to correct these errors and, perhaps one day, simulate purposeful behaviors. This machine correction of memory-based problems would join biological and machine perception and storage into a single calculable “routine,” as Orit Halpern put it,⁴⁰⁶ to cure ailments that arose when memories were improperly deleted from consciousness. Data processing errors manifested either as mental illness or, if faulty commissures connecting the brain’s hemispheres impeded articulations of thought, as organic physical maladies. Both kinds of errors could, he presumed, be fixed by closing off overactive neuronal firings, rather as he had done with copper wire signal noise, in order to restore executive function. “As a consequence,” Wiener wrote, “the processes associated with speech and writing are very likely to be involved in a traffic jam, and stuttering is the most natural thing in the world.”⁴⁰⁷

⁴⁰⁴ Balzac’s 1831 novel related the Faustian tale of Raphaël de Valentin, a man in possession of a magical, wish-fulfilling donkey skin that shrunk in direct proportion to his own health after poorly chosen wishes led to one disaster after another. The skin’s shrinkage was, Wiener surmised, “a possible explanation for a sort of senescence.” Wiener, *Cybernetics*, 124.

⁴⁰⁵ “Norbert Wiener, *Cybernetics* (Cambridge, MA: The MIT Press, 1948), 121.

⁴⁰⁶ Orit Halpern, “Dreams for Our Perceptual Present: Temporality, Storage, and Interactivity in Cybernetics” *Configurations*, Vol. 13, No. 2 (Spring 2005), 283-319.

⁴⁰⁷ Wiener, *Cybernetics*, 154.

Specialized Knowledge and Mnemonic Accentuation: Alain Resnais' Archive Symphony *Tout la Mémoire du Monde*

Wiener's mnemonic prescriptions in *Cybernetics* were taken seriously in the early 1950s, particularly in France, where his Descartes-on-steroids decrees generated an artistic proposal by the filmmaker Alain Resnais (1922-2014) that paralleled themes Beckett explored in *Krapp's Last Tape*. A cinema patron who attended screenings by younger filmmakers, Beckett singled out Resnais as "the most gifted of the lot," the two having met on May 5, 1958 to discuss a possible film version of *All that Falls*.⁴⁰⁸ Even if it is unlikely that Beckett followed cybernetic debates that followed computer designer Louis Couffignal's *The Thinking Machines*, 1952, and the neurophysician Henri Laborit's articles on memory from a distance,⁴⁰⁹ Resnais read their publications copiously. This became evident when Radiodiffusion-Télévision Française (RTF) commissioned Resnais in 1954 to make a film about the *Bibliothèque Nationale de France* (BNF), an institution founded in 1368 by King Charles V and probably the world's largest archive of cultural works. Resnais's documentary for RTF, *All the Memories of the World*, 1956, captured the BNF's day-to-day operations and stressed that mnemonic and preservationist activities that made it a likely intertext for *Krapp's Last Tape*, one that, however, offered a very different perspective on cybernetic and computational phenomena in the mid-1950s from Beckett's.

All the Memories of the World begins with a sweeping pan over the BNF's glass- and iron-turreted rooftop and spire followed by an abrupt edit to its darkened cellar as a clutter of

⁴⁰⁸ Samuel Beckett, "Letter to John Manning, October 15, 1959," *The Letters of Samuel Beckett* Vol. 3, edited by George Craig, Martha Dow Fehsenfeld, Dan Gunn, Lois More Overbeck, (Cambridge: Cambridge University Press, 2014), 85, 246.

⁴⁰⁹ See Louis Couffignal, *Les machines à penser* (Paris: Éditions de Minuit, 1952) and *La Cybérnetique* (Paris: Universitaires de France Presses, 1963). Laborit's career somewhat paralleled U.S. cyberneticist Warren McCullough's. See Henri Laborit, *Résistance et soumission en physio-biologie: l'hibernation artificielle* (Paris: Masson, 1954).

books, manuscripts, magazines, fine visual art, maps, and musical scores appear. The daily barrage of new materials, narrator Jacques Dumesnil informs the viewer, necessitates new stories on top of the existing site *and* an excavation of the basement. Cutting to the interior of a sound studio, a camera exits the frame and a microphone swivels into view [Image 3.7 & 3.8], placing the viewer in the spot where the narrator's voice would have been recorded—a kinesthetic subversion of passive spectatorship. "Because he has a short memory," Dumesnil explains over a lingering shot of the recording studio's interior, "man [sic] amasses countless memory aids."⁴¹⁰ The visual kinesthesia continues in the next shot that, taken with a camera on a dolly in motion through a shelf-lined corridor, gives the viewer the sensation of being-there.

Resnais presents the BNF's preservation of cultural holdings as the literal instantiation of the individual's political freedoms. If that mission is the film's hero, the *Catalogue des Livres Imprimés de la Bibliothèque du Roy* is the vast archive's nerve center. [Image 3.9] "Vital work," Dumesnil says, "for without a catalogue, this fortress would be a pathless land."⁴¹¹ The viewer accompanies a single book through that land, all the way from its arrival and stamping, its cataloguing in the new holdings register, and finally, its indexing. [Image 3.10 & 3.11] Already in 1956, administrators printed index cards electronically but, as the viewer sees, librarians manually put them in monumental banks of wooden drawers Dumesnil calls the BNF's "brain." Glimpses of sumptuary treasures symbolizing knowledge cast into stark relief the solipsism of Krapp's self-referential archive: the Paris Codex painted by Mayans in eleventh century; pulp fiction featuring Harry Dickson, "the American Sherlock Holmes;" art historian and Nobel Laureate Romain Rolland's notebooks; Blaise Pascal's manuscript of *Pensées*, 1669; *Kudurru*, a

⁴¹⁰ *Tout la Mémoire la Monde*, directed by Alain Resnais (1956; Paris: Films de la Pleiade), B&W Film.

⁴¹¹ Resnais, *Tout la Mémoire la Monde*.

sixteen-thousand-year-old boundary stone expatriated from Baghdad; Sebastian Cabot's *Map of the World*, 1544; and Charlemagne's *Evangelistary*, 783. Resnais's cinematographic detailing of its fabulous holdings rhapsodizes the BNF as the very guardian of the civilized world.

But as the book Resnais follows moves from the stacks into the stately reading room, in a shocking conclusion Demusnil informs the viewer that, in the past, knowledge was "part of a universal, abstract, indifferent memory where all books were equal and together basked in attention as tenderly distant as that shown by God to men."⁴¹² [Image 3.12] In 1956, however, a threat undermined memory's value to collective humanity. "Here," Dumesnil intones, memory is "torn from its galaxy to feed these paper-crunching pseudo-insects irreparably different from real insects in that each is bound to its own distinct concern."⁴¹³ The harsh assessment reflected French intellectuals' fears that the ratiocination, instrumentalization, and specialization of life had replaced the cohesion and mutuality of the prelapsarian society. Resnais put that fear in succinct terms: "a future in which all mysteries are solved, when this and other universes offer up their keys to us. And this will come about simply because these readers, each working on his slice of universal memory, will have laid the fragments of a single secret end to end."⁴¹⁴ The polemic echoed the views of French theorist Georges Bataille, ironically librarian at the BNF from 1922 to 1942.⁴¹⁵ In 1938 Bataille wrote, "A man who bears the burden of science, has exchanged human destiny's concern for living with a concern for the discovery of truth at the cost of a crippled existence."⁴¹⁶ For Resnais, "mystery" enriched existence just as for Bataille

⁴¹² Resnais, *Tout la Mémoire la Monde*.

⁴¹³ Resnais, *Tout la Mémoire la Monde*.

⁴¹⁴ Resnais, *Tout la Mémoire la Monde*.

⁴¹⁵ Fred Botting and Scott Wilson, "Introduction: From Experience to Economy," *The Bataille Reader* (Oxford: Blackwell Publishers Ltd., 1997), 20

⁴¹⁶ Georges Bataille, *Visions of Excess: Selected Writings, 1927-1939*, edited and translated by Allan Stoekl, (Minneapolis: University of Minnesota Press, 1985 [1938]), 224-5.

life, in its preferred modality, “meets the figure of destiny fixed by the caprice of *chance*: the *determining laws* that science defines are the opposite of this play of fantasy constituting life.”⁴¹⁷

The idea both shared was that a wave of ratiocination might offer up a fully calculable—and thus politically and economically exploitable—reality, against which a bulwark must be entrenched.

In light of *All the Memories of the World*'s fear of a rationalized universe, Resnais might well have opposed Bush, von Neumann, Wiener, and Couffignal's mnemonic machines, but recent scholarship demonstrates otherwise. The film's first draft proposed the sequence “Portrait of the Ideal Memory,” about future technologies that allowed access to the BNF's holdings from distant locations, as well as a variety of other information. “On the screen—to answer questions of any kind—,” Resnais and Forlani wrote, “documents [will] scroll past belonging to all Civilization in all ages.”⁴¹⁸ Intending it to be shot in a science fiction style that contrasted with the film's somber tone,⁴¹⁹ “The Ideal Memory” is worth quoting in detail, not least of all for the premonition of cross-platform networks of computation and broadcasting it offered in 1955:

Imagine a gigantic machine (a robot) everyone will encounter as easily as those machines that calculate your weight in the corridors of the Metro. This machine, this universal memory, would know not only all the past, but also all present. That would be the real repository of written civilization. Is this machine necessarily utopian? Nothing prohibits it from being existing within a century or two. In conjunction with television, it is possible one day that we may—in the universities—view by turning a dial all images, all words of human knowledge on a screen. One may think that—one day—all high places of culture will be connected together. If so, then by means of uninterrupted playback, continuous use of all holdings will be possible. The memory of the world will really exist.⁴²⁰

⁴¹⁷ Bataille, 232. The italics are original.

⁴¹⁸ “Portrait de cette mémoire idéale. Sur l'écran – pour répondre aux questions les plus diverses – défilent des documents graphiques appartenant à Tous les civilisations, à Tous les époques.” Alain Resnais and Remo Forlani, “Premier état du synopsis d'un film de court-métrage sur la Bibliothèque Nationale,” cited in Alain Carou, “Tout la mémoire du monde, entre la commande et l'utopie,” 1895: *Revue de l'association française de recherche sur l'histoire du cinéma*, No. 53 (September, 2007), 124.

⁴¹⁹ “Il faut que cette séquence ait un style très « science-fiction ».” Resnais and Forlani, cited in Carou, 124.

⁴²⁰ *Imaginons une gigantesque machine (un robot) capable de répondre à tout avec la même facilité que ces machines qui vous disent combien vous pesez dans les couloirs du métro. Cette machine, cette Mémoire*

Resnais's vision of an automated memory was, however, censored by BNF administrator Julien Cain, who found it "*obscur—ou banal.*" Cain likely regarded computation technologies to be in conflict with budgetary priorities or, perhaps, felt electronic access to the BNF's collection might render its physical plant and employees redundant. That Resnais dropped "The Ideal Memory" without recognizing how it conflicted with the film's stance against calculation evidenced artists' ambivalence toward technologies for automating or simulating biological memory in the 1950s.

The Immodest Memory Science of *Artificial Intelligence* versus *Krapp's Last Tape*

Their ambivalence was not shared by memory scientists. As Resnais finished *All the Memories of the World* in 1956, a new undertaking emerged among scientists gathered for a conference at Dartmouth University that its organizer, John McCarthy, said was based "on the conjecture that every aspect of learning or any other feature of intelligence can in principle be so precisely described that a machine can be made to simulate it."⁴²¹ It produced a collection of essays by Claude Shannon, John von Neumann, Ross Ashby, and Marvin Minsky entitled *Automata Studies*, 1956.⁴²² Brimming with speculations about "intelligence amplifiers" and digital computers' epistemological potentials, the book implied that computational mind states far superior to the logical routines Turing speculated on in 1936 would soon migrate from the annals of science fiction into the factual "real." With an unbridled optimism and decades of U.S.

universelle connaîtrait non seulement tout le passé, mais aussi tout le présent. Ce serait le véritable Conservatoire de la Civilisation écrite. Cette machine, c'est bien sûr une Utopie? Rien n'interdit cependant de la croire possible d'ici un siècle ou deux. La télévision aidant, il est possible de penser qu'un jour on pourra – dans les Universités – rien qu'en tournant un bouton voir surgir sur un unique écran Tous les images, tous les mots résumant les connaissances de l'homme. On peut penser qu'un jour – tous les hauts lieux de la Culture seront reliés les uns aux autres. Alors une lecture ininterrompue, un recours permanent à Tous les mémoires seront possibles. La mémoire du monde existera réellement.

Resnais and Forlani, cited in Carou, 124-5.

⁴²¹ Cited in John Johnston, *The Allure of Machinic Life: Cybernetics, Artificial Life, and the New AI* (Cambridge, MA: MIT Press, 2010), 290.

⁴²² *Automata Studies*, edited by Claude Shannon and John McCarthy (Princeton, NJ: Annals of Mathematical Studies and the Princeton University Press, 1956).

military overfunding in their sightlines, by 1959 these exponents of Artificial Intelligence predicted mnemonic machines “coextensive with the range to which the human mind has been applied.”⁴²³

If by 1958 memory scientists restructured archival data, computed logical routines with enormous speed, imagined curing mnemonic illnesses and simulating intelligences that marked the contours of agency displayed by sentient life, few artists took notice.⁴²⁴ Within this discursive breach *Krapp's Last Tape* can now be said to occupy a unique and distinguished place. Beckett's play expressed no optimism that externalizing memory from the body, disciplining it with electronic feedback, or duplicating it with automata would improve the lives of individuals expected to benefit from such exploits. On the contrary, Krapp's demise in a literal and figurative embrace of his mechanical doppelgänger compels the perceiver to hold recording technology and the computational *apparate* it was a synecdoche for culpable for his isolation, flight from romantic love, incapacitation, and likely death.

Of special interest is how Beckett seemed to regard with suspicion memory science's capacity to help individuals solve problems with creative insight. While the memories Krapp recorded on an external device provoked associative thinking, his bounced like a phonograph needle skipping randomly from groove to groove. Perhaps Beckett's most farsighted conceit for personal devices that technologically reproduce affect was to have Krapp return continually to a recording of sexualized affect. That Krapp fast-forwarded the tape past “The Vision at Last”

⁴²³ Herbert Simon and Allen Newell, inventors of the first computer program to perform a mathematical proof, cited in Theodore Rozak, *The Cult of Information: The Folklore of Computers and the True Art of Thinking* (New York: Pantheon Books, 1986), 122.

⁴²⁴ In the late 1950s criticism of cybernetics and computation could be found in the literary genre of Science Fiction. See Philip K. Dick's *The Eye in the Sky* (Boston and New York: Mariner Press, 2012 [1957]) and *Time Out of Joint* (Boston and New York: Mariner Press, 2012 [1959]) as well as Stanislaw Lem, *Solaris*, translated by Joanna Kilmartin and Steve Cox (New York: Harvest, 1961).

confirmed his complete disengagement with the socially beneficent uses of technological reproducibility. Already in 1957, Beckett's dramatization of gadget love seemed to argue that recording, storing, retrieving devices that displaced memories—and the affective realities they superimposed over the present—reduced the quality of life among those who overindulge in recorded affect. Krapp's rapport with technological reproducibility, said to lift tape recording "out of its purely machine-like function" and transform it into "a box of magic,"⁴²⁵ expressed the appeal of mnemonic automata in the 1950s. Indeed, these represented a Pandora's Box of promises that the brain would soon be simulated, repaired, merged with, or surpassed. A strong faith in immanent computational doppelgängers lingers on among twenty-first century writers and scientists.⁴²⁶ [Image, 3.13] And while that subject lay beyond the scope of this dissertation, the stage is now set to discuss how Beckett transferred his critique of memory devices to technologies that reproduced streams of moving images in *Film*, an intervention into cinema thirty years after hearing and vision were reunited with optical sound-on-film in 1929.

Part II—"Comic Foundered Precipitancy:" *Film* as Cinematic Allegory of Ubiquitous Recording

Critics have for many years recognized *Film* as a meta-critique on cinema and, less commonly, that a theme of surveillance pervades it. In 1971 Ruth Perlmutter identified that its "flight from

⁴²⁵ Dougald McMillan and Martha Fehsenfeld, *Beckett in the Theater Volume 1: From Waiting for Godot to Krapp's Last Tape* (London & New York: John Calder and Riverrun Press, 1988), 294.

⁴²⁶ Ray Kurzweil, for instance, idealizes the consequences of a human-machine merger he calls "the singularity: "The Singularity will represent the culmination of the merger of our biological thinking and existence with our technology, resulting in a world that is still human but that transcends our biological roots. There will be no distinction, post-Singularity, between human and machine or between physical and virtual reality." Ray Kurzweil, *The Singularity is Near: When Humans Transcend Biology* (New York: Viking, 2005), 2. Elsewhere, Kurzweil's elaborates a theory of pattern recognition algorithms for reverse engineering the brain's capacity for creative thinking. Ray Kurzweil, *How to Create a Mind: The Secret of Human Thought Revealed* (New York: Penguin books, 2012).

perceivedness is really a flight from being entrapped by cinema.”⁴²⁷ Peter Freund credited it with trying to “break open the interface joining audience and drama” and exposed “the all-perceiving gaze to its own futile desire to master the image.”⁴²⁸ In 2017 Anthony Paraskeva concluded, in the best analysis yet available, that it “belongs to the wider influence of documentary narratives on the modernist cinema of the period. The documentaries of Jean Rouch and the *cinema verité* movement, particularly the technique of reassembling visual segments of real events into a fictional narrative.”⁴²⁹

While Perlmutter, Freund, and Paraskeva have caught hold of different aspects of Beckett’s ambitious cinematic gambit, none has compared its themes to *Krapp’s Last Tape*, considered the details of its production planning, or accurately traced its acid reconceptualization of cinema history from 1929 to the early 1960s as his response to technological reproducibility’s affront to the sovereignty, agency, and privacy of individuals in a world of ubiquitous recording. To describe how this theme pervaded *Film*, this section of chapter two considers that Beckett once again altered the temporality in which a work was set to allegorize the effects of recording, this time by channeling sound’s introduction into the cinema and dialoging with Dziga Vertov’s *Man With a Movie Camera*, 1929, and Buster Keaton’s *The Cameraman*, 1929. It begins with a close reading of *Film*, relates its concerns to those many debated in the crucial year of 1929. The silent film tramp as a social archetype fits into Beckett’s plans, as does his apparent contempt for Vertov-inspired documentary filmmaking styles that offer, as Paraskeva observed, the best context for evaluating Beckett’s intentions with *Film*.

⁴²⁷ Ruth Perlmutter, “Beckett’s *Film* and Beckett and Film,” *Journal of Modern Literature*, 6:1 (February, 1977), 86.

⁴²⁸ Peter Freund, “The Eye in the Object: Identification and Surveillance in Samuel Beckett’s Screen Dramas,” *Journal of Film and Video*, Vol. 50, No. 1 (Spring 1998), 45.

⁴²⁹ Anthony Paraskeva, *Samuel Beckett and Cinema* (London and New York: Bloomsbury Press, 2017), 53.

Film in Action: The Chase, the Baffling Perspective, the Apartment, the Disease of Vision

Shot on black and white stock, *Film* opens with an extreme close-up of a wrinkled eyelid; when it opens, an enormously enlarged moving image of Buster Keaton's pupil and iris stare at the viewer. [Image 3.14 & 3.15] The image recalls Luis Buñuel and Salvador Dalí's the gorily slit bovine eye in *An Andalusian Dog*, 1929, and, in a much more fitting comparison, the eye of cinematographer Mikhail Kaufman as it was seen through a closing camera's aperture in Dziga Vertov's *Man with a Movie Camera*, 1929. Beckett's eye establishes *Film*'s shared conceptual and technological rhetoric with *Man with a Movie Camera*, as does the one in-camera optical trick Beckett allowed, a lap dissolve that transitions the viewer into *Film*'s *mise en scene* of New York City's Lower East Side.

It transports to an exterior brick facade in a vacant lot. Standing next to the wall Keaton, identified in the script as "O" (short for Object) and wearing his trademark porkpie hat, is seen from behind. He wears the rumpled jacket of a silent film tramp but carries a brief case ill suited to so *déclassé* an individual that may represent Beckett's homage to the fact that Keaton usually played youthful apprentices seeking bourgeois careers. But O's attire is far less conspicuous than his desperation to flee the viewer's gaze, a plot device that introduces Beckett's metacritical stance toward vision. While film scholars had not by 1964 theorized it as coincident with the camera's own,⁴³⁰ the film spectator's perspective had long been intuitively understood by cinemagoers as coeval with that of the apparatus. To confirm this isomorphism of viewer and

⁴³⁰ The canonical theorizations include Jean-Louis Baudry's "Ideological Effects of the Basic Cinematographic Apparatus," *Film Quarterly* Vol. 28, No. 2 (Winter 1974-75 [1970]), 39-47 and Jean-Louis Comolli's "Technique and Ideology: Camera, Perspective, Depth," *Cahier du cinéma* No. 231 (August-September 1971), 42-49 and No. 233 (November 1971), 40-45. I thank Noam M. Elcott for alerting me to Baudry's later comments about the basic apparatus and *dispositif*. The former concerned both film production and projection equipment while the latter referred to implements of projection. "The basic cinematographic apparatus is a long way from being the camera by itself, to which some have wanted to say I limit it." Jean-Louis Baudry "The Apparatus: Metaphysical Approaches to the Impression of Reality in Cinema," translated by Jean Andrews and Bertrand Augst, in *Narrative, Apparatus, Ideology: A Film Theory Reader*, edited by Philip Rosen (New York: Columbia University Press, 1986 [1975]), 317.

camera, Beckett personified the camera with the name “E” (short for Eye), understood to be a male protagonist “staring with his eyes [at O].” Beckett’s pun of “Eye” and “I” further collapses E and the viewer into one entity, subtly implying that E or the individuated spectator, not the observed subject O, is *Film*’s true subject and, by the same stroke, Beckett objectified a famed actor as a mere prop. Two months after writing a first draft of *Film* to satisfy the commission Rosset offered him to write a film in February of 1963, Beckett tried to clarify his thoughts in a letter to Rosset, stating that he imagined O as an individual who took literally the doctrine that being consists of being perceived while putting no faith in the existence of an objective reality. “I often imagine a naïve human being involved in the first situation, so unphilosophically minded as to take it literally, seeking ingeniously to be as nothing by withdrawal within a space stripped of all perceiving organs and running foul of himself as perceiving organ. ¶ It is this innocent literal-mindedness that makes him a comic figure and conditions the whole style and atmosphere of the film.”⁴³¹ Referring also the duality of Robert Luis Stevenson’s fictions, Freud’s theory of psychology as states, and the affective divide in Franz Schubert’s music, Beckett finally says that *Film* is about the divide “between the being that is perceived and the being that perceives. And in order that this may be shown (on a screen) the two halves are given shape, as legitimately or illegitimately as Stevenson’s two halves, in the form of a fleeing object and a pursuing eye.”⁴³²

This conceptual trickery did not impress Alan Schneider or Boris Kaufman, both of whom tried to clarify in the July 11 and 12, 1964 production meetings who sees what in *Film*.⁴³³ They settled on transferring the perspective from E’s viewpoint to O’s by hanging a gauze scrim

⁴³¹ “Letter from Samuel Beckett to Barney Rosset June 6, 1963,” *The Letters of Samuel Beckett, Volume 3: 1957-1965*, translated by George Craig, edited by George Craig, Marthat Dow Fehsenfeld, Dan Gunn, and Lois More Overbeck (Cambridge, UK: Cambridge University Press, 2014), 549-550.

⁴³² “Letter from Samuel Beckett to Barney Rosset June 6, 1963,” *The Letters of Samuel Beckett, Volume 3*, 550.

⁴³³ Discussions between Samuel Beckett, Alan Schneider, Boris Kaufman, and Barney Rosset, July 11 and 12, 1964, sound recording, Grove Press Archive, Syracuse University Special Collections, n.p.

in front of the camera's lens to blur the image, a tactic Beckett begrudgingly accepted during the meeting even though he understood the necessity of differentiating E and O's sightlines.⁴³⁴ He even considered adding slightly differentiated "tick" and "tock" sounds to mark them as such.⁴³⁵ Thus, for a short time, less than a minute of *Film*, the audience becomes O, seeing what he does, blurrily. For the remaining twenty minutes, camera and viewer unite as E in a manic pursuit of O, who runs away and shields his face from E's view for no apparent reason. Beckett, taciturn at best, and who rarely mentioned *Film*, wrote a scenario in 1963 that described O's behavior as "comic founded precipitancy."⁴³⁶ Denoting amusement tempered by failed haste, this complex locution evoked the era of slapstick films as a point of departure for the chase *Film* depicts.

But, and problematically so for those eager to see Keaton ply his trademark physical comedy, *Film* offers the viewer no humor from asserting her superiority to another's, as the philosopher Thomas Hobbes defined humor; no perception of situational incongruities that Kant's thought of as comedy;⁴³⁷ and, to be sure, no lovers overcome a social order impeding their union.⁴³⁸ Instead, O's behavior is governed by arbitrary seeming rules that, if anything, rub Keaton's nose in the seat of his own notoriety—his face. As Beckett's hand drawing specifies, that O feels an "anguish of perceivedness" when his face enters E's sightline—specified as an

⁴³⁴ "The point I tried to make was that the two visions are to be distinguished, not only on the plane of absolute quality, but also dynamically, i.e. in their manner of transferring from one object to the next." "Letter from Samuel Beckett to Alan Schneider dated June 13, 1964," *The Letters of Samuel Beckett, Volume 3*, 602-603.

⁴³⁵ "Thinking in desperation of possible sound—tick tick tick tick—tock tock tock tock—to reinforce two visions. Knowing all in vain." "Letter from Samuel Beckett to Barbara Bray dated September 22, 1964," *The Letters of Samuel Beckett, Volume 3*, 628.

⁴³⁶ Samuel Beckett, "Outline," reproduced in *No Author Better Served*, 168. [Italics in original text.]

⁴³⁷ On a theory of comedy, see Sam Friedman, *Comedy and Distinction: The Cultural Currency of a 'Good' Sense of Humor* (Abingdon & New York: Routledge, 2014), 1-9.

⁴³⁸ "At the beginning of the play the obstructing characters are in charge of the play's society, and the audience recognizes that they are usurpers. At the end of the play the device in the plot that brings hero and heroine together causes a new society to crystallize around the hero, and the moment when this crystallization occurs is the point of resolution in the action, the comic discovery, *anagnorisis* or *cognito*." Northrup Frye, *Anatomy of Criticism* (Princeton, New Jersey: Princeton University Press, 1957), 163.

angle of forty-five degrees or less from E's frontal aspect. [Image 3.16] By maintaining an angle of greater than forty-five degrees, however, O remains within an "angle of immunity."

If the anthropomorphic camera, an objectified actor who fears being observed, poorly denoted changes of perspective, and humorless comedy did not ward off all comprehension, Beckett took it all a step further: *Film* evokes the detective, horror, and documentary genres, yet none of these adequately describes what happens in this strange and unsettling work of art. Beckett aims, literally and figuratively, for a stylized yet also cinematically *objective* chase. That chase, however, leads the viewer into contact with ambiguities. As O, running alongside the wall, bumps into a man and woman garbed in antiquated clothing (she a prim, high-collared blouse, he a minister's collar), the auditory component is made explicit when, startled by O's disruption, the man shouts at the woman. While his voice is not audible, she looks straight into the camera and emits, "Shhhhhhh," the one sound *Film* is heard. But her sound seems meant to scold the viewer into silence, as if sound is an unwelcome intrusion into the visual domain of cinema. Stranger still, their faces appear in tight close-ups that recoil in horror at O, compelling the viewer to speculation that O may be nefarious and sought after for wrongdoing. If, on the other hand, the tables are reversed and he is an innocent individual sought by miscreants, the realization dawns that if O is "good" the viewer is now cast as *Film*'s villain.

Meanwhile, the horror continues when O enters an apartment building, where an elderly woman in the lobby faints at the sight of him. He steps past her, climbs a stair, and enters a rundown apartment. Inside, sighted pets and inanimate objects that symbolize vision trigger O's fear of being perceived, so he secures his privacy by removing the dog and cat, tossing his coat over a bird cage, placing a blanket on a goldfish bowl, covering the windows, hanging a rug over

the mirror, and destroying a photograph of a Sumerian votive sculpture symbolizing God.⁴³⁹

While O may suffer from Scopophobia, he is not insensate, but sympathetic, so the viewer gives him the benefit of the doubt she does to a silent film actor of the kind Keaton usually played.

It is during the apartment scene, however, that *Film* unravels. Apparently convinced he is no longer under observation, O reclines in a chair; but if this were the case the viewer would lose track of how O appears on screen. The viewer has, however, been deceived because, as the script explains, E has slipped into the apartment with O. “They enter room together,” it reads, “E turning with O as he turns to lock the door behind him.”⁴⁴⁰ Neither the viewer nor O has any way to grasp this. More confusingly still, E and O’s sightlines fuse into one moving image stream, which, as Schneider ardently explained to Beckett in preproduction meetings, made no sense whatsoever to the viewer. “The space in the picture,” Beckett explained, “is the product of two perceptions, both of which are diseased.”⁴⁴¹ Growing nearly as flummoxed as Schneider at the difficulty of translating Beckett’s verbal concepts into moving images, Kaufman suggested filming O’s mirrored reflection to establish an objective view against which O and E’s own perspectives could be understood. “No!” Beckett shrieked, “the point of reference is in the personal experiences of the spectator, a spectator we never see and never will see.”⁴⁴² Schneider then suggested an in-camera superimposition to express the congruency of O and E’s vision, child’s play for Kaufman, but Becket, now almost shouting, cried, “No tricks!”⁴⁴³ He then rejected proposals to illuminate O’s visual field with light, to film O and E’s viewpoints at different times of day for contrast, and even an offer to build two different sets as ways of sorting

⁴³⁹ Samuel Beckett, *No Author Better Served: The Correspondence of Samuel Beckett and Alan Schneider*, edited by Maurice Harmon (Cambridge, MA: Harvard University Press, 1998), 171.

⁴⁴⁰ Beckett, *No Author Better Served*, 170.

⁴⁴¹ “Audiotape of Meeting,” n.p.

⁴⁴² “Audiotape of Meeting,” n.p.

⁴⁴³ “Audiotape of Meeting,” n.p.

out the film. But Beckett had eccentric visual ideas to communicate: “Every visual experience is a hateful, abominable thing,” he insisted.⁴⁴⁴ As a last word on *Film*’s concept, he told Schneider and Kaufman, “Finally, we’re trying to find the technical equivalent, a visual, technical cinematic equivalent for visual appetite and visual distaste. A reluctant, a disgusted vision and a ferociously voracious one.”⁴⁴⁵ Undeterred as he was editing *Film* in January of 1965, Schneider wrote to Beckett, “The basic problem of the film is to strengthen and clarify the POV business, that is O and E. And to make sure that we know [it] is *subjective* in both instances.”⁴⁴⁶ But Beckett refused to change *Film* in any way, setting the stage for a calamity in New York City that October.

In *Film*’s truly weird final scene, O finds himself face to face for the first time with E, inexplicably visible to O and the viewer as O’s doppelgänger—Keaton gazing upon another Keaton. Nothing has prepared the viewer for this. Yet, by the letter of Beckett’s script, the viewer is supposed to intuit that O and E are one and the same, a man who has learned that self-perception is inescapable. A gape-jawed terror engulfs O’s face as E, standing where the photo of God was previously affixed to the wall, glares down angrily at O, who covers his face in defeat. *Film* was rare attempt to capture affective self-perception—one of few markers of identity that, along with interior speech, resists conscription into a regime of recording. and which is why filmmakers resort to voice-overs and close-ups of emoting faces. Making a film

⁴⁴⁴ “Audiotape of Meeting,” n.p. Beckett’s own Scopophobia, manifested in the fear of being photographed, is discussed at length in the documentary film *Not Film* (New York: Milestone Films, 2016), dir. Ross Lipman.

⁴⁴⁵ S. E. Gontarski, *The Intent of Undoing in Samuel Beckett’s Dramatic Texts* (Bloomington, IN: Indiana University Press, 1985), 192.

⁴⁴⁶ Alan Schneider, “Letter to Samuel Beckett, January 21, 1965,” Beckett, *No Author Better Served*, 183.

about one's subjective perception was nonsensical, for as Beckett knew, *Film's denouement* has nothing to do with Berkeley at all.⁴⁴⁷

Film's Archival Turn: Photographed Memories

Its deficiencies notwithstanding, *Film* appeals to the viewer who is willing to parse the meta-critical themes Beckett packed into it. The first reprises *Krapp's Last Tape's* mnemonic and archival obsessions, as seen in the apartment when O reclines in the chair, sure he is no longer being observed, and removes from his briefcase a cache of photographs. [Image 3.17]. Portraits commemorating milestones in O's life, the photographs include images of O as a six month old infant in his mother's arms; at age four praying on a veranda next to his mother; at age fifteen in a school blazer teaching a dog to beg; wearing an academic gown on graduation day; at age twenty-one, mustachioed and newly married; at age 25, enlisted in the military with his daughter; at age 30 but much older looking, with an eye patch he acquired after being injured in battle and wearing a grim expression.⁴⁴⁸ The images invite the viewer to build a narrative of O's life, as he looks carefully at each on, lingering twice as long on the images of he and his spouse and brushing his index finger over his infant daughter's face. O's display of affection for individuals he is estranged from evokes the viewer's sympathy and, more importantly, defines him as a war veteran who, unable to resume his domestic life, has descended into vagabondage.

Taken along with his status as a man on the run, O's portraits belong to a tradition that migrated from painting to photography in the nineteenth century, when the portrait photograph

⁴⁴⁷“For as to what is said of the absolute existence of unthinking things without any relation to their being perceived, that seems perfectly unintelligible. Their *esse* is *percipi*, nor is it possible they should have any existence out of the minds of things which perceive them.” Bishop George Berkeley, *Treatise on The Principles of Human Knowledge and Three Dialogues*, edited by Howard Robinson (Oxford: Oxford University Press, 1990), 42. Interestingly, Berkeley conjectured in his next passage that the ability to perceive and distinguish objects' existences without recourse to human perception formed the basis of abstract thinking.

⁴⁴⁸ Beckett, *No Author Better Served*, 176.

acquired a dual role as honorific and bourgeois and as a technology that discerned criminality. The major theorist of photography's duality, Allen Sekula, argued that nineteenth-century archival science originated with law enforcement's quantification of facial topologies, an initiative that resulted in the "mug shot."⁴⁴⁹ Mug shots became, however, the basis for a spurious science of mathematical intervals derived from facial structures. The eyes, mouths, foreheads, and noses in photographs of convicts were subjected to calculations that, although empirically verifiable, were abstract and symbolic, without any basis in reality: criminality had no correlative in facial features. Nevertheless, metrics derived from photography led to a disastrous "eugenics movement" in the twentieth century.⁴⁵⁰ Not coincidentally, the archival pseudoscience shared an arbitrariness with Dewey-style information classification schemes. In regard to photo-archivists Francis Galton and Alphonse Bertrillon, Sekula wrote, "the new scientific bibliographers articulated an operationalist model of knowledge based on the 'general equivalence' established by the numerical shorthand code. This was a system for regulating and accelerating the flow of texts, profoundly linked to the logic of Taylorism. Is it surprising that the main reading room of that American Beaux-Arts temple of democratic and imperial knowledge, the Library of Congress, built during this period of bibliographic rationalization, should so closely resemble the Panopticon?"⁴⁵¹ In contradistinction to the oppressive metric of mug shots, bourgeois portraits concealed, Sekula observed, "a *shadow archive* that encompasses an entire social terrain while

⁴⁴⁹ Allen Sekula, "The Body and the Archive," *October*, Vol. 39 (Winter 1986), 10.

⁴⁵⁰ "In serving to introduce the panoptic principle into daily life," Sekula observed, "photography welded the honorific and repressive functions together. Every portrait implicitly took its place within a social and moral hierarchy. The *private* moment of sentimental individuation, the look at the frozen gaze-of-the-lived-one, was shadowed by two other more *public* looks: a look up, at one's 'betters,' and a look down, at one's 'inferiors.' Allan Sekula, 10.

⁴⁵¹ Sekula, 57.

positioning individuals within that terrain.”⁴⁵² Sekula’s analysis offers an interpretation of O’s dual membership in bourgeois and criminal orders; in turn, when O destroys his photos in the apartment, it is to keep them away from his pursuers helps to resolve the ambiguity Beckett assigned to him. O is a fugitive from observation, but to clarify the terms of his fear, this analysis will pivot into a consideration of Beckett’s longstanding infatuation with historical and contemporary cinema.

Beckett’s Stake in the Cinema: Sound, Commerce and Art, the Tramp Archetype and Buster Keaton

In 1936, the year Irish poet Niall Montgomery gifted Beckett with Vsevolod Pudovkin’s *Film Technique*, 1930, Rudolf Arnheim’s *Film*, 1933, and issues of Swiss film journal *Close Up* (1927-1933), the aspiring novelist wrote to the great Soviet director Sergei Eisenstein in hope of becoming his student at the Moscow State Institute of Cinematography, making clear his that he was a published writer and, therefore, interested in writing silent films from “the scenario and editing end of the subject. It is because I realize that the script is a function of its means of realization,” he added, “that I am anxious to make contact with your mastery of these, and beg you to consider me a serious *cinéaste* worthy of admission to your school.”⁴⁵³ While Eisenstein did not reply, and taught only one Anglophone student, the future film historian Jay Leyda, it pays to note that although silent cinema was already an anachronism, Beckett’s preference for silent films was rooted in the perceived limitations sound imposed on a predominantly visual medium. In a March 2, 1936 letter to Thomas McGreevy, Beckett mentioned that the Technicolor Disney cartoon *Becky Sharp*, 1936, had flopped at Dublin’s Savoy Theater after

⁴⁵² Sekula, 11.

⁴⁵³ Samuel Beckett, “Letter to Sergei Eisenstein, 3/2/36,” *The Letters of Samuel Beckett Volume I: 1929-1944*, translated by George Craig, edited by George Craig, Martha Dow Fehsenfeld, Dan Gunn, and Lois More Overbeck (Cambridge: University of Cambridge Press, 2009), 309 (n. 9), 317.

enjoying a long run in London. “This does encourage my hope that the industrial film will become so completely naturalistic, in stereoscopic color and gramophonic sound, that a backwater may be created for the two-dimensional silent film that had barely emerged from its rudiments when it was swamped. Then there would be two separate things and no question of a fight between them or rather of a rout.”⁴⁵⁴

The reasons why Beckett disliked sound in the commercial cinema included the fact that actors and cinematographers were forced to remain stationary in front of steel ribbon microphones to ensure speech’s capture, a practice that subordinated the visual dynamism of motion to auditory and literary considerations. Second, as speech’s role skyrocketed, actors’ ability to improvise creatively diminished. Third, unlike the camera’s fixity of vision in a directional, rectangular form, the fact that sounds disbursed outward in all directions required crews to limit unwanted on-set noises. These noises included the whirring sounds of film camera transport mechanisms that proved difficult to keep from being recorded onto the soundtrack. Moreover, once the need arose to standardize a frame rate of exactly twenty-four frames per second with automated transport mechanisms so sounds on the optical track did not warble, skilled cinematographers could no longer create expressive visual effects by hand-cranking at varying speeds. What’s more, the difficulty of editing sounds recorded directly onto film brought about a new conservatism: radical visual montage did not comport well with narrative through-lines expressed with speech and sounds.⁴⁵⁵ And, lastly, the sound film thwarted film’s promise of

⁴⁵⁴ Samuel Beckett, “Letter to Thomas McGreevy, 2/6/36,” *The Letters of Samuel Beckett Volume I: 1929-1944*, 311-312.

⁴⁵⁵ David A. Cook, *A History of Narrative Film* (New York & London: Norton & Company, 1981), 247-257.

a visual Esperanto to unite multitudes separated by language differences.⁴⁵⁶ In view of the surprising quantity of dilemmas associated with sound, many art film directors feared financiers would stop funding their works after investing to retool studios and theaters for sound cinema. In fact, this very issue dominated the Independent Cinema Congress held on October, 1929 at La Sarraz, Switzerland, where art-oriented filmmakers strategized to keep aesthetic films alive as pressures mounted to finance the retrofitting of film production and display technologies for talking pictures. Although personally enthused about sound's potential as an experimental counterpoint to moving images, Eisenstein represented the Soviet Union at the 1929 Congress.⁴⁵⁷

Beyond his displeasure with sound's disruption to the 1900 network's visual channel, and in spite of its humorlessness, *Film* did actually reflect Beckett's love of Vaudevillian humor, as did characters in most of his plays and novels. Estragon, Vladimir, Watt, Krapp, and O resemble screen personae Mack Sennett, Charlie Chaplin, Stan Laurel, Oliver Hardy, and Buster Keaton forged from 1910 to 1929. Notably, every one of these actors drew inspiration from lower social orders that frequently conflicted with the bourgeois and the police. Not coincidentally, silent film comedians made wealthy individuals and police officers the butt of most jokes. Beckett enthusiastically cottoned to Charlie Chaplin's class-conscious "Little Tramp" persona. Relentlessly impudent yet sympathetic, Chaplin's tramp stole from everyone and cheated rivals whenever possible in films that embodied class antagonisms. The line separating bourgeois

⁴⁵⁶ For a précis of *Close Up*'s coverage of debates over the sound film, see James Donald, "Introduction: From Silence to Sound," *Close Up: Cinema and Modernism, 1927-1933*, edited by James Donald, Anne Friedberg, and Laura Marcus (Princeton, NJ: Princeton University Press, 1996), 79.

⁴⁵⁷ "Only the use of sound as counterpoint to visual montage offers new possibilities of developing and perfecting montage. The first experiments with sound must be directed towards its 'noncoincidence' with visual images. Only this method can produce the feeling we seek, the feeling which, with time, will lead to creation of a new orchestral counterpoint of image-vision and image-sound." Sergei Eisenstein, quoted in Léon Moussinac, *Sergei Eisenstein*, translated by D.S. Petry (New York: Crown Publishers, 1970), 154-5. See also Eisenstein, Vsevolod Pudovkin, and Gregori Alexendrov's famed 1928 "Statement on Sound" in *Sergei Eisenstein: Selected Works Volume I, 1922-1924*, edited and translated by Richard Taylor (London and New York: IB Tauris, 2010), 113-4.

rectitude and criminal vagabondage O straddled was perhaps never as clear in the history of cinema as during the slapstick era. “All my pictures,” Chaplin correctly observed, “depend on the idea of me getting in trouble.”⁴⁵⁸

Tramp characters were, however, incongruous with the economically prosperous 1920s because they represented a kind of vagrant that originated in nineteenth-century social ills.⁴⁵⁹ Marked by declines in industrial production, labor unrest, and stock market fluctuations, the 1870s were especially fraught with discord. “During that decade the homeless population increased dramatically in size and assumed a distinctive form,” the historian Kenneth Kusmer has written. “A new, more aggressive type of homeless man emerged—the tramp. Tramps rode the railroads without paying, joined together in threatening bands, and frightened farmers while incurring the wrath of law enforcement officers.”⁴⁶⁰ Contrary to mistaken associations of tramps with the Great Depression of the 1930s, their high point of popularity reflected bourgeois desires to ameliorate a dangerous population from decades beforehand. In this connection, Beckett exploited tramps’ association with criminality in *Film*. In fact, his first choice to play O was Charlie Chaplin himself, but the seventy-five year old actor declined, as did actors Zero Mostel and Jackie MacGowran. When he conveyed the bad news to Beckett over the telephone, as Schneider recalled, “he shattered our desperation over the sudden casting crisis by calmly suggesting Buster Keaton.”⁴⁶¹ A longtime Keaton admirer, Beckett attended the faded actor’s

⁴⁵⁸ Cited in Michael Roemer, “Chaplin: Charles and Charlie” in *The Silent Comedians*, edited by Richard Dyer MacCann (Metuchen, NJ & London: The Scarecrow Press, 1993), 132.

⁴⁵⁹ Paul T. Ringenbach, *Tramps and Reformers, 1873-1916* (Westport, CT & London: Greenwood Press, Inc., 1973), 3-74.

⁴⁶⁰ Kenneth L. Kusmer, *Down and Out, On the Road* (Oxford: Oxford University Press, 2002), 3.

⁴⁶¹ Schneider, 67.

January 12, 1954 performance at Paris's Cirque Medrano theater and had considered casting him in a New York City production of *Waiting for Godot*.⁴⁶²

Although less famous than Chaplin, Keaton was a surprisingly apt choice. For one thing, the notoriety of his face provided Beckett with the same utility Chaplin's did, albeit for different reasons. Film critic James Agee compared Keaton's face to Abraham Lincoln's iconic visage, and, according to film writer Peter Krämer, it was "the clearest and most striking mark of his physical presence as a performer."⁴⁶³ Whereas Chaplin dazzled audiences with a vast reservoir of expressive faces, Keaton's expressionless deadpan accomplished a similar feat and, moreover, it looked outward, directly toward the audience. "Buster, the voyeur absorbing vital information is," film critic Robert Benayoun observed, "rather like the eye in the Masonic emblem, all-seeing and all-hearing."⁴⁶⁴ Benayoun even likened Keaton's gaze to Dziga Vertov's theory of the kino-eye: "The stupefying Keaton possesses a camera eye. He frames what he sees,"⁴⁶⁵ depicting Keaton's notoriety in cinematic terminology Beckett also recognized. In a felicitous accident, Keaton had critiqued the omnivorous kind of vision Vertov celebrated in *The Man with a Movie Camera*. Keaton and Vertov both completed their depictions of reality in the watershed year of 1929. When Keaton agreed to play O, the opportunity to engage their works in a metacritical dialogue about recording technology fell right into his lap. To drill down on *Film*'s shared with *The Man with a Movie Camera*, shed light on reasons why Beckett situated *Film* in 1929, and

⁴⁶² Knowlson, *Damned to Fame*, 352, 372. See also "Letter from Samuel Beckett to Pamela Mitchell dated January 12, 1954," in *The Letters of Samuel Beckett 1941-1956*, Volume 2, edited and translated by George Crag, Martha Dow Fehsenfeld, Dan Gunn, and Lois More Overbeck (Cambridge University Press, 2011), 443-4.

⁴⁶³ James Agee, "Comedy's Greatest Era," *Life Magazine* (September 9, 1945), 82 and "The Making of a Comic Star: Buster Keaton and *The Saphead*" in *The Silent Cinema Reader*, edited by Lee Grieveson and Peter Krämer (London: Routledge, 2004), 282.

⁴⁶⁴ Robert Benayoun, *The Look of Buster Keaton*, edited and translated by Randall Conrad (New York: St. Martin's Press, 1982), 17.

⁴⁶⁵ Benayoun, 19.

explain how *Film* intervened in the cinema of 1964 requires a thorough review of Vertov's *magnum opus* and the theories that undergirded it.

Beckett's Dialogue with Vertov on "Life Caught Unawares"

The Man With a Movie Camera depicts cameraman-hero Mikhail Kaufman, the brother of Vertov (*nee* Denis Kaufman) and Beckett's cinematographer Boris Kaufman. Cast in the dual role of producer *and* subject, Mikhail Kaufman appears onscreen as he films Soviet citizens' quiet and ebullient moments in private and public, and at work or during leisure time. Ideally, his subjects remained unaware that they were being filmed, but in actuality arc lamps and the impossible-to-conceal weight and size of his camera almost ruled out candid recording. But even with these limitations, the film was a culminating point of the ideas Vertov, Kaufman, and Elizaveta Svilova adumbrated in many articles advocating for the techniques of filming reality.

Vertov's enthusiasm for the "real" began with his 1918 leap from a second story window, a peril undertaken so that his facial expressions in a state of mortal danger could be recorded in slow motion and evaluated afterwards.⁴⁶⁶ Emboldened by the results yet chastened by the quandary of placing individuals into harm's way just to film them, Vertov sought ethical means for capturing reality. To solve this problem, he observed, "the camera had to penetrate into a room, into the intimate emotional experiences of people. It had to be done so that the camera would penetrate to the level on which a person reveals himself completely."⁴⁶⁷ A sightline into the deep corridors of thought and emotion took place in his first film, *Kinoglaz*, 1924, in a shot of a woman's face as she learned of her husband's death [Image 3.19]. Too overcome by shock to respond emotionally, as an actor might, her absence of affect was for Vertov quite salutary.

⁴⁶⁶ For an account of this often-told story, see Ute Holl, *Cinema Trance Cybernetics* (Amsterdam: University of Amsterdam Press, 2017), 251-2.

⁴⁶⁷ Dziga Vertov, *The Writings of Dziga Vertov*, edited by Annette Michelson and translated by Kevin O'Brien (Berkeley: University of California Press, 1984), 125.

Merged with the heady political energies of the 1917 revolution, Vertov couched his enthusiasm for surreptitious filming in a militant rhetoric, noting that *Kinoglaz* “represents an assault on our reality by the camera and prepares the theme of creative labor against a background of class contradictions and of everyday life.”⁴⁶⁸ Clausewitzian speed and strategic diversions of attention became his preferred cinematic *modus operandi*:

1. Filming unawares—an old military rule: gauging, speed, attack.
2. Filming from an open observation point set up by *kinok*-observers. Self-control, calm, and, at the right moment—lightning attack.
3. Filming from a hidden observation point. Patience and complete attention.
4. Filming when the attention of the subjects is diverted naturally.
5. Filming when the attention of the subjects is artificially diverted.⁴⁶⁹

For Vertov, reality was like an enemy force in that it had to be overcome with patience and deception, and in his filmic schemata human subjects represented both the filmmakers’ quarry and an audience for the blitzkrieg on reality. When Soviet filmgoers underwhelmed by reality rejected *Kinoglaz* and Vertov called its failure “the great joy of directors, actors, and the entire cinematic priestly caste,”⁴⁷⁰ he still bolstered *Kinoglaz* as “the camera’s first reconnaissance of real life.”⁴⁷¹

In the same year *Kinglanz* opened, 1924, Vertov qualified his argument for recording surreptitiously in a revealing declaration:

Not kino-eye for its own sake, but truth through the means and possibilities of film-eye, i.e., *kinopravda* [“film-truth”].¶ Not “filming life unawares” for the sake of the “unaware,” but in order to show people without masks, without makeup, to catch them through the eye of the camera in a moment when they are not acting, to read their thoughts laid bare by the camera.⁴⁷²

⁴⁶⁸ Vertov, 34

⁴⁶⁹ Vertov, 162.

⁴⁷⁰ Vertov, 78.

⁴⁷¹ Vertov, 94.

⁴⁷² Vertov, 174

It is not easy to parse how a filmmaker could record truth but not for its own sake or, for that matter, how life surreptitiously filmed was done not for the sake of the unaware. In regard to the first item, at least as I read him, Vertov is admitting between the lines that non-acted reality was no automated production of the “camera-eye,” but one that required a skilled artist to effectively edit footage of subjects. Regarding the second, telling filmmakers to not shoot surreptitiously for the sake of “the unawares” is, at least as I read it, an injunction not to shoot candid events as an ends. In other words, the artist is responsible for not violating subjects’ privacy or decency. And while Vertov scholars have sidestepped the ethical ambiguities of “Life Caught Unawares,”⁴⁷³ the question Beckett poses in his dialogue with Vertov on omnivorous visuality is this: Did *The Man with a Movie Camera* violate individuals’ privacy and sovereignty?

Without reservation, the answer is “yes.” Early in the film, Vertov depicts a woman in the acts of sleeping, waking, rising, and dressing in her apartment with vignettted cinematography. The keyhole-like visual effect conveyed an impression that she did not know she was being recorded to the viewer. [Image 3.20 & 3.21] in other instances surreptitious filming, Kaufman shoots from atop of cranes and rooftops where he recorded urbanites without their knowledge. [Image 3.22, 3.23] Vertov employed optical tricks like superimposition to contract Kaufman’s apparent size, implying in one key scene that he was filming goings on in a tavern from inside a beer glass. Perhaps more than any other sequence in Vertov’s *oeuvre*, the tavern sequence

⁴⁷³ Here is, for instance, Jeremy Hicks in 2007:

Any failure by Vertov fully to exploit cinema’s power as an instrument of surveillance was not due to any qualms about the individual’s consent to be photographed or right to privacy. As he puts it, no member of the audiences can be sure they will not appear in an issue of *Kino-Glanz*. On the contrary, Vertov’s films are posited on a sense of the camera’s right to see whatever it wants: it is possible to argue that many of those who seem concerned to avoid being photographed, in *Man with a Movie Camera*, for example, are being implicitly criticized, whereas the workers are unconcerned by the presence of the camera. Vertov is implying that all is public, there is no private sphere into which a camera has no right to intrude, and the camera therefore needs no consent of the part of individuals to film them. For Vertov, the personal is political.

Jeremy Hicks, *Dziga Vertov: Defining Documentary* (London: I.B. Taurus and Co.), 34-5.

reflected a visual intrusiveness Beckett regarded as a symptom of diseased vision. It begins with a low-angle shot taken from beneath a barroom table, then Kaufman pans up abruptly and swung the camera aggressively over the table, brushing it past faces of patrons engaged in a discussion. Their expressions of disgust over the interruption are observable.

Besides the tavern scene intrusiveness, Beckett likely objected to Vertov's thirst for the unadorned "real" because it led to an adversarial relationship with Sergio Eisenstein, whose films Beckett greatly admired. In 1925 Eisenstein attacked Vertov's theories and films as a "*reductio ad absurdum* of the technical methods that are valid for newsreel."⁴⁷⁴ Eisenstein contemptuously viewed the "real" Vertov considered cinema's true subject as an obstacle to dialectically unifying the fictive and documentary genres, and he later dismissed *The Man with a Movie Camera* as little more than "formalist jackstraws and unmotivated camera mischief."⁴⁷⁵ Their feud inspired a parody in *Close Up* with a title that paraphrased Eisenstein's criticism, "Vertov ad Absurdam [sic]," 1932. The parody proposed casting an anthropomorphized "talking" camera in the dual roles of apparatus and viewer, and the resulting film would be projected in a theater equipped with sound reproduction technology in every seat:

The character of the camera might, as a concession with Vertov's permission, be given a mirror physiognomy, but it would be better for the individuals of the audience to credit the tripod with their own beauty. It would not be more immoral than identification with the usual muscular man or henna'd helpless. I would suggest a simple hearty story, like *Treasure Island*. Or, more topically, occasional verisimilitude could be given by the introduction of a hand containing a cigarette to just below the camera, which would of course be swiveling and tracking in the most tasteless manner all over the place: very outmoded and

⁴⁷⁴ Sergei Eisenstein, "The Problem of the Materialist Approach to Form" in *Selected Writings Volume I*, edited and translated by Richard Taylor (Bloomington: Indiana University Press, 1988), 62.

⁴⁷⁵ Sergei Eisenstein, "The Cinematic Principle and the Ideogram," *Film Form: Essays in Film Theory*, edited and translated by Jay Leyda (New York: Harcourt Brace Jovanovich, 1977 [1929]), 43.

nauseating, but perhaps useful.* The camera audience would have a voice, which might very well come from the back of the cinema, if enterprise could not project it from every seat. Thinking of the headlines: “Starring you!”⁴⁷⁶

Siding with Eisenstein, as Beckett undoubtedly did in the dispute over reality’s role in cinema, the spoof ridiculed Vertov’s theory of the Kino-eye for personifying the apparatus. Suggesting that the audience would better identify with the tripod expressed, ironically I think, a fondness for moving camera images that sound’s arrival had rendered obsolete. Notice too how sound is an emblem of “industry,” not art to capture the embittered tone of *cinéastes* who objected to changes sound brought to films. In another remarkable coincidence, the proposed fusion of camera and audience anticipated *Film*’s conceit, as did the identifications of individuals with an object like the tripod.

Even before *Close Up* ironized the theory of the kino-eye, optical sound-on-film’s arrival inspired Vertov to advocate an even stranger and more intrusive aim for recording technology.

“We shall go,” he proclaimed in 1929,

from [Kino-Eye and Kino-Ear] to the simultaneous montage of visual-acoustic-tactile-olfactory facts, etc. ¶ We shall then reach the stage where we will surprise and record *human thoughts*, and, finally ¶ we shall reach to the greatest experiments of direct organization of thoughts (and subsequently of actions) of all of mankind.⁴⁷⁷

It is a fair surmise that Beckett found this nauseating, for what lay at stake in the ubiquitous recording Vertov imagined was the concept of privacy autonomous, individuated, and modern individuals enjoyed. Technologically reproducibility’s threat to privacy is longstanding. In a landmark U.S. Supreme Court case in 1890, justices Louis Brandeis and Samuel Warren defined

* “A camera smoking, yawning, drinking, getting hiccups, looking down and admiring its own knees, has been so often suggested that finally we are constrained to believe it has a wider application to the jaded than we thought—hence, in fact, the publication of this here. *Ed.*”

⁴⁷⁶ Pennethorne Hughes, “*Vertov ad Absurdum*,” *Close Up*, Volume 9, No. 3 (September, 1932), 174-5.

⁴⁷⁷ Vertov, “Kino-Eye, Lecture I,” *Film Culture Reader*, 372.

privacy as “[t]he right to be let alone,” basing their decision upon concerns that the Eastman Kodak Company’s 1884 “snap” camera might lead unscrupulous newspaper editors to publish photographs of intimate behaviors to embarrass enemies and add readers.⁴⁷⁸ O’s objectification hints at Beckett’s disgust with lost privacy. As philosopher Stanley Benn has argued, privacy centers on the idea of personhood: “Respect for someone as a person, as a chooser, implied respect for him as one engaged in a kind of self-creative enterprise, which could be disrupted, distorted, or frustrated even by so limited an intrusion as watching.”⁴⁷⁹ Being, Benn added, “an object of scrutiny as the focus of another’s attention, brings one a new consciousness of oneself as something seen through another’s eyes” and in this process one “becomes aware of himself as an object.”⁴⁸⁰ In Benn’s formulation, then, O is a recipient of unwanted attention who justifiably protects his identity from conscription.

Before describing *Films’* assessments of contemporary cinema in 1964, I will consider *The Cameraman*, 1929, a film Buster Keaton played a dual role of author and lead actor in. Like *Film*, it engaged the rhetoric of “Life Caught Unawares” and also envisioned social life under a regime of ubiquitous recording. Furthermore, as a remnant of a bygone moving image economy, the temporality of Keaton’s style merits examination, for it gave Vertov food for thought and Beckett seemed to adopt the cinema’s shifting temporalities as yet another subject *Film* offered a metacritical perspective about.

The Dialogue with Keaton on the Ethics of Surreptitious Recording, Commerce, and Fashion

An aspiring filmmaker of the unvarnished “real,” *The Cameraman’s* protagonist “Buster” bore an uncanny resemblance to Mikhail Kaufman in *Man With a Movie Camera*. Buster carries

⁴⁷⁸ Daniel J. Solove, *Understanding Privacy* (Cambridge, MA: Harvard University Press, 2009), 15-18.

⁴⁷⁹ Stanley I Benn, “Privacy, Freedom, and Respect for Persons” in *Nomos XIII: Privacy 2*, edited by J. Roland Pennock and J.W. Chapman (New York: Atherton Press, 1971), 7.

⁴⁸⁰ Benn, 7.

around a moving image apparatus so ungainly that it becomes a point of departure for Keaton to display his great aptitude for physical comedy and a fulcrum for satirizing the many logistical challenges of filming realities off of a movie set in the 1920s. “Buster” crashes into pedestrians and shatters the glass door of the firm where his love interest, played by Marceline Day, is the receptionist and where he receives a provisional opportunity to become a newsreel cameraman.

The picayune-seeming story evolves into a complex satire after Day receives a tip that a gang fight is erupting in Los Angeles’s Chinatown neighborhood. To give Buster an advantage over the firm’s other cameramen, she tells only him about the forthcoming street fight. Eager to solidify his employment, Buster records the brawl from locations where he cannot be seen: a shadowy architectural niche, a rooftop, and a second-story window. [Images 3.24, 3.25] Buster’s Vertov-like cinematography catches life unawares, but *The Cameraman* humorously pointed up ethical dilemmas involved in documenting reality. [Image 3.26 & 3.27] When, for instance, a combatant drops the knife he is trying to murder another combatant with, Buster stoops down, retrieves the blade from the ground and slides it back into his hand without interrupting the shot. Irresponsibly prolonging a life-threatening situation to film a violent act to advance his career, Buster carries on because it will thrill the viewer who sees it, within a theatrical context, as an interstitial short film dissociated from any responsibility for the consequences. Compounding his dubious behavior, when the conflict wanes Buster tosses light bulbs into the street from the second story window he has been filming the fighting from. When the separating gang members look back to the sounds of glass shattering, Buster waives his arms to return and, as a new scrum breaks out, Buster resumes filming from above.

Surprisingly, while Keaton probably never saw a Vertov film, Vertov knew Keaton’s work enough to cite his film *The General*, 1927, as an example of how the cinema renewed itself

with stylistic alterations. “Much has become outdated and seems comic today, like Buster Keaton’s train,” Vertov wrote. “But in their day these now funny experiments evoked not laughter but a storm of controversy, ideas, plans, outlooks.”⁴⁸¹ The scene in question depicts a bridge collapsing underneath the weight of a passing locomotive, which collapses into a river. Much remarked upon in its day, the stunt appeared outmoded to Vertov only seven years later, presumably due to more outlandish on-screen disasters that had expanded audiences’ perceptual thresholds for spectacle. Also embedded in Vertov’s comment was a controversy *The General* provoked among filmmakers when, after the expensive film failed to return an expected profit to its distributor United Artists, it seized the reins of Buster Keaton Comedies, among the first independent film production companies. Symbolizing the priorities of commerce over aesthetics, and to some degree the limitations on physical comedy that accompanied sound’s arrival, Keaton’s career as a direction was over by 1930 and he even stopped acting by 1940, an abrupt fall from grace that symbolized capitalism’s abject failure to support artisanal cinema.

But, more subtly, Vertov’s comment on Keaton associated technological reproducibility with the vocabulary of film styles Beckett explored in *Film*, just as he had in *Krapp’s Last Tape*. Setting *Film* in the past year of 1929 constructed an allegorical relationship to the present time of 1964. In the 1930s, Walter Benjamin discerned a comparable vocabulary in women’s fashions. “Fashion has a flair for the topical,” he wrote, “no matter where it stirs in the thickets of long ago. It is a tiger’s leap in to the past.”⁴⁸² In the tradition of Viennese art historian Alois Riegl’s notion that aesthetic styles reflect a society’s political, ethical, and institutional character,⁴⁸³

⁴⁸¹ Vertov, *The Writings of Dziga Vertov*, 174.

⁴⁸² Walter Benjamin, “Theses on the Philosophy of History,” *Illuminations*, edited by Hannah Arendt and translated by Harry Zohn (New York: Schocken Books, 1968 [1940]), 261

⁴⁸³ For a fuller discussion of Riegl and Benjamin, see Michael Jennings, *Dialectical Images: Walter Benjamin’s Theory of Literary Criticism* (Ithica, NY: Cornell University Press, 1987), 151-163.

Benjamin regarded style of sufficient affective power to activate political awareness within a dormant collective. In the 1950s, French critic Roland Barthes described the workings of a regressive “fashion system” that mobilized consumption in all capitalist industries, including the trade in garments.⁴⁸⁴ Intuiting stylistic change as a site where film history could be prodded, so to speak, alongside of Keaton’s face, Beckett’s references to Victorian clothing, the tramp archetype, Vaudeville, and the silence cinema suggest that *Film*’s historicity is no vapid exercise in nostalgia. Rather, its allegorical constellation of past and present was aimed at contemporary productions by direct cinema and *cinéma vérité* filmmakers that, with a new technological standard that united auditory and visual recording, aimed to effectively capture “the real.”

Part III, Miniaturization Takes Command: Unifying Hearing and Vision to Capture “the Real”

The technological unification of sound and hearing that enabled artists to record anytime and anywhere began four years before Beckett wrote *Film*. “The 1960s saw the introduction of lightweight, hand-held cameras that could be used together with synchronous sound,” as Bill Nichols put it. “Filmmakers acquired the mobility and responsiveness that allowed them to follow social actors in their everyday routines.”⁴⁸⁵ In France, works that fit Nichols’ description of the phenomenon enjoyed a big bang of sorts when the ethnographic documentarian Jean Rouch (1917-2004) and Edgar Morin (b. 1921), a professor of sociology with two books on cinema under his belt,⁴⁸⁶ employed new recording *apparate* to make *Chronicle of a Summer*,

⁴⁸⁴ Roland Barthes, *The Fashion System*, translated by Matthew Ward and Richard Howard (New York: Hill and Wang, 1985).

⁴⁸⁵ Bill Nichols, *Introduction to Documentary* (Bloomington, IN: Indiana University Press, 2001), 32.

⁴⁸⁶ Edgar Morin, *Le cinéma; ou, L'homme imaginaire, essai d'anthropologie sociologique* (Paris: Editions de Minuit, 1956) and *Les Stars* (Paris: Editions du Seuil, 1957).

1961, a film of ordinary reality, not a political spectacle.⁴⁸⁷ On discovering their shared interest in applying ethnographic means to Western subjects, Rouch and Morin retool techniques Rouch employed in *The Mad Masters*, 1955, and *I, a Negro*, 1958, films he made in Nigeria and the Ivory Coast. They aimed to document as objectivity as possible the private and public realities of young Parisians.

Since in 1960 no methodology for recording daily life existed, Rouch and Morin decided to place themselves in front of the camera as they orchestrated activities and exchanges between the film's participants, all non-actors referred to as "the cast." Including meta-discussions about producing the film in the process of its being made, *Chronicle of a Summer*'s established the genre of *cinéma vérité*—a term Morin apparently adopted from the film critic and Vertov admirer Georges Sadoul.⁴⁸⁸ *Cinéma vérité* may be characterized as the attempt to overcome cinema's instantaneously reifying ontology that, as theorists of necromancy suggest, freezes the object world as indexical traces of reality in the dead, nearly immaterial spaces of recording. This section analyzes this dialectic of reality and reification, notes a controversy that ensued after a Paris screening of *Chronicle of a Summer*, and evaluates the likelihood that, as had seemed to engage with Vertov and Keaton, Beckett also opened a dialogue with *cinéma vérité* that is vital to evaluating *Film*.

⁴⁸⁷ The project set in motion Henri Lefebvre's injunction to explore and elaborate everydayness in his book *Critique of Everyday Life*, 1947, which attributed alienation in post-war France to the diminution of experiential life by consumerism and a hangover-effect of the fascist 1930s. "Make the rejection of everyday life—of work, of happiness—a mass phenomenon, a malady of the decaying middle classes, a collective neurosis (where in France it was merely an individual phenomenon), and you end up with the Hitlerian 'mystique.'" Henri Lefebvre's *Critique of Everyday Life*, Volume 1, translated by John Moore (London: Verso, 1991 [1947]), 131.

⁴⁸⁸ Morin and Sadoul were not on friendly terms after Morin defected from the Stalinist French Communist Party in 1951, which Sadoul remained aligned with until the late 1950s. Whereas Sadoul had coined the term *cinéma vérité* in 1949 and regarded Vertov as its clearest progenitor, Morin, perhaps due to the personal animus between he and Sadoul, tended to downplay Vertov's influence upon *Chronicle of a Summer*. For an excellent new history of these relationships, see Séverine Graff, *Le Cinéma Vérité: Films et Controversies* (Rennes: Universitaires de Rennes, 2014), 62-64.

An Auditorially-Equipped Mikhail Kaufman, Angelo's Bedroom, and Reconnaissance at Renault

In the film's opening scene, Rouch and Morin sip wine, smoke, and explain the premise to Marceline Loridan, a thirty-five year old woman they wish to join the cast, but whose palpable nervousness is in the way. "What Morin and I are deviously asking you is to just talk," Rouch says, "to answer our questions. Anything you object to we can always cut out."⁴⁸⁹ Presumably extended to reduce her anxiety about opening her personal life to their film, Rouch's offer to delete scenes she dislikes immediately undercut its goal of objectivity. After they ask her, "How do you live?" and "Are you happy?" Rouch and Morin explain that, if she does participate, she will pose the same questions to random individuals as a film camera and portable magnetic audiotape recorder capture their answers.

A swift edit transports the viewer to a Paris street where, with a microphone in hand and a tape deck concealed in her coat like a multi-sensory Mikhail Kaufman, Marceline accosts passers-by to conduct interviews. While some flee like Beckett's O on seeing the camera, [Image 3.28] those who stop to speak with Marceline usually do so when the moving image seems to have been shot from across the street or a second story window where, obviously, the camera was not visible to the individual subject. Marceline's first in-depth interview did not however, come about by way of the woman-in-the-street technique, which was dropped from *Chronicle of a Summer* immediately. Clearly arranged in advance, it took place in an auto repair shop owned by a man who confesses on-camera he often overcharges customers. "No one could manage if they stuck to the law," he asserts. Noting the car culture's irrational effects on Parisians, he

⁴⁸⁹ *Chronicle of a Summer*, directed by Jean Rouch and Edgar Morin (New York: Criterion Collection, 2013 [1961]), DVD.

observes, “People are mad. They work all week. On Sunday they don’t want to damage the car, so they park it.”⁴⁹⁰

A foundation of Europe’s post-1945 economic recovery, automobility remains a focus as Rouch and Morin introduce cast members who labor on the assembly line at Renault’s Île Seguin factory just west of Paris’s city line. “I work twenty-four hours a day,” a wiry young man named Angelo exclaims. “We only do a nine-hour shift. But the rest of the time is spent sleeping so you can work. So it comes to the same thing, work all the time.”⁴⁹¹ In a display of recording’s new affordances of lightness and portability, Rouch and Morin instantly transport the viewer into Angelo’s bedroom at 4:45AM on a working day, nominally to test his statement’s truth value. Supposedly unaware that the filmmakers had let themselves into the cottage he shared with his mother, the surprised Angelo cursed out the crew after being awakened by a ringing alarm clock, which is seen and heard on-screen.⁴⁹² The viewer watches him dress, eat breakfast, walk in darkness to commute on the Metro, and enter the factory as daylight breaks. When his shift ends, the viewer watches him leave, arrive home, perform martial arts exercises in the backyard, read, and sleep. Fearing reprisals against Angelo, Rouch and Morin did not film inside the Renault plant on their visit, but they did return with a lightweight, quiet, high-speed capable thirty-five-millimeter camera with on-board synchronized sound. Offered use of the prototype by Éclair’s André Coutant [Image 0.2],⁴⁹³ Rouch and Morin hired Raoul Coutard to surreptitiously recorded Renault’s welders and drill press operators as they worked and ate lunch next to the machines they operated. Fresh from shooting Jean-Luc-Goddard’s *Breathless*, 1960, with the handheld,

⁴⁹⁰ *Chronicle of a Summer*, 1961.

⁴⁹¹ *Chronicle of a Summer*, 1961.

⁴⁹² Morin’s recollection of this scene is cited in Jean Rouch, *Ciné Ethnography*, edited and translated by Steven Feld (Minnesota: University of Minnesota Press, 2003), 245.

⁴⁹³ Paul Henley, *The Adventure of the Real: Jean Rouch and the Craft of Ethnographic Cinema* (Chicago: University of Chicago Press, 2010), 157-158.

spontaneous camerawork he became famous for, Coutard hid in Renault's dark corners to record the sights and sounds of industrial labor.⁴⁹⁴

Morin soon introduces Angelo to Landry, a young Ivory Coast citizen attending a French *lycée*. Landry smiled broadly at Angelo occupation. With better future prospects, Landry says, "I wouldn't dream of working in a factory. In a factory you're shut in all day, with all the noise." Rather than take offense, Angelo confirmed Landry's opinion. "You're right, it *is* shitty! We're watched. Workers are set up against each other, then there's the harassment by foremen, always on our backs."⁴⁹⁵ Landry, thinking he had committed a *faux pas*, tried to at least praise factory workers' prosperity, but Angelo would not hear of it. He then told Landry that his fellow workers did not buy cars to use, but rather to conceal their real economic privations by engaging in conspicuous consumption. If "being" had degenerated into "having" after the 1789 revolution, in 1960 the downward trend brought a new configuration—"appearing to have."⁴⁹⁶

Reality and the Politics of Gender, Topical Event Dinners, A Recollection of Auschwitz

Built around disclosures of intimate thoughts and activities, *Chronicle of a Summer* offers none more excruciating Morin's interview with Marilú Parolini, an attractive woman shown walking in profile and from behind en route to the offices of *Cahier du Cinema*. There, Morin peppers her with questions about her upbringing, economic situation, and romantic life. "I've

⁴⁹⁴ Edgar Morin, "Chronicle of a Film," *Visual Communication*, Volume 11, No. 1 (Winter, 1985), 9. The fear turned out to be well founded after a Renault supervisor confronted Angelo, who was transferred to an undesirable position with the firm. Morin, "Chronicle of a Film," 14.

⁴⁹⁵ *Chronicle of a Summer*, 1961.

⁴⁹⁶ "At Renault," Angelo bitterly says,

Eighty percent of the guys have cars. The French worker is an individualist. [...] He wants to act rich. But he's just a jerk, really. I eat at the cafeteria. I don't care. I'm broke, but I eat. Some of the fellows at Renault just pick at some salad and a piece of bread. But, as you say, they own a car. So they think "the French worker has money. He makes lots of dough, never had it so good. He can afford a car, a home." Don't believe it. The guy's broke, he's a loser. Believe me, I live with them. They're losers. Another thing. You get into a restaurant. You see this guy all dressed up. You think he's got money. But he's pathetic. [...] He's scrimped and saved for that suit. Well dressed, rings on his fingers. It's all an act. I'll tell you why. On Monday he'll be back at his dirty bench. Inside and outside the factory, he's not the same guy.

Chronicle of a Summer, 1961.

never gone without modern conveniences,” she proclaimed, explaining that being poor had, at first, assuaged guilt she harbored for a privileged childhood: “I felt good having a hard time. It was the first time I’d ever worked. I’d wake up at 7:00am, exhausted but almost happy to take the subway with the crowd. But that didn’t last. Now, I’m sick of my room, sick of the cold. I’m sick of the subway at rush hour.”⁴⁹⁷ Soured on working life, Marilú recounted the details of an existential crisis fed by drinking and meaningless sex. “I want to be in touch with something which takes me outside,” she confessed to Morin, tears welling in her eyes and hands trembling, “instead of relating everything to myself. I don’t even have the right...to kill myself...it would be phony.”⁴⁹⁸ As the cinematographer zooms in for a close-up of her face, Marilú’s disordered self-perceptions and the power Morin wields as her self-appointed father-confessor expresses commonplace hardships women faced in the first years of second-wave feminism.⁴⁹⁹ Cajoled from deep within her core identity, Marilú’s feelings infuse *Chronicle of a Summer* with a modernized, multisensory analogue to emotions Vertov recorded surreptitiously in *Kinoglanz*.⁵⁰⁰

The competition of reality and reification in Marilú’s confession were matched, however, by the dialectical relationship between proper and improper behavior. These were expressed with references to France’s burgeoning film culture of 1960 at two communal dinners depicted in *Chronicle of a Summer*. At the first, the future political revolutionary and media philosopher

⁴⁹⁷ *Chronicle of a Summer*, 1961.

⁴⁹⁸ *Chronicle of a Summer*, 1961.

⁴⁹⁹ “In particular, the confessor occupies an ambiguous place between heaven and earth. He listens with carnal ears to the penitent who bares her soul, but it is a supernatural light that shines in the gaze with which he enfolds her; he is a divine man, he is God in the appearance of a man.” Simone de Beauvoir, *Second Sex*, translated by Constance Borde and Sheila Malovany-Chevalier (New York: Vintage Books, 2011 [1949]), 804.

⁵⁰⁰ One early reviewer noted *Chronicle of a Summer*’s apparent use of surreptitious filming techniques. “Morin makes a genial confessor, but hidden cameras are at least partly responsible for the confessional intimacy of these scenes.” Roger Sandall, “Review of Films by Jean Rouch,” *Film Quarterly*, Volume 15, No. 2 (Winter 1961-62), 58. It is unlikely that Marilou’s confession was filmed without her being aware—the camera can be seen moving throughout the scene.

Regis Debray,⁵⁰¹ then Morin's student at the Sorbonne, joined the cast. As participants dined Morin and Rouch moderated a discussion about the film they were making. "So far," Rouch said, "the film had confined itself to a somewhat personal world. Now it expands to take in the events of this summer of 1960."⁵⁰² This was, by all accounts, an eventful season in a difficult year for France's colonial endeavors, and when Morin informs the cast that draft-aged males face military conscription to fight independence-seeking Algerian nationals, an off-camera crew person can be heard remarking, "Ah, this will make fascinating film footage in ten, twenty years from today."⁵⁰³ Discouraged by this proleptic intrusion, Morin barked, "Ah, now you're talking as an aesthete, about films!"⁵⁰⁴ Evoking future accolades for the present had apparently broken reality's veil with an undesirable aestheticism: self-reflexivity could go only so far before reifying processes—whether acknowledging the technological process of recording or a crewmember's aside—disproved the pretense that reality could be objectively captured.

At a second cast dinner, *Chronicle of a Summer* pivoted into a reality that relied on portable recording technology and cinema culture's growing preeminence in French life. When, for instance, Rouch asked Landry if he knew what the tattoo of small numbers on Marceline's arm meant, Landry accessed the answer through a cinematic memory: "I've seen a film about that—*Night and Fog!*"⁵⁰⁵ The reference was to Resnais's 1955 documentary film on the Holocaust, which fractured an icy quietude on this subject in France during the 1950s. A still image of Marceline's fingers grasping a rose dissolves, and the viewer is transported to the Place

⁵⁰¹ Debray was later captured and imprisoned with Latin American revolutionary Che Guevara in Bolivia. See Regis Debray, *Revolution in the Revolution?: Armed Struggle and Political Struggle in Latin America*, translated by Bobbye Ortiz (New York: MR Press, 1967). Presently, Debray is a media scholar and author of *Media Manifestos: On the Technological Transmission of Cultural Forms*, translated by Eric Rauth (New York: Verso, 1996 [1994]).

⁵⁰² *Chronicle of a Summer*, 1961.

⁵⁰³ *Chronicle of a Summer*, 1961.

⁵⁰⁴ *Chronicle of a Summer*, 1961.

⁵⁰⁵ *Chronicle of a Summer*, 1961.

de la Concorde, where Marceline is simultaneously seen walking down an empty street and heard on the soundtrack describing the details of her deportation to Auschwitz [Image 3.29] in 1944.

As she ambulated, the cinematographer Michel Brault recorded her with Coutant's new Éclair from the interior of a Citroen car Morin manually pushed to keep the soundtrack free of engine noise. Synchronized to the image track, Marceline hid the audiotape recorder that captured her speech. With these *apparate* she recorded traumatic memories of events that took place in the exact place where they had. "Empty as it was twenty, fifteen years ago, I don't remember," she says, then in a whisper added "'Pitchipoi,'" the imaginary destination where Nazis told French Jews they going, but which was the Paris suburb Drancy, where transports to Auschwitz were staged.⁵⁰⁶ Marceline recorded a discussion with her father during their ordeal. "'We'll work in factories,'" he told her. "'We'll see each other on Sundays.'"⁵⁰⁷ But after returning to friends and family members unable to fathom either her father's death or the cruelty she endured, Marceline grew alienated from those she loved. Although her soliloquy shook the film's moorings in one kind of reality with an historical reality, it received critical scrutiny, not least by Rouch himself in 1971, when he called it "unnatural."⁵⁰⁸ His disavowal highlights *Chronicle of a Summer's* dialectical oscillations between reality and reification on the one hand, and authentic versus acted behavior on the other, marking individuals' new self-consciousness

⁵⁰⁶ This history is described in Suzanne Gross, *Sarah Dreams of Pitchipoi: a Hidden Child's Memoir of the Holocaust in France* (Margate, NJ: ComteQ, 2008).

⁵⁰⁷ "When I came back, I was hardened," Marceline says, "It was hard. I saw them all at the station. Mother, everyone... They kissed me. My heart was a stone. Michel [her younger brother] was the one who touched me. I said, 'Don't you know me?' He said, 'Yes, I think...I think you're Marceline.' Ah, Papa." *Chronicle of a Summer*, 1961.

⁵⁰⁸ In 1971, Rouch said her soliloquy had no place in *cinema vérité*, which, he claimed, "reveals these exceptional moments when, suddenly, there is in effect no camera, no microphone. There's a revelation, a staggering revelation because it's totally sincere—and totally provoked." Jean Rouch, cited in Roy G. Levin, *Documentary Explorations: 15 Interviews with Filmmakers* (Garden City, New York: Doubleday Publishers, 1971), 137

toward technological reproducibility. Before analyzing this self-awareness as a phenomenon in its own right, an appraisal of *Chronicle of a Summer*'s responses, conceptual and technological, to recorded objects' new social and material ubiquity will be useful.

The Nagra Audiotape Recorder, Omnivorous Cinema, and Camus's "Humble Representatives of Sovereign Chance"

Rouch's later criticism should not distract from the innovations he and Morin devised to offer the perceiver a multisensory grasp on "the real." In the first of these, Brault simply walked alongside of the subjects he filmed with a handheld camera while a tape recorder captured their speech. What differentiated this practice, which they called "Pedovision," from ordinary cinematography was the new capacity to record and synchronize sounds, speech particularly, with the image track without limitation on their movements. The engineer Stephane Kudelski's transistor-powered, portable Nagra audiotape recorder offered, as Rouch synesthetically put it, a "glimpse into the cinema which was to be born a year later."⁵⁰⁹ As a means of eavesdropping on or conscripting the acoustical dimension of reality, Morin compared the Pedovision technique to the hero of 1960s filmmakers: "Dziga Vertov, camouflaged in a car and stealing snatches of life from the streets."⁵¹⁰

The second of Morin and Rouch's innovations, both conceptual and technological, was the decision to admit moving images marred by jostling the camera and noises inadvertently captured with the microphone into *Chronicle of a Summer*. This deviation from the mean of standard production imbued it with a hitherto unseen- and unheard-of intimacy, and it offered a messy, polyphonic, and technologically reproducible reality. Surely, its unification of sound and

⁵⁰⁹ Rouch, cited in Morin, "Chronicle of a Film," 8. As Paul Henley pointed out in 2009, however, "Although this technology had not been available in Vertov's day, [Rouch] credited him with having 'magisterially prophesied' the development of a fully mobile ciné-eye operating in tandem with a fully operational radio-eye, that is, a microphone recording sound." See Henley, 174.

⁵¹⁰ Morin, "Chronicle of a Film," 4.

vision alone offered more convincing testimony of everyday life than any other Ethnographic film.⁵¹¹ And, as most ethnography did, *Chronicle of a Summer* utilized the reportage of an informant. “Rouch can infiltrate a community as a *person*,” Morin observed, “and not as the director of a film crew. He accepts the clumsiness, the absence of dimensional sound and the imperfection of the visual image. In accepting the loss of [a] formal aesthetic, he discovers virgin territory, a life which possesses aesthetic secrets.”⁵¹² Shorn of any literary contrivances, Rouch and Morin charged into the virginal fabric of reality with the alacrity Vertov called for in 1924.

To aggrandize its conceptual achievements, Morin denied that the film’s uniqueness arose only from its innovative uses of new technologies. “Make no mistake,” he commented,

it is not merely a question of giving the camera that lightness of the pen which would allow the filmmaker to mingle in the lives of people. We know that there is a profound kinship between social life and the theater, because our social personalities are made up of roles which we have incorporated within ourselves. It is thus possible, as in a sociodrama, to permit each person to play out his life before the camera.⁵¹³

Morin’s reference was, of course, to film critic Alexander Astruc’s metaphor for the camera as a writing pen “capable of expressing any kind of reality,”⁵¹⁴ but the cinema of unified vision and hearing offered a new omniscience over the reality of daily life after 1945 critics and artists took note of continually. In 1946 André Bazin claimed film’s early theorists had foreseen “nothing less than a total cinema that is to provide that complex illusion of life which is still a long way

⁵¹¹ What James Clifford wrote in 1983, “Experiential, interpretive, dialogical, and polyphonic processes are at work, discordantly, in any ethnography,” is especially true of the attempt to reproduce reality in *Chronicle of a Summer*. James Clifford, “On Ethnographic Authority,” *Representations* Number 2 (Spring, 1983), 142.

⁵¹² Morin, “Chronicle of a Film,” 4.

⁵¹³ Morin, “Chronicle of a Film,” 5.

⁵¹⁴ Predicting “the age of the camera-pen,” a cinema devoid of scriptwriters, yet as flexible and subtle as language, Astruc believed the distinction between the author and director would collapse: “The filmmaker/author writes with his camera as a writer writes with his pen. In an art in which a length of film and sound-track is put in motion and proceeds, by means of a certain form and a certain story (there can be no story at all—it matters little), to evolve a philosophy of life, how can one distinguish between the man [sic] who conceives the work and the man who writes it?” Alexandre Astruc, “*Du Style a la caméra et de la caméra au stylo*,” *Le Ecran Francais* (March 30, 1948), n.p.

away.”⁵¹⁵ In 1952 the U.S. television producer Allan Funt dreamed of surreptitiously recording an extended slice of life. “I’ve often dreamed of making a full-length feature picture done entirely with hidden cameras,” Funt wrote. “What a pleasure it would be to spend six months of a year to really bring the candid technique to its greatest potential instead of groaning under the paces of turning out a half-hour of film every week.”⁵¹⁶ Anticipating advances Drew, Rouch, and Morin would enjoy a decade later, Funt observed, “there are many improvements within our grasp, [...] longer telephoto lenses and short wave transmission of sound will allow us to record people who are hundreds of yards away. We will no longer be restricted by a microphone cable which now has to be dragged along and seriously limits our mobility.”⁵¹⁷ In 1957 Albert Camus stretched the metaphor of omniscience into an absurdity by proposing recording technology that could capture an individual’s entire life:

We should have to presuppose, in fact, an ideal camera focused on the man day and night and constantly registering his every move. The very projection of such a film would last a lifetime and could be seen only by an audience of people watching someone else’s life in detail. Even under such conditions, such an unimaginable film would not be realistic for the simple reason that the reality of a man’s life is not limited to the spot in which he happens to be. It lies also in other lives that give shape to his – lives of people he loves, to begin with, which would have to be filmed too, and the lives of unknown people, influential and insignificant, fellow citizens, policemen, professors, invisible comrades from the mines and foundries, diplomats and dictators, religious reformers, artists who create myths that are decisive for our conduct—humble representatives, in short,

⁵¹⁵ André Bazin, *What is Cinema? Volume One*, translated by Hugh Gray (Berkeley: University of California Press, 1967 [1946]), 20.

⁵¹⁶ Allen Funt, *Eavesdropper at Large: Adventures in Human Nature with “Candid Mike” and “Candid Camera,”* (New York: Vanguard Press, 1952), 205-6. After founding it in 1946 as the radio show *Candid Mike* (an abbreviation for “microphone”), Funt moved the program to television and retitled it *Candid Camera*. The idea of producing a candidly recorded came to him after he surreptitiously recorded conversations of young women who congregated at a New York City drugstore. After debuting in 1948, *Candid Camera* enjoyed nine seasons as a staple of prime time broadcasting (1948-50, 1960-67). With considerable sadism, it surreptitiously recorded the surprised, amused, indignant, sad, and terrified reactions of individuals. Funt and paid performers acted alongside the duped individuals, amplifying situational absurdities by pretending nothing was wrong as bizarre events unfolded.

⁵¹⁷ Funt, 206.

of the sovereign chance that dominates the most routine existences.⁵¹⁸

Insofar as its rhetoric of enveloping surveillance resembled the camera-I that tracked O's face and photographs, Camus's thought experiment described the premise of Morin and Rouch's cinematic conscription of Angelo, Marilú, and Marceline's lives in *Chronicle of a Summer*.

"We're Embarrassed Because We Feel We're Intruding": The Trouble with Recording Reality

In spite of its conceptual and methodological likeness to *Film*, *Chronicle of a Summer* received to critical accolades. At the 1961 Cannes Film Festival, the non-ideological platform where academic juries evaluated films, not movie industry or political figures, as had been the case at fascist-era festivals in Italy and Germany, Morin and Rouch received the *Grand Prix de la semaine internationale de la critique*.⁵¹⁹ Instantly hailed as a cinematic landmark, it inspired parody and imitation. Jacques Baratier's thoroughly bizarre *verité* musical *Sweet and Sour*, 1963, an example of the former, cast an army of Éclair and Arriflex wielding youths dancing and singing "When will all of us have a camera?"⁵²⁰ In a deft homage shot from inside of a passenger bus, Chris Marker incorporated a brief shot of Morin and Rouch conversing at an outdoor café into his film *La Joli Mai*, 1963, a *cinéma vérité* masterpiece of random interviewees filmed on-location in the streets of Paris.⁵²¹

In spite of the success, a controversy stalked *Chronicle of a Summer* before its theatrical release. The events, discussions, accidents, behaviors, and disclosures of private thoughts ran aground. Morin had meddled behind-the-scenes by showing rushes of Marilú's interview to Marceline, who behaved differently afterward. Even after realizing the gravity of this error,

⁵¹⁸ Albert Camus, "Create Dangerously," *Resistance Rebellion, and Death*, trans. by Justin O'Brien (New York: Knopf, 1961 [1960]), 197-8.

⁵¹⁹ Lucy Mazdon, "The Cannes International Film Festival as Transnational Space," *Post Script* Vol. 25, No. 2 (January 2006), 19-30.

⁵²⁰ *Dragées au poivre*, directed by Jacques Baratier (Paris, France: Les Films Number One, 1963), Film.

⁵²¹ *La Joli Mai*, directed by Chris Marker (1963; Brooklyn, NY: Icarus Films, 2013), DVD.

Morin showed Angelo rushes of scenes that cast his refreshing spontaneity into doubt.⁵²² The distortions he imposed on the film may now be regarded as tactics less scrupulous artists copied without the critical reservations Morin harbored.⁵²³

Chronicle of a Summer's most poignant and powerful controversy emerged when the cast assembled for a screening of the film and shared their judgments on its depiction of realities they had lived and, therefore, knew better than anyone. Like Robert Flaherty in *Nanook of the North*, 1921, Rouch and Morin recorded their subjects' exchange and placed it into the completed film. It begins with Rouch speaking to the cast after the house lights came following the screening. "Edgar and I," he announced, "would like your opinions."⁵²⁴ A Renault employee immediately attacked Angelo and Landry's exchange about their careers. "For the most part, whenever trying to express themselves," the man said, "they spoke in general terms. You don't do that in life."⁵²⁵ Not everyone agreed. "On the contrary," another protested, "it's great when he tells Landry 'I like you.' They connect, they share the same problems."⁵²⁶ "They do not," Marceline snapped.⁵²⁷ Shocked by the rancor toward one another's on-screen personas, Morin tried to defend Angelo and Landry: "It's one of the most authentic scenes we did, because we see friendship as it develops."⁵²⁸ "But that's not my point," the autoworker replied, adding, "It's all unnatural, it's

⁵²² "We film a conversation with [Marceline] but she has been, unconsciously, influenced by the rushes she has seen of Marilou. [This dialogue with Marceline was not integrated into the film.] From this point on, we no longer show the rushes to participants, except to Angelo, who has a skeptical, even ironic, interest in our enterprise." Morin, "Chronicle of a Film," 12. Morin also admitted that introductions of participants to one another were acted out by individuals who already knew one another.

⁵²³ "If you want to capture spontaneity, improvisation, the accident, and so forth," Warhol screenwriter Ronald Tavel remarked, "you must set up an environment in which the spontaneous, the accidental, the improvisational, the unexpected, will take place. That takes planning." Cited in J.J. Murphy, *The Black Hole of the Camera: The Films of Andy Warhol* (Berkeley: University of California Press, 2012), 7.

⁵²⁴ *Chronicle of a Summer*, 1961.

⁵²⁵ *Chronicle of a Summer*, 1961.

⁵²⁶ *Chronicle of a Summer*, 1961.

⁵²⁷ *Chronicle of a Summer*, 1961.

⁵²⁸ *Chronicle of a Summer*, 1961.

completely phony.”⁵²⁹ Deeply aggrieved at the suggestion he had acted, Angelo protested. “I don’t agree. When the scene with Landry happened, I knew nothing about him,” he explained. “It just happened that when talking to him, I forgot the cameras.”⁵³⁰ Morin’s coaching of Angelo casts leaves the viewer precariously suspended between the poles of belief and disbelief in the reality of the scenes he appears in, but also in a state of worry about Morin’s integrity.

In the most relevant criticism, however, Marceline’s lover, a twenty-year-old Sorbonne student, aimed for the juggler. “When it’s not boring,” Jean-Pierre said, “it’s at the cost of total indecency.”⁵³¹ He did not mean indecent in a pornographic sense, but in its display of the cast’s personal feelings and invasion into such private spaces as Angelo’s bedroom. If this were not troubling enough, animosities simmering between cast members exploded after Marilú described her on-camera behavior as a negotiation between acting and disclosing her personal life. “I found that, in order to get a sparkle of truth,” she said, “the character has to be alone and on the verge of breaking down. He [sic] has to talk about a very intimate matter.”⁵³² Maxie, a woman briefly depicted, objected vociferously to Marilú’s statement and, indeed, to her on-screen persona:

With that approach you can only get artificial scenes, or scenes bordering on, or in fact, outright indecent. I agree [with Jean-Pierre]. You asked us if we felt like meeting some of these people. Regarding some of those present, I’m sorry, but I really don’t after seeing this. As to Marilú, I’d be horribly embarrassed; she said too much. She stripped herself too bare.⁵³³

For Jean-Pierre and Maxie, the jarring effect of displaying intimacies in the cinema with newly powerful recording apparatuses sidestepped ethics and traded on prurient disclosures. What both

⁵²⁹ *Chronicle of a Summer*, 1961.

⁵³⁰ *Chronicle of a Summer*, 1961.

⁵³¹ *Chronicle of a Summer*, 1961.

⁵³² *Chronicle of a Summer*, 1961.

⁵³³ *Chronicle of a Summer*, 1961.

perceived is that the private feelings undergirding experiential life are no viable foundation for mutuality and compassion.

Now visibly flummoxed at the spectacle of cast members attacking each other about a project he had made to establish an *esprit de corps* between students, workers, and intellectuals, Morin lashed out. “What Maxie said is monstrous,” he snapped. “Such reactions block the emergence of truth in life and in relationships.”⁵³⁴ Far from diffusing the situation, however, Morin’s anger emboldened others to accuse both Marilú and Marceline of acting. At this, Debray stepped into the fracas. “Marilú doesn’t act in front of the camera,” he said. “The camera doesn’t inhibit her; it prompts her to search for herself. The same goes for Marceline: she talks to herself.”⁵³⁵ But Debray qualified his praise with a devastating affirmation of Jean-Pierre and Maxie’s criticisms: “And we’re embarrassed because we feel we’re intruding, but it’s also when we get completely caught-up.”⁵³⁶ This comment exposed two structural paradoxes in *Chronicle of a Summer*.

First, knowledge that one’s activities are being preserved promotes supra-authentic behavior—a phenomenon analogous to the observer effect in quantum physics. Second, the viewer compulsively watches candid cinema because what happens on-screen has taken place elsewhere and in the past. Technological reproducibility’s imposition of spatial and temporal dislocations on the reality it depicts absolves the perceiver of ethical responsibility for what transpires. Of the divide between the ethics of perception and what is irremediably fixed in a different time and a place, the L.P. Hartley’s observation, “The past is a foreign country; they do things differently there” applies well to recordings’ under-theorized affectivity and reception.⁵³⁷

⁵³⁴ *Chronicle of a Summer*, 1961.

⁵³⁵ *Chronicle of a Summer*, 1961.

⁵³⁶ *Chronicle of a Summer*, 1961.

⁵³⁷ L.P. Hartley, *The Go-Betweens* (New York: New York Review Books, 1953), 17.

Chronicle of a Summer as Film's Intertext

The paradoxes Debray hit upon align surprisingly well to the ambiguities of *Film's* plot, characters, critique of Vertov and his 1960s progeny that I propose is its *raison d'être*. An illustration of the similitude would begin with the demands *Chronicle of a Summer* placed on the spectator to evaluate reality. When, in the final scene, Rouch asked Morin for his thoughts about the film, Morin replied that it had changed his understanding of reality: “We’re reaching a stage when we question truth that is not everyday truth.” By this he meant that cinema had changed attitudes, behaviors, and perceptions of reality, not least how the cast perceived reality—their reality—as it appeared in *Chronicle of a Summer*. “As soon as they’re more sincere than in life,” he added, “they’re labeled as either hams or as exhibitionists. That’s our basic problem. If the audience thinks these are actors or exhibitionists, our film’s a failure. But I know and feel that they’re neither. But they won’t know—the audience won’t.”⁵³⁸ He further unpacked his idea with an empirical observation about cinema’s reification of reality: “If I’m watching a film, I’m conditioned to expect acting and production values of a certain kind. Deviations from the standard trigger disbelief.”⁵³⁹ For Morin, by 1960 the human sensorium’s pummeling with technologically reproducible bodies, voices, objects, and spaces had altered perceptions of reality itself (whatever that might be), perceptions of reality in the cinema, and perceptions of reality in the process of recording it.

While few would dispute that cinema and musical recordings influenced the perceptions and behaviors of young individuals, *Chronicle of a Summer's* greatest relevance for *Film* lay in its exposure of intimacies that Morin, obsessed only with its fidelity to the “real,” was absolutely blinded to—namely, the cast’s accusations of indecency. From media economy of 2017, it is

⁵³⁸ *Chronicle of a Summer*, 1961.

⁵³⁹ *Chronicle of a Summer*, 1961.

impossible to imagine why Morin thought a demonstration of “the real” would bring diverse individuals together. His belief in recording reality as an Esperanto for communicating over class, gender, and racial differences is, perhaps, the *ur*-case of 1960s-era cinema’s rampant faith in scopophilia. Morin’s utopian embrace of transparency and omnivorous *audiovisuality* reverses Beckett’s contempt for omnivorous vision that confronts the viewer in *Film*.

Just as *Krapp’s Last Tape* foiled scientists’ utopia of ratiocinated memory, *Film* played the spoilsport to reality’s conscription into the discourse network of 2000, which unified technologically reproducible sound recordings and moving images. *Film*’s hostility to the thought experiments and pronouncements of Bazin, Astruc, and Camus on ubiquitous recording renders it legible as the antithesis of 1960s cinema. The filmmaker Stan Brakhage, who harbored a strong belief in the Vertovian cinema, once described Beckett’s *oeuvre* as “sentimentalizing in the way of saying that it’s a dreadful bore and a catastrophe (which is, I take it, Beckett’s too-easy-for-me solution).”⁵⁴⁰ His animus is logical. Brakhage’s cosmological triptych *Dog Star Man*, 1961-64, romanticized an artist-hero’s unique sensibility with most expressionist means available in cinema.⁵⁴¹ Anti-romantic, anti-expressionistic, anti-utopian, and anti-heroic, Beckett’s aim in *Film* was as anathema to *Dog Star Man* as it was to *Chronicle of a Summer*.

The faith among artists in technological reproducibility to capture and transform reality reached a new zenith as Beckett received a commission to make a film of his own. In Lyon from March 1 to 8, 1963 *musique concrete* composer Pierre Schaeffer convened Journées d’Études du Marché International des Programmes et Équipements du Service de la Recherche de la Télévision Française (MIPE-TV), a major conference to assess portable, lightweight moving

⁵⁴⁰ Stan Brakhage, “Some Remarks,” *Take One*, Volume 3, Number 1 (September-October.1971), 8.

⁵⁴¹ R. Bruce Elder, *The Films of Stan Brakhage in the American Tradition of Ezra Pound, Gertrude Stein, and Charles Olson* (Waterloo, Ontario: Wilfrid Laurier University Press, 1998), 100-212.

image and sound recording devices' impact upon art, music, cinema, radio, and television. "The scope of the first MIPE-TV," film historian Severine Graff wrote, "far exceeded that of a meeting of specialists and should be understood in the light of a major craze in the French press for '*cinéma-vérité*.'"⁵⁴² Attendees included Robert Drew, Richard Leacock, Albert Maysles and *cinéma vérité* stalwarts Rouch, Morin, Sadoul, Coutard, and Brault. The event gathered practitioners working in a unified auditory and visual channel with technologies that were becoming more portable, powerful, and available to independent artists. Conferees debated the aesthetic value of portable recording devices in broadcast television. Likely to Beckett's horror, MIPE-TV received a great deal of coverage in French film journals and the popular press⁵⁴³ and presented Direct Cinema and *cinéma vérité* filmmakers as artists in competition to realize the future Vertov had ordained in the 1920s. Anticipating a world *sans* privacy or autonomy, *Film* and *Krapp's Last Tape* depicted actions and recollections as technologically recordable, storable, and retrievable objects.

⁵⁴² "Une telle réception démontre que la portée du premier MIPE-TV dépasse largement celle d'une rencontre de spécialistes et qu'elle est à comprendre à l'aune d'un engouement majeur de la presse française pour le '*cinéma-vérité*.'" Séverine Graff, "Réunions et désunions du '*cinéma-vérité*': le MIPE-TV 1963 de Lyon," *1895* No. 64 (Fall 2011), 67. MIPA-TV was an acronym for "Study Conference on the International Programs of France's Television Service."

⁵⁴³ [L]a réception de l'événement dans la presse est d'une grande richesse et témoigne de son importance auprès du public cinéophile. Ainsi les *Lettres françaises* y consacrent leur première page, quatre articles des *Cahiers du cinéma* sont, directement ou non, en lien avec cette manifestation, et la *Cinématographie française* retrace longuement la rencontre lyonnaise. Graff, 67.

Coda: Recording as Diegesis and World-Building

Recorded art objects of the 1950s tapped into themes seldom addressed in preceding fine art. Usually, they pointed forward in time to the computational discourse network of 2000 that simplified certain facets of artistic production and reunited vision and audition after a one hundred year long separation. That artists turned to technological reproducibility to displace “the real” temporally and spatially between 1954 and ’64 was surely no accident, for their art reflected concerns about a fully ratiocinated world that computation was already a master signifier for. However, because none of these artworks employed digital technologies, other criteria must be found to explain recording’s affective powers and status as an emblem of futurity in the turbulent social and media economies of the mid-1950s and early ‘60s.

In those economies, artists employed recording to fashion alternatives to realities they objected to on aesthetic or political grounds. The best terms for their activities would include, as Thomas Elsaesser has noted, “diegesis” and “world-making.” “It is the question of diegesis (as the combination of place, space, time and subject) more than the issue of digitization,” he wrote, “that requires us to define the very ‘ground’ of the moving image in its multiple sites.”⁵⁴⁴ Of the related concept of “world-making,” Elsaesser noted that re-ordering “reality” in the cinema often meant adding sounds that were diegetic, extra-diegetic, or imagined to moving images, a remark which echoed Rick Altman’s assertion that cinematic realism was tied to the production of soundtracks.⁵⁴⁵ A preponderance of auditory experimentation with magnetic audiotape in the 1950s seems to corroborate his assessment; in fact, already by 1958 the realities artists constructed with auditory *détournements*, cut-ups, and chance methods illustrated what Jacques

⁵⁴⁴ Elsaesser, 102-3.

⁵⁴⁵ Elsaesser, 102.

Ranciere called “the power of anticipating an effect to better displace or contradict it.”⁵⁴⁶ Indeed, far from offering the escapist entertainments found in popular musical recordings or the commercial cinema, artist-forged realities tried to undo, turn back, or fend off a world they perceived as trending toward a determinism that gravely limited reality, both in qualitative terms and as a site where progressive goals might be achieved.

By fulfilling this essentially political purpose, the technologically reproducible art objects studied here can be said to belong to a modern tradition that employed a number of techniques, not all of which were essentially technological. In 1870, for instance, Isidore Ducasse reanimated a seventeenth-century text by Vauvenargues to undo the loss of historical consciousness he perceived as characteristic of his times. In 1989, Ducasse’s admirer Guy Debord recognized the confusion Minitel—a French computer network constructed by 1983⁵⁴⁷—had introduced about intentionality. Noting that only mindful agents could practice *détournement*, the technique he borrowed from Ducasse, Debord wrote:

The antique ponderousness of exact quotation will be compensated for, I hope, by the quality of the selection. They will appear when appropriate in this text: no computer could have provided me with this pertinent variety.⁵⁴⁸

For Debord, making worlds to enhance historical consciousness lay well beyond the mere information processing computers offered, and other artists active in the 1950s explicitly or implicitly shared his view. As one whose fictions satirized ratiocination and computation and who also tried to raise the public’s awareness of corruption and injustice, William S. Burroughs made of himself a ventriloquist whose dummy—a radio newscaster’s borrowed voice—spoke rare truths about warmongering aristocrats, financial markets, and corrupt politicians. Facing an

⁵⁴⁶ Jacques Ranciere, *The Future of the Image* (London: Verso, 2007), 5.

⁵⁴⁷ See Julien Mailland and Kevin Driscoll, *Minitel: Welcome to the Internet* (Cambridge, MA: MIT Press, 2017).

⁵⁴⁸ Guy Debord, translated by James Brook *Panegyric* (London: Verso, 2004 [1989]), 8-9.

avalanche of technologies that promised to automate music, Maxfield staked out a performance practice that set musicians into collaboration with rich and strange sonic doppelgängers and computed chance music that wove intention with randomness to represent the universe. Equally attuned to futurity in his approach to recording, Beckett envisioned Krapp's demise and O's desperation to escape conscription into the cinema as diagnoses of what life might be like in a future of instantaneously available affect and perpetual surveillance. In fact, it is possible to imagine a comparison between our era and the nineteenth century's distillation of photographic metrics into a spurious science to discern a scenario in which Beckett's prediction could come true: Might the data trails that today track and profile individuals' proclivities become a matrix of repression in the twenty-first century? Could a Eugenics-like political movement arise from it? Who might be criminalized in such a scenario—immigrants, LGBT persons, black or brown individuals, progressives, the poor? One final issue raised by 1950s-era recorded art objects is whether their cybernetic, archival, mnemonic, and computational elements imply the necessity of reappraising art's relationship to these very same themes. As this dissertation suggests, others had beaten conceptual artists to the punch and completed artwork just as good, if not better, than theirs.

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Figures



Image 0.1a & 0.1b, Prototype of AEG Magnetophone, 1934 (left); magazine advertisement for Ampex's copy of the Magnetophone reel-to-reel tape recorder (right).



Image 0.2, Engineer Andre Coutant demonstrates his handheld Éclair film camera for critic George Sadoul, photo, 1963.

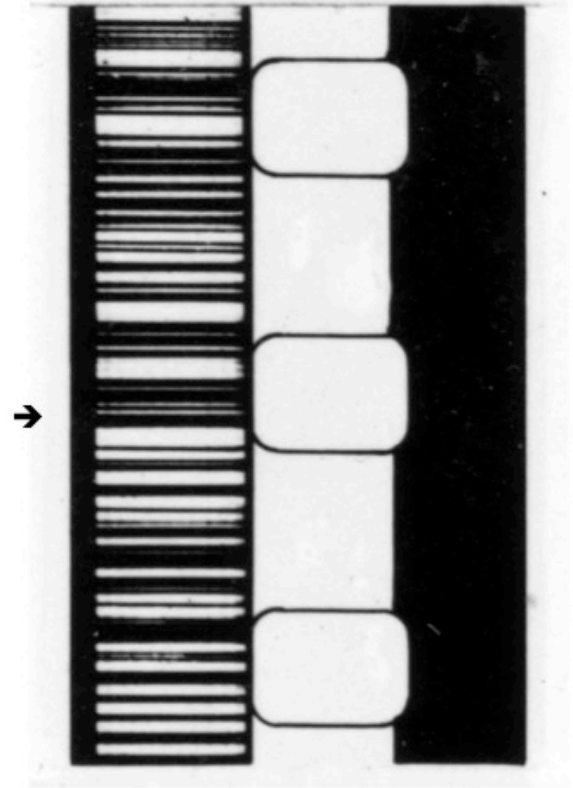


Image 0.3, Optical Sound-on-film, variable density type, as it appears on the edge of a film's celluloid base.

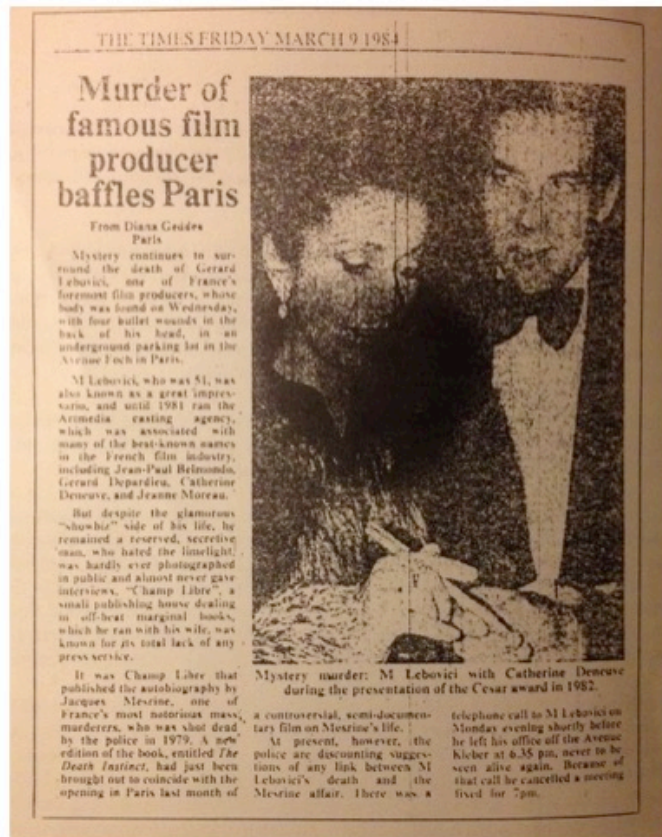


Image 0.4, Robert Drew (right) holding his renovated 16mm camera and Robert Maysles (carrying the synchronized Nagra tape recorder), photo, 1963.



Image 0.5, Richard Drew (right) aiming a directional microphone at John Kennedy, production photo, *Primary*, 1960.

Image 1.1, Newspaper article on the assassination of Gerard Lebovici, *London Times* (March 9, 1984)



**angry
young
computer**

Our B200 can outdo any computer in its class. Any computer, regardless of name or initials. So naturally, when it sees a system being bought or leased on the basis of name or initials, the B200 gets angry. Because it knows it can do a better job for fewer dollars. If you know anybody who's considering a computer, do him a favor. Mention the Burroughs B200. The same goes for anybody who's angry at his present computer. And we hear a lot of people are.

Burroughs Corporation 
See a Burroughs computer in action, Election Night, ABC-TV.

Burroughs Corporation, 1964

148 Business & Industry

► Westinghouse, 1964

Image 1.2, Burroughs Corporation Advertisement from Newsweek magazine (October 24, 1964).

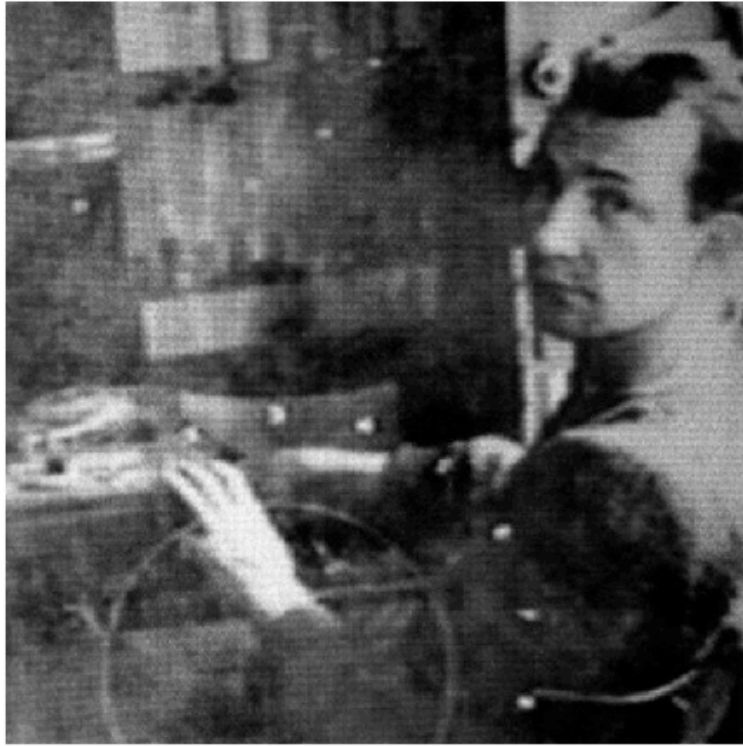


Image 2.1, Richard Maxfield at work in an electronic recording studio.

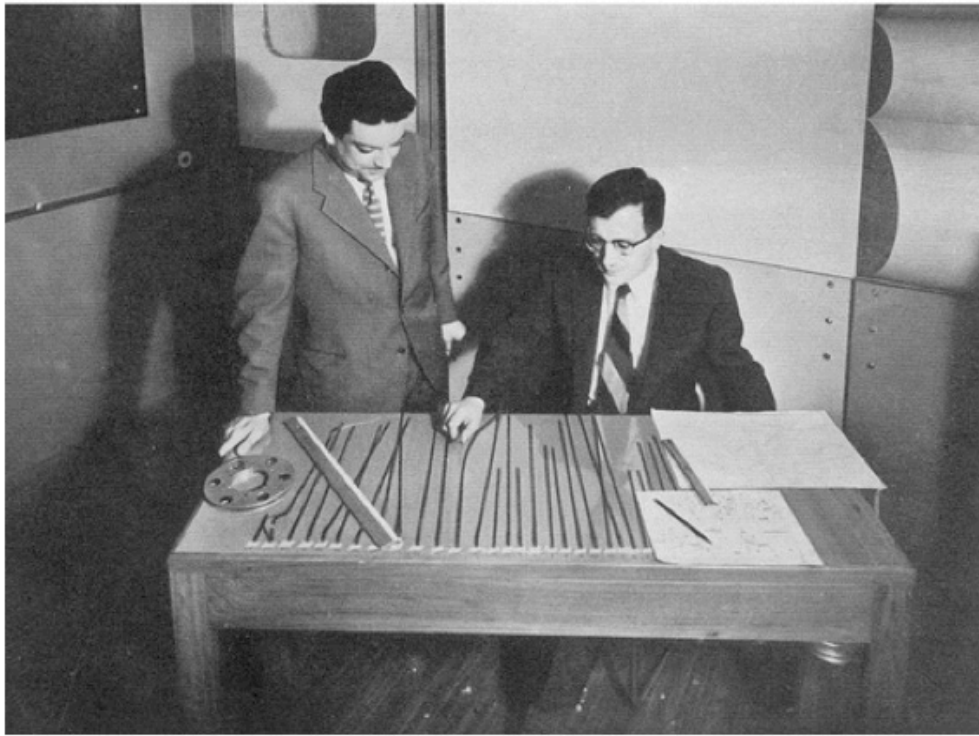


Image 2.2, Bruno Maderna (left) splicing audiotape in the *Studio di Fonologia*, Milan, 1955.



Image 2.3, Bill Hewlett, Model 200A Oscillator, 1939

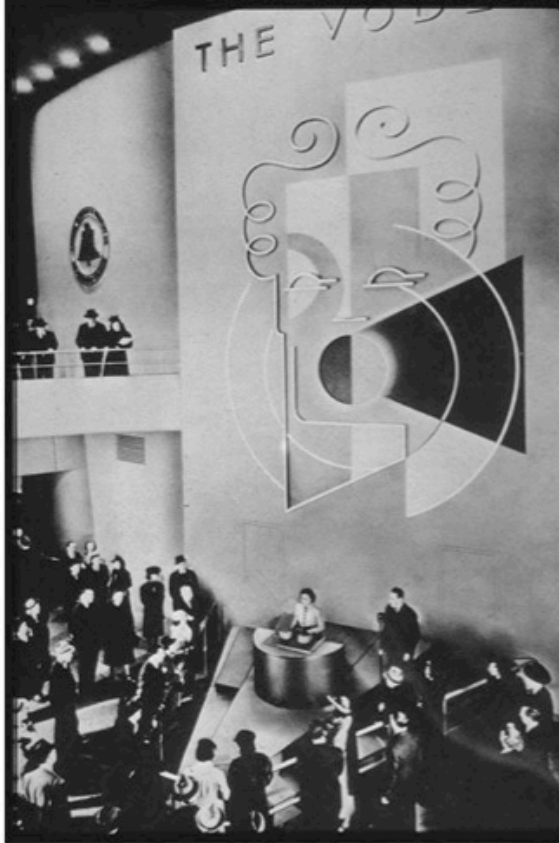


Image 2.4, Voder Demonstration at the New York City World's Fair, 1939.



Image 2.5, Heathkit Corporation, Sine-Square Generator, 1958-60

Announcing a
Major Breakthrough
In High Fidelity Reproduction



THE FISHER
DYNAMIC
SPACEEXPANDER
MODEL K-10

It is well established that one's perception of the size of the room or hall in which music is being played is based on the amount of reverberation in the signal reaching one's ears. With the revolutionary new FISHER Dynamic Space Expander, Model K-10, you can now literally create living concert hall acoustics in your own home, and on any type of signal—whether from records, radio or tape—in the turn of one simple control! The music are astonishing.

The patented design of the FISHER K-10 permits the blending of any desired degree of reverberation with the input signal to create a

result that is truly the living music itself. Listen to any of your favorite programs or records with the FISHER K-10 in operation and you will find that, without it, the program actually sounds "dead"—the most dramatic proof of what the FISHER Space Expander does!

Best of all, there are no moving parts to get out of adjustment—no meters, no continuous tape hubs, no complicated drive mechanisms. The FISHER K-10 is a marvel of simplicity and superb electronics, designed to give years of trouble-free, thrilling service.
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AUDIO • SEPTEMBER, 1960

15

Image 2.6, advertisement for Fisher “Dynamic Space Expander” electronic reverberation unit, *Audio Magazine* (September 1960), 15.

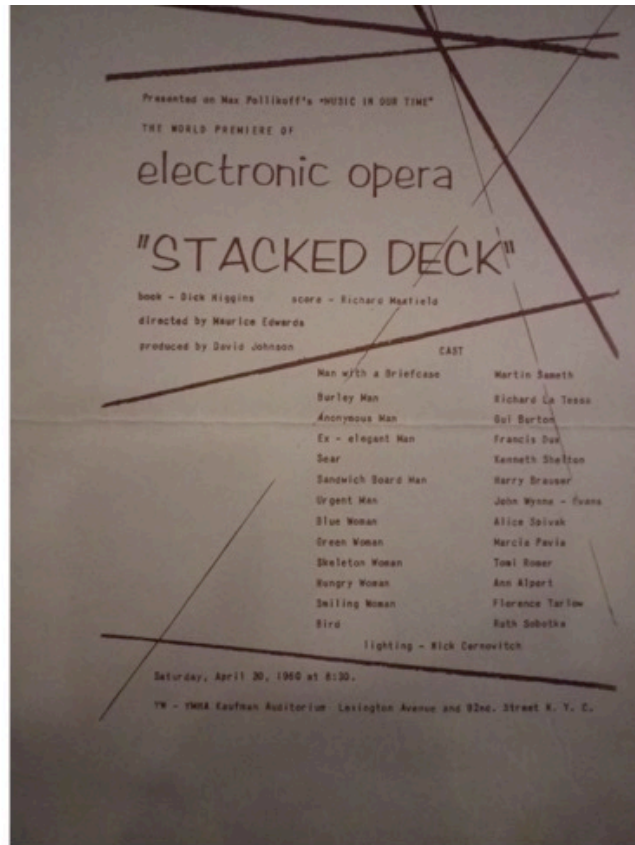


Image 2.7, Poster for premier of *Stacked Deck*, an electronic opera by Dick Higgins and Richard Maxfield, 1958



Image 2.8, Man with a Briefcase—“an archetypal and frustrated bourgeois” (Martin Sameth)—confronts the Woman in Green—“the very soul of sensuality” (Marcia Pavia). Note mandala projected on screen behind the actors. Dick Higgins and Richard Maxfield, still from 1960 performance of *Stacked Deck*, 1958.

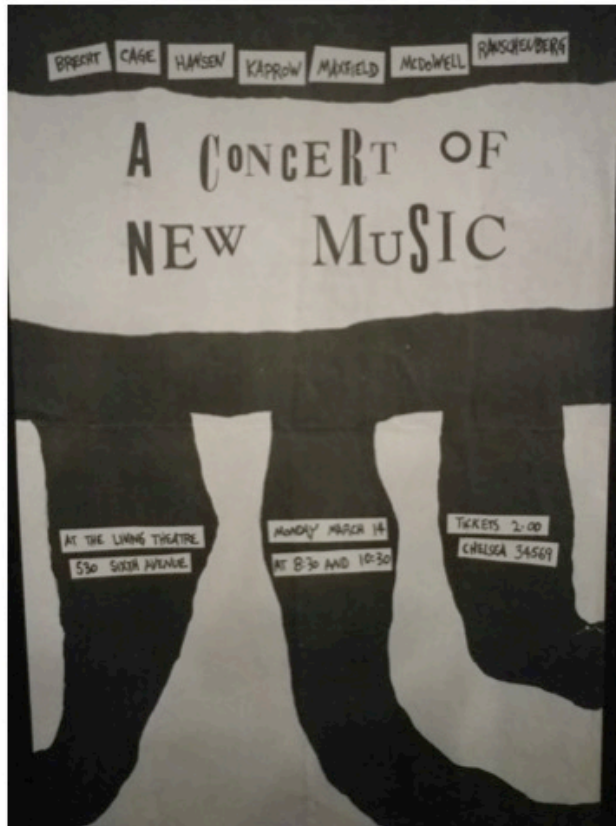


Image 2.9, Living Theater poster for evening of works by Richard Maxfield, George Brecht, Al Hansen, Allen Kaprow, John Cage, John Herbert McDowell, and Robert Rauschenberg. NYPL Fluxus archive.

JUNE 11: MATTHEWS AT THE KENNEDY

PROGRAM

SCENES a chamber-event arranged by G. Brecht (for Gross and John
 movement set by: James Waring performed by: Joan Weber and JERRY Ling
 sound score: G. Brecht performed by: John Cox and Jackson Naylor
 lights and light score: G. Brecht
 operated by: Barbara Gilchrist and Adrienne Montgomery

(Five-minute Intermission)

L.O. by ROBERT WHITMAN
 CHARACTERS: JIM DINE AS NAIL MAN
 RONALD DUCKER AS WOGAN
 PAT CLEGGING AS WOGAN
 LOGAN SANDERS AS STICK MAN
 (an departing cast)

CONCRETE FINE by ALLAN KAPROW

ELECTRONIC MUSIC by RICHARD MAXFIELD

WINDMILL COLLAGE by JIM DINE
 CAST OF CHARACTERS: JIM DINE as THE STRAWPOLLER and THE DANCER
 THE JUNGLES played by LAFFY THORNTON
 TWO COONIN GIRLS played by TWO PINEUS OF
 DANDRAGE
 RED HAIR played by POUNDED THORNTON
 some sounds by BLAST DINE
 also some screen movements by BLAST DINE

The illustrations are actual photos and by credit as all in the left. They are also copies

Image 2.10, Program note for Richard Maxfield, "Electronic Music" with works by George Brecht, Robert Whitman, Allan Kaprow, and Jim Dine, Reuben Gallery, c. 1960, NYPL Fluxus Archive.

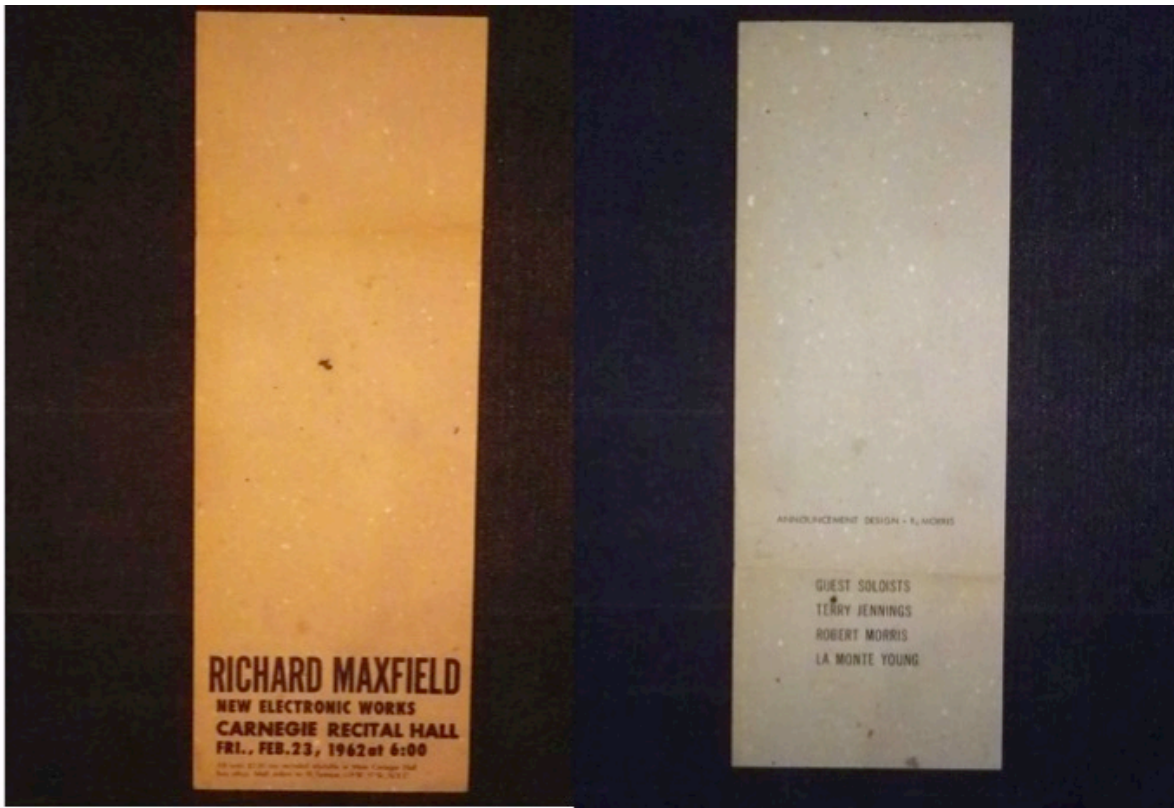


Image 2.11, Robert Morris, promotional poster for "New Electronic Works by Richard Maxfield" at Carnegie Hall, 1962, NYPL Fluxus Archive.

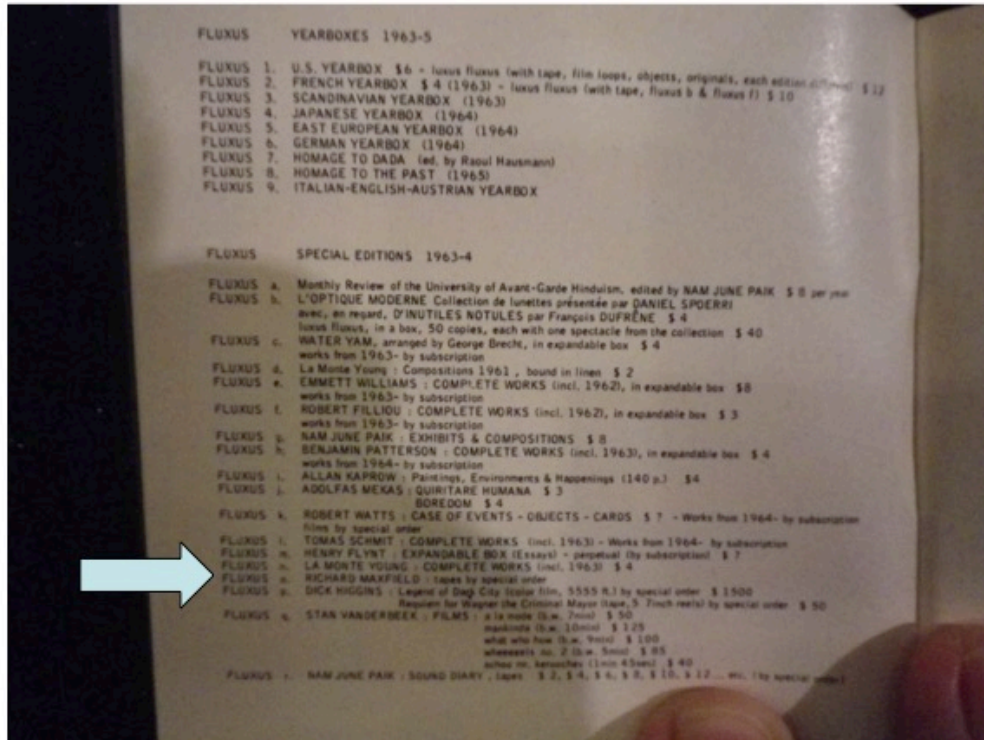


Image 2.12, Richard Maxfield, "Tapes by Special Order" available from Fluxus Special Editions' catalogue, 1963-4, NYPL Fluxus Archive

for Richard Maxfield

TWO PIECES

by Joseph Byrd

PIECE. For all the people in a room, except, sometimes, one.

The duration of the piece is arbitrary and may be established by any or some of the performers, or by random means, or by the fulfillment of any extra-musical purpose for which the piece may be used (such as summoning a waiter or showing displeasure at a recital).

The sounds may be any which can be produced by forcing air through the nose or mouth without vibrating the vocal cord, or in any manner producing a distinct pitch. The length of sound is to be the maximum possible on one breath, and will thus be dependent on the quality and intensity of the sound produced, as well as the amount of air in the lungs of the performer. Silences may be any length of time which the performer needs or wants to take a breath. The performers should feel no obligation to vary their sounds or to produce "interesting" sounds.

CLAP. For any group of people with arms and hands.

The duration of the piece may be established in any way satisfactory to the majority, but should be decided upon in advance, and adhered to. Within the time allotted, each person may clap his hands (preferably loudly) once when he has completed this action, regardless of where within the entire time-span he has decided to do so, his part in the performance is over. The individual may elect not to clap, but if so, should not contribute to the performance by any other means (i.e., stomping feet, whistling, booing, etc.). Outside of performance of his part, it is desirable that the individual make as little noise as possible.

Joseph Byrd
December, 1960
NYC

Image 2.13, Joseph Byrd, *Two Pieces for Richard Maxfield*, 1960, Getty Center.

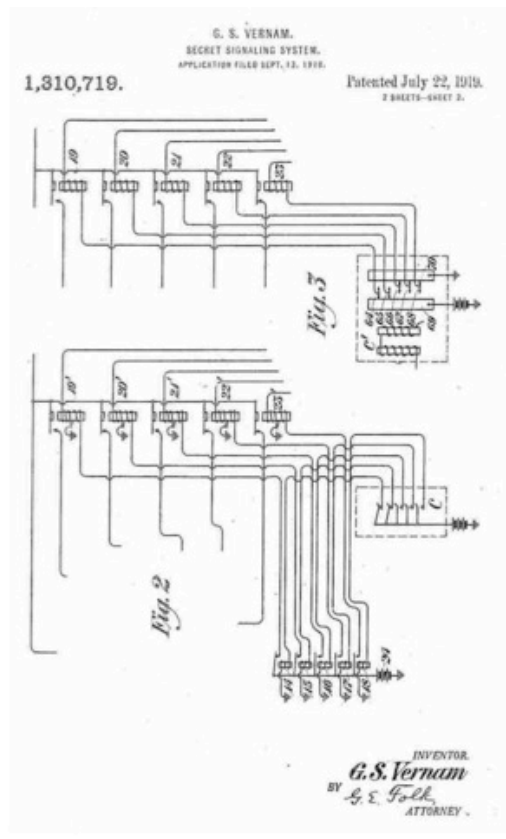
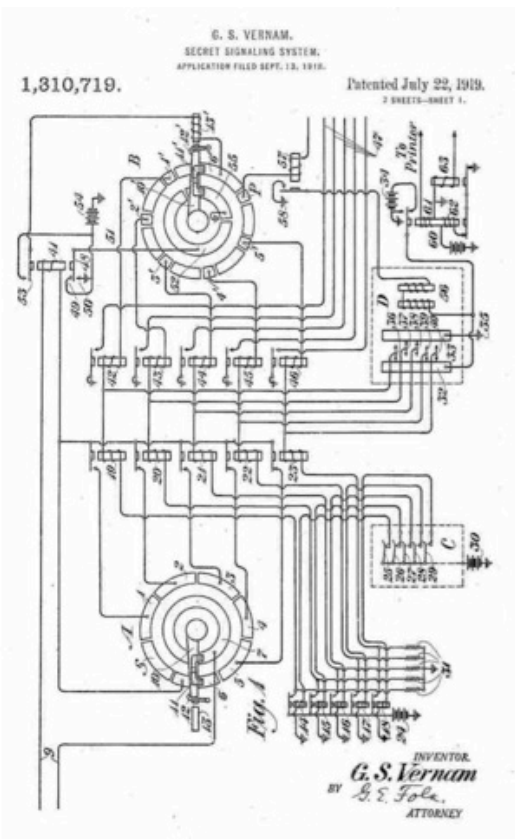


Image 2.15, Gilbert Vernam, Patent application for “Secret Signaling System,” 1919



Image 2.16, Jackson Pollock, *Energy Made Visible*, 1947.



Image 3.1, Agent 003 stands in front of a magnetic tape memory unit for Alpha 60. Film still, Jean-Luc Goddard, *Alphaville*, 1965.

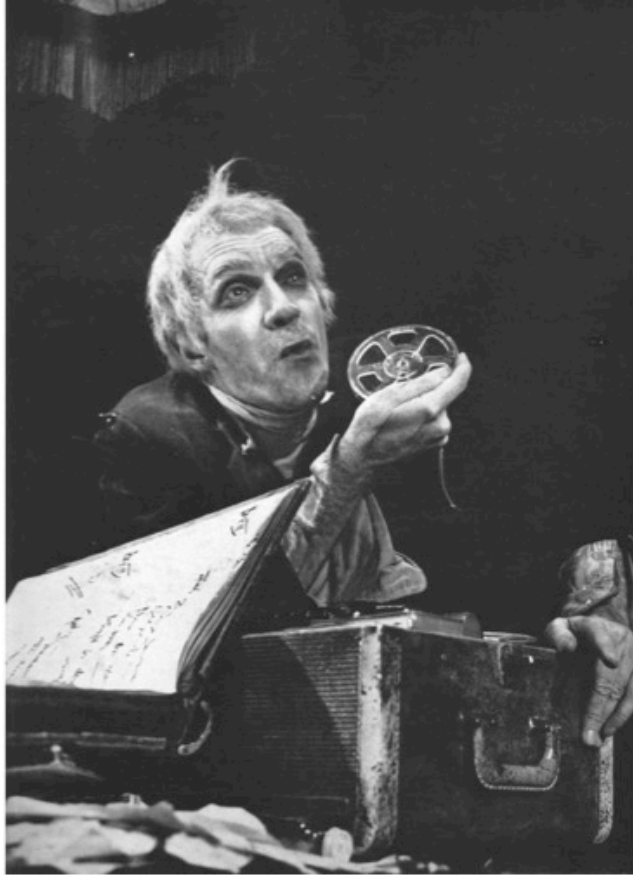


Image 3.2, Krapp, ledger, and tape recorder played by Donald Davis, *Krapp's Last Tape*, theatrical still, 1960.



Image 3.3, *Krapp*, performed by Robert Wilson perusing his archive of audiotape recordings, theatrical still, *Krapp's Last Tape*, 2012.

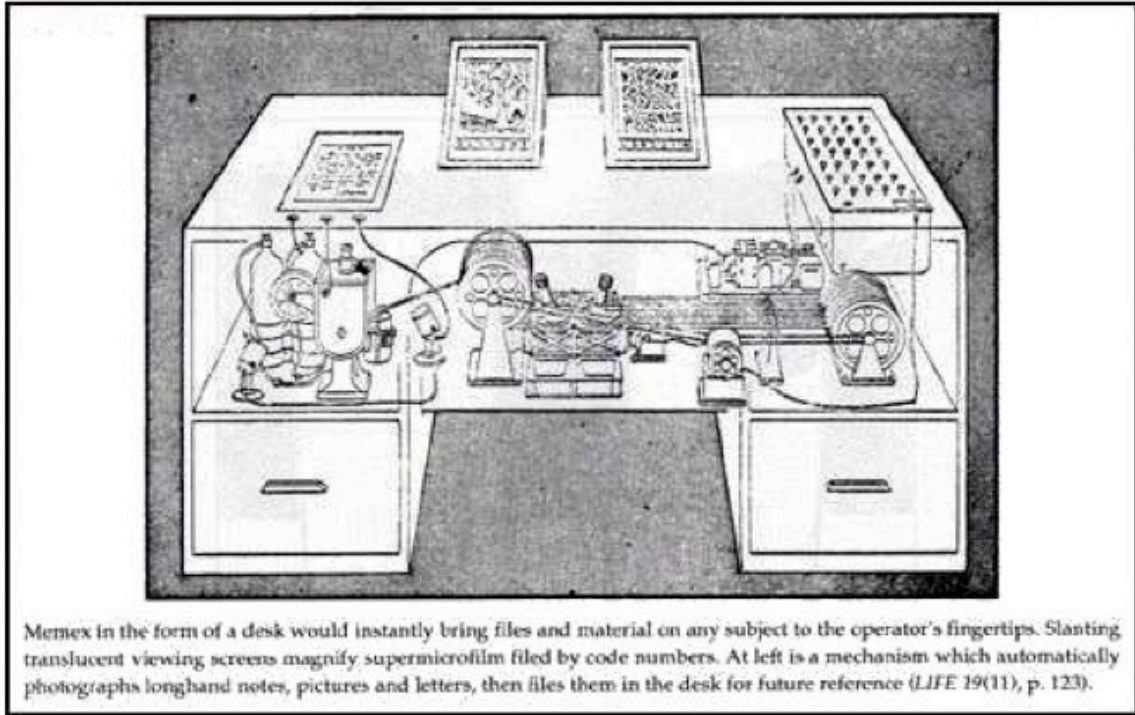
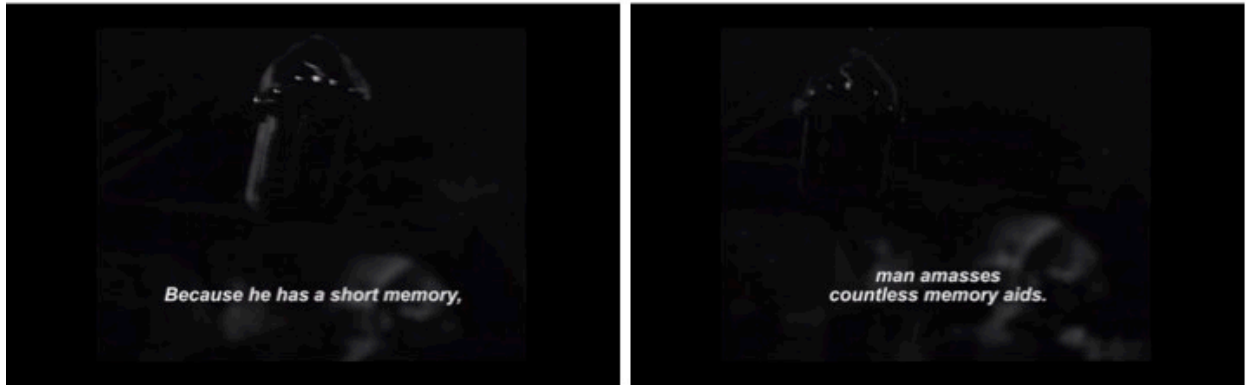


Image 3.4, Illustration of Bush's Memex, *Life Magazine* (September 10, 1945), 123.



Images 3.7 & 3.8, Shot of electronic microphone in opening sequence of *Tout la Memoire du Monde*, Film Stills, 1956.

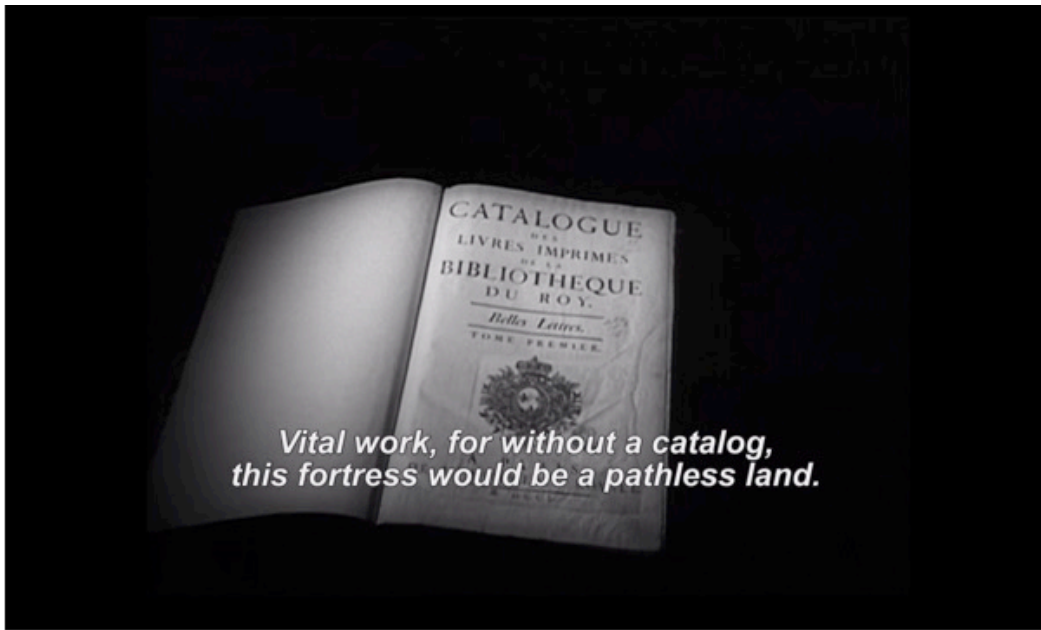


Image 3.9, Shot of the BNF's hardcover catalogue, film still, *Tout la Memoire du Monde*, 1956.



Image 3.12, BNF reading room where specialists consume materials transformed incorporation into the mnemonic archive, film still, *Tout la Memories du Monde*, 1956.



Image 3.13, Scientist Hiroshi Ishiguro (right) holding a dialogue with Geminoid HI-1, a robotic simulation of himself, 2011.

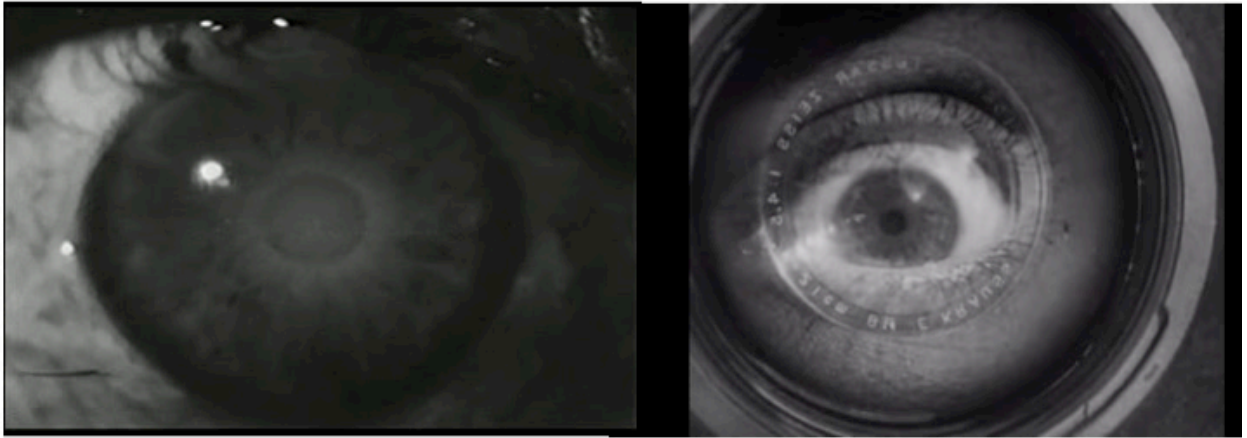


Image 3.14 & 3.15, Extreme close up of Keaton's eye in *Film* (left) and Kaufman's in *Man with a Movie Camera*, film stills.

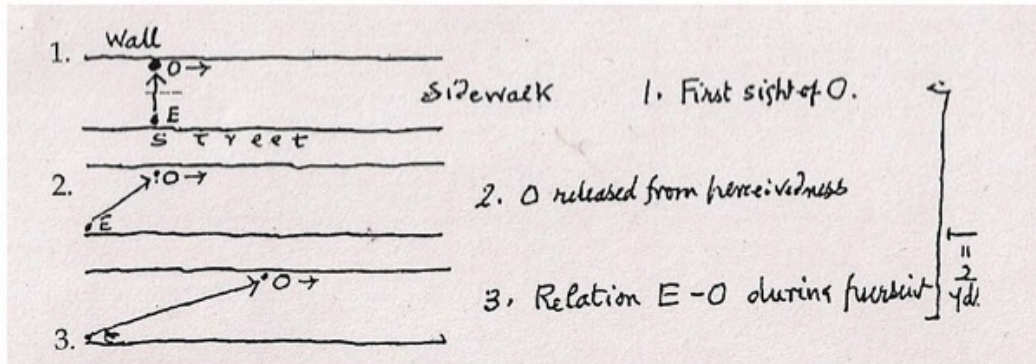
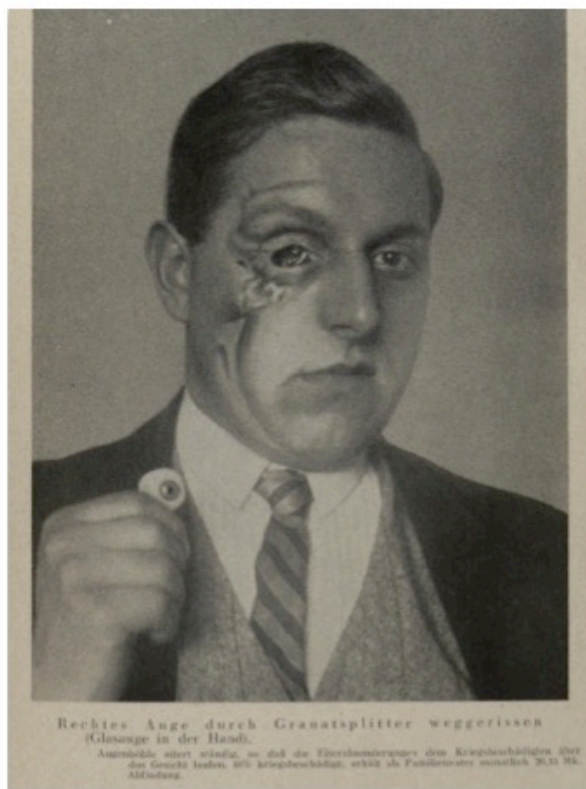


Image 3.16, Samuel Beckett's hand-drawn diagram outlining O's "anguish of perceivedness" and "angle of immunity," 1965



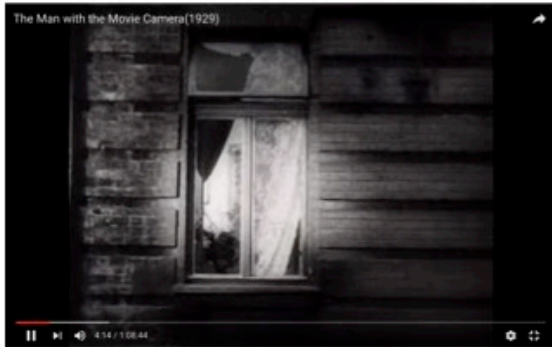
Image 3.17, O perusing his personal photographic memories, stills from *Film*, 1965



**Image 3.18, World War One veteran displaying prosthetic eye from wartime injury.
Photograph by Ernst Friedrich, *War Against War!*, 1924**



Image 3.19, Hidden camera film footage of a woman learning of her husband's death, Dziga Vertov, *Kinoglantz*, film still, 1924.



Images 3.20 & 3.21, Vignetted shots of dressing woman, Dziga Vertov, *Man with a Movie Camera*, film stills, 1929.



Image 3.22, Kaufman filming from rooftops, Dziga Vertov, *Man with a Movie Camera*, film still, 1929.



Image 3.23, Kaufman filming from inside of a beer glass, Dziga Vertov, *Man with a Movie Camera*, film still, 1929.



**Image 3.24, Kaufman
filming from the rooftops
in *Man with a Movie
Camera*, film still, 1929.**



**Image 3.25, Buster filming
street fighting at a parade,
The Cameraman, film still,
1929**



Image 3.26, Buster filming “life caught unawares” in *The Cameraman*, film still, 1929.

Image 3.27, Buster placing a dropped knife back into the hand of a combatant, *The Cameraman*, film still, 1929



Image 3.28, Marceline (center) interviews a random Parisian, film still, *Chronicle of a Summer*, 1960



Image 3.29, Marceline recording her memories in the Place de la Concorde, film still, *Chronicle of a Summer*, 1960

Appendix, *Educative Value* (1955)⁵⁴⁹

—Guy Ernest Debord—

Voice 1: Let us speak of rain and sunshine, but let us not believe that such things are frivolous; for our existence depends on the weather outside.

Voice 2 (young woman): Tamar took the cakes she had made and brought them to Amnon, her brother, in the bedroom. She offered them to him so that he might eat them; but he seized her, saying, "Come and sleep with me, sister." She answered, "No, brother, do not do violence unto me. One does not act in this manner in Israel. Do not commit this infamous act! Where would I go to bear my shame? And as for you, you would be disgraced in Israel. Speak instead with the King, I beg you; he will not prevent you from taking me as your wife." But he refused to listen, and was stronger than her; and he did violence unto her and abused her.

Voice 3: Upon what criteria does the contemporary family, that is, the bourgeois family, depend? Upon capital, upon private enrichment. The family only exists in its fully-developed form for the bourgeoisie; but the consequences of this are public prostitution and the total disappearance of the family within the proletarian classes. To be sure, the bourgeois family will disappear, along with its logical consequences; and these too will disappear along with capital.

Voice 1: Bernard, Bernard, this first bloom of youth will not last forever. The fatal hour will come, and will resolve all false hopes thanks to its unyielding verdict. Life, like a false friend, will pass us by in the midst of our endeavors. The rich of this earth, enjoying their pleasant lives, see themselves as having many possessions, and they will be thoroughly shocked to find themselves empty-handed.

Voice 4: However, what will especially help foster the climate of confidence to which the Algerian populace aspires is the news that police operations have been carried out successfully, and ended with 130 arrests made, most notably in Chinchilla: 36 terrorists or agitators were apprehended there, that is, the vast majority of the commandos who were in action on the fateful night. In Cassaigne there were 12 arrests. As concerns the latter, it is especially comforting to note that of the twelve individuals arrested, four were actually turned over by *fellahs* (peasants) living in the region, who were anxious to take part in the investigations to that the guilty might be brought to justice.

Voice 2 (young woman): The placid bovines would be at the mercy of the carnivores if they did not have their pairs of horns to defend themselves. In the adjoining aquarium, we see strange fish whose eyes are bulging inordinately.

⁵⁴⁹ *Potlatch* #16 (January 26, 1955), #17 (February 24, 1955), and #18 (March 23, 1955), reprinted in *Potlatch, 1954-1957* (Paris: Editions Gerard Lébovici, 1985), pp. 100-102; pp.112-113; pp. 203-204; trans. by the author, Luke Sandford, David Auerbach.

Voice 4: Moreover, reinforcements -- parachutists, police offices, C.R.S. [special security forces], aviation, -- continue to be sent out to sensitive points, ready to participate in the decontamination operation which, according to Mr. Jacques Chevallier, State Secretary assigned to the War, said yesterday could require much time and men.

Voice 2 (young woman): Alas! Everyone in Great Britain knows that the princess -- for reasons of state -- cannot outfit herself at French couturiers. It's been five years since she bought a dress at Dior. That provoked a veritable scandal.

Voice 1: It is an eternal crime, of some illusion, of certain conventions in which royalty cloaks itself, against which all men have the right to stand up and take arms; it is an outrage which even the blindness of an entire people cannot justify.

Voice 4: No material profit attracts men to the polar regions, but only the disinterested desire to know the entire earth. By strength alone they have reached the two poles.

Voice 3: There remained only the need to study the interior of those continents whose contours were known.

Voice 1: Fruits and flowers press forth in profusion, and in the midst of this splendid nature the indigenous peoples fall into a life of languor.

Voice 4: The Fellaghas? Who are they? Where do they come from? Tunisian officers? It's been said... . And Tripolitans? But that they are now benefiting from local recruitment, of this there is no doubt. Most of them wear the semblance of a khaki uniform.

Voice 1: They love games, singing, dancing, and they receive foreigners with a generous sense of hospitality. But they are also daring and *remarkable navigators*.

Voice 3: We have the situation well in hand, affirms the Governor General. One can hardly rule innocently.

Voice 4: The topography, the climate, the rivers which we have studied up to now form the framework in which living things, plants, animals, humans exist. Each living species adapts to natural conditions. But often man, the most active and destructive being, has modified these conditions and created new landscapes.

Voice 1: Red flags, bearing the star of Ho Chi Minh, having long floated over the city. The new masters, did not forget to decorate the cathedral with them.

Voice 4: Thus, civilization and modern lifestyles have penetrated to the extreme limits of habitable lands.

Voice 3: A mountainous continent extends around the South Pole.

Voice 2 (young woman): Yea, though I walk through the Valley of the Shadow of Death, I shall fear no evil, for Thou art with me.

Voice 1: The explorers have as their enemies cold, wind, darkness and isolation.

It is a true adventure departing for these regions. Even today, with the assistance of telegraph and airplanes, explorers become lost.

They know how to guide themselves by the stars, the sea swells, the wind. They have sea charts made of bamboo stalks, indicating the islands and their currents.

Voice 2 (young woman): I remember the love you brought to me in the time of my youth, at the time of our betrothal, when you followed me into the desert, through a savage land... . And I made you enter a land which was like an orchard so that you could eat of its fruits.

Voice 1: Those who make revolutions in the world, those who want to do good, should only sleep in the grave.

Voice 3: Men build their houses give the use which they want to make of them. The same house will not be suitable for all occupations, for all lifestyles.

Everything which is not new during a time of innovation is pernicious.

Voice 1: The history of ideas, what does it prove if not that intellectual production is metamorphosed by material production?

The dominant ideas of a given period have always been the ideas of the dominant class. We speak of ideas which revolutionize all of society. Thus we only formulate a fact, namely that the elements of a new society were formed in the previous society; that the dissolution of old ideas goes hand in hand with the dissolution of old conditions of existence.

Voice 2 (young woman): In our times we work mostly in great factories where machines allow for the manufacture of innumerable objects. The worker oversees and regulates the machines, he is confined by uniform and strictly defined work. The start-up of such factories requires enormous amounts of capital, engine power and abundant manpower, as well as the proximity of appropriate means of communication.

All of the phrases in this radio transmission were lifted from:

Jacques Benigne Bossuet's *Panegyrique de Bernard de Clairvaux*.

Demangeon and Meynier. [Sixth-level General Geography text]

France-soir of November 5, 1954

The Jeremiad, Psalms, Samuel, *The Bible*

Marx and Engels. *Communist Manifesto*

Saint-Just. *Reports and Discourses at the Convention*