

CHAPTER ONE:  
ART, TECHNOLOGY, AND HIGH ART/LOW CULTURE DEBATES IN  
CANONICAL AMERICAN ART HISTORY

***I. Overview***

In his *Media Art History*, Hans-Peter Schwarz of the Center for Art and Media in Karlsruhe, Germany (ZKM) wrote: “The history of the new media [sic] is inextricably linked with the history of the project of the modern era as a whole. It can only be described as the evolution of the human experience of reality, i.e. of the social reality relationship in the modern age.” I begin with his words, which have strong resonance for me, perhaps beyond his initial intent or ultimate direction. His astute triangulation of those three concepts—new media history, the project of the modern era, and “social reality”—form the nexus of my theoretical investigation. For it seems that current social realities and the project of the modern era largely govern new media’s reception within the Western art history canon. Perhaps clarity regarding the ideological interconnection of these three elements will only be possible with more historical distance. However, this dissertation represents a step toward a better understanding of the sometimes-vicious canonical opposition to the fusion of art and technology, in light of these intersections.

Key are his two phrases: “the project of the modern era,” and “the evolution of the human experience of reality, i.e. of the social reality relationship in the modern age.” On the basis of Schwarz’s text, I take the second phrase to mean the dehumanization that results from industrialization and modern warfare. In regard to artistic production, he rightly underscores the abrupt reorganization of vision precipitated by, for example, developments in photography and cinematography during the early modernist period. As I will elucidate, this is tremendously

significant, and the pervasiveness of that influence is such that it is difficult to imagine a regime of figurative illustration that can outstrip the impact of photography and the moving image. Early on, photographic and filmic images in the West became synonymous with the visualization of reality, the evidence of verity to even those who should know better than to take them at more than face value. However, the evolution of the human experience of “reality” in the modern age was jarred by much more than the onset of industrialization and the introduction of new technological forms of image and sound capture. The larger “social reality” facing modern Europe and the quickly modernizing West was precipitated by “the project of the modern era,” that project being not only industrialization, but also its companion: colonial expansion.

The shock of the modern age was not merely that of technology, but also of the “Others”: those subaltern masses that provided the international labor force for industrialism, and a target market for a budding capitalist system. En masse, they encroached from all sides, be it through the flooding of the rural poor into the cities to work, or through the self-imposed ideological ‘burden’ of bringing the light of advanced civilization to the furthest reaches of a dark world. To make plain my assertion, I claim that the history of new media technology is not neutral, but is an extension of (or connected to) the project of advanced visual technologies, the imperialist motives of modernity, and the new social pressures that accompanied them. Therefore, the historicization of new media art is equally fraught with messy social realities that accompanied the project of the modern age, the effects of which are continually felt today.

How, then, do these social realities inform a history of art and technology? By reading artistic production against social context—through both official and unofficial histories—it is possible to gain a sense of the values of a given society.

But it is especially through the dissonance, or the moments of disconnect that irritate the social comfort zones around “proper” and “improper” art, that the difference between the way a culture wishes to be seen, and the reality of its conditions becomes evident. Identifying four key areas of discord, this work considers first the terms “high” and “low” and their association with new media forms. Second, the relationship between capitalism and the avant-garde becomes important as an extension of the high-low culture discussion. Third, the current “social reality” of globalization and post-colonialism is drawn into the discussion. Finally, I examine how electronic and digital media alter the longstanding notion of the work of art as exuding a kind of originality. These elements are like three interlocked circles; each one touches the other. It is in the overlap of these four areas that questions about art and technology become the most activated and insightful. And so it is impossible to wholly separate them into discrete chapters, though an effort has been made to give an organic structure to the text.

What I do *not* wish to suggest, however, is a one-dimensional relationship between modern visual technologies and certain forms of oppression. This is too literal a connection, which diverts both agency and responsibility away from those who freely choose the means by which technology is mobilized. Rather, I am concerned with whether a certain mode of creative production, in this case new media-infused artistic production, gains canonical status and why. In clarifying these relations, I hope to contradict the negative identification of technology as divergent from the interests of high culture (as cultural aberration, or degradation) when in fact it holds a tremendous cultural and expressive potency that enriches art historical study.

Beginning with the nineteenth-century modernist period that accompanied industrial development, artists, philosophers, critics, and literary figures have

communicated an increasing sense of anxiety surrounding their relationships with machines. More precisely, with the increasing automation of production that replaces the human with the robotic arm, many have seen the potential for the machine to meet or surpass the usefulness of the average human. With the more recent experimental development of artificial intelligence and artificial life, the uniqueness of the human intellect has also come into serious question. Now, the fear of obsolescence on the part of man in relation to machine is not limited to the body, but also the mind.

Responding to the strain that new technologies place on human self-definition, artists continually challenged modernity's demands, lauded its utopian possibilities and appropriated its means. One could even make the argument that, with modern technology's ever-growing leverage upon daily life in industrialized societies, every modern and contemporary artistic movement has in some way responded to its influence. To attempt to capture the nature of that response would be far too ambitious for a single volume—and perhaps even somewhat absurd—given that today we live the very unfolding of those tensions and elations that surround the machine's encroachment on human existence.

Key but highly contested terms like modernism and postmodernism will recur as signifiers of the debates engaged. While the scope of this discussion involves the development of a robust understanding of these constructs, it seems appropriate to set down a general set of definitions, as a foundation upon which to build. When discussing modernism, or the modernist period, I refer specifically to ideas associated with the technological innovations and social milieu of the period between the mid-1800s and the 1960s. This encompasses the following: the onset of visual technologies such as photography and cinema; the springing up of the modern city and mass culture; industrialization; the advances in transportation that would

allow for rapid travel and colonization; the belief in scientific rationalism; the primacy of the ocular; and the integration of mechanization into daily life. The term postmodernism as used in this context refers to the destabilization of meta-narratives in theoretical discourses and cultural production that can be traced back to the 1970s and 1980s, and which are characterized by pluralism, contingency and sampling. This instance reflects a growing criticality toward modernist ideologies that are steeped in the empiricism of the Enlightenment, positivism, the imperial project and unbridled optimism around the utopian possibilities of science and technology.

Even the most fundamental consensus around the term “technology” hovers in question, and definitions range from the development of rudimentary stone tools to the high-tech computer introduced in the twentieth century. Just within the arts, it may refer to a broad range of developments that include the introduction of pre-mixed, tubed oil paint, the digital mouse, or even the number two pencil. The language is extremely slippery, sometimes even imbued with a gender-biased conceit that would label the socially-determined ‘male’ developments as bona fide technology (i.e. the combustion engine) and ‘female-oriented’ domestic technologies (like the weaver’s loom) as craft. For the sake of this discussion, technology refers to any number of developments accompanying industrial mechanization, and associated with modernity and postmodernity. Within the dyad of art and technology, this includes (but is not limited to) photography, cinematography, television, video, robotics, electronic and digital media forms, projection art, and computer-assisted two and three-dimensional design. However, I wish to underscore the fact that this definition of technology, while socially understood as related to the practical applications within modern manufacturing, is but one aspect of “technology” in the broader sense of the development of implements to extend human capabilities.

Finally, in reference to the use of the term “network” within the current discussion, it does not specifically imply the World Wide Web per se. Rather, I refer to a complexity of network *thinking*—a kind of exploded poststructural model of conceptualizing economic, social and political webs of power. It is a system of interconnected components linked together by nodes, of which the Internet is but one example. Intellectual models of global networks preceded the technical possibility of their physical realization. Their manifestation proceeded from societal necessity. This is an important subtlety to distinguish, since increased global awareness and challenges to linearity predate the Internet by more than twenty years. For example, consider Walter Benjamin’s notion of the “constellation” as manifested in his sprawling non-linear collection of writings, *The Arcades Project* (1927-1940); or Jorge Luis Borges’ proto-hypertext fiction *The Garden of Forking Paths* (1941). As I will subsequently discuss, the introduction of particular technologies is often driven by ideologies that precipitate their development, and shape their function.

While I would not advocate a technologically deterministic view of how network complexity affects the formation of social identity, one cannot ignore how information technology has reshaped our collective sense of time and space. This in turn affects experience, since experience cannot occur outside the confines of temporality and location. The network has taken these building blocks of experience—time and space—and radically reconfigured them into a complex rhythm of flows and counter-flows.

As this system grows exponentially in all directions, it is necessary to reassess one’s coordinates within a constantly shifting topography. Hence, a consideration of these ideals will lead to a discussion of various attempts to negotiate identity from within this open-ended system: post-colonial discourses, postmodernism, diaspora, transculturalism, and identity politics that engage

hybridity. Gilles Deleuze and Félix Guattari's rhizomatic configuration of "plateaus" or "intensities" suggest unstructured ruptures that disturb the placid surface of knowledge production. The current enquiry seeks to trace the erratic influences of globalization, network, and technology upon the evolution of new media-based art—and vice versa.<sup>1</sup> By engaging in a mode of creative association that does not take for granted the discreteness of these elements, I hope to cultivate pathways that link art history with a richly diverse erudition that lies just beyond its traditional borders.

The overall objective of this intellectual project is to capture the spirit of the present state of art history as a discipline, in relation to an increasing presence of both new media forms, and thinking interpenetrated by new media constructs. With a view toward history, this chapter considers the rift between canonical art scholarship and new forms of artmaking, particularly those associated with mass media, industry, and popular or 'low' culture. As such, its focus centers upon the art historical reception of art influenced or produced by modern technology. To quibble about the origins or historical pedigree of new media is—insofar as this exploration is concerned—less urgent than pinpointing the ideological impact of modern technology on art history. For while each of the astute intellectuals that I subsequently call upon defend the scholastic worthiness of new media forms with impressive, focused research and interpretation, lacking is an assessment of why such a defense should be necessary in the first place.

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<sup>1</sup> Gilles Deleuze and Félix Guattari, *A Thousand Plateaus: Capitalism and Schizophrenia*, trans. Brian Massumi (Minneapolis: University of Minnesota Press, 1987).

## ***II. Defining New Media***

What are new media? Are there “perceptible material properties” that uniquely define them as discrete media? These forms of cultural production and their attendant fields of study arise out of the postmodern condition, and therefore require interdisciplinarity. Birthed in an era of globalization, with its perpetual churning of capital and commodity, it comes as no surprise that this field bears similar tendencies toward the polymorphous. Janet Murray defines the term “new media” as a gesture in the direction of digitality; that is, as the expressive medium that has defined the latter part of the twentieth century.<sup>2</sup> Murray’s definition offers a breathtakingly comprehensible and highly distilled definition that is rooted in the literal sense of the word “medium”. It is seemingly based upon the logic that since the digital is the latest identified and fully articulated medium to follow older media (like painting, photography, cinema and video), then new media means literally: “digital media.”

Murray’s clear delineation makes categorization easy: works that are conceived of and remain in the digital form are new media, while works that do not adhere to this qualification are not. Her stance is in keeping with that of computer artist and theorist Delle Maxwell, who in the 1990s argued for a definition of computer art based upon the artist’s engagement with the building blocks of software: code. She advocated a self-criticality within the computer art world that would separate the commercial uses of computers from the “high” art pursuits of computer artists. Maxwell suggested that the only hope for the future of the field is

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<sup>2</sup> Janet Murray, “Inventing the Medium” in *The New Media Reader*, ed. Noah Wardrip-Fruin and Nick Montfort (Cambridge, Mass.: MIT Press, 2003), 3.

to arise from its conceptual “ghetto” through greater disciplinary rigor.<sup>3</sup> This discussion will become especially relevant in regard to the rupture between the art world and new media studies, especially as it relates to computer art’s originality or aura. However, locating the heart of new media practice within the artist’s engagement with code is too restrictive. It does not take into account the multidimensional nature of the computer as both a machine and an artistic instrument. That is to say, Alan Turing’s concept of a ‘universal’ computing machine, upon which the modern-day computer is based, has given way to its multidimensional technical and cultural functions.

The impact of this multiple functionality on the public’s reception of technology plays a major role in Trevor Pinch and Frank Trocco’s *Analog Days: The Invention and Impact of the Moog Synthesizer*.<sup>4</sup> Creating a duality between Robert Moog’s and Don Buchla’s synthesizer developments during the late 1960s and 1970s, the two authors plot the progress of these very divergent approaches, and illuminate the interplay between the social and the technical. Instructively, their account reveals that as a *machine*, the synthesizer is as difficult a cultural object to define as the computer. As a *musical instrument*, the synthesizer is inherently connected to an electronic form of artistic expression. This delineation became significant when considering the status of the musician vis-à-vis the synthesist (synthesizer operator). When manipulating the synth for musical purposes, was this person an engineer or a musician? During its fledgling years in the record industry, no one seemed sure who should take creative credit for the resulting output:

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<sup>3</sup> Delle Maxwell, “The Emperor’s New Art” in *Computers in Art and Design: SIGGRAPH 91 Art and Design Show* (New York: Association for Computing Machinery 1991).

<sup>4</sup> Trevor Pinch and Frank Trocco, *Analog Days: The Invention and Impact of the Moog Synthesizer* (Cambridge, Mass. and London: Harvard University Press, 2002).

Was the actual creation of original electronic sounds—the patching or programming—an artistic or engineering achievement? ... The record industry just did not know how to deal with this hybrid machine-instrument and its operators; it defied all normal categories.<sup>5</sup>

Was a synthesizer a machine or an instrument? The answer lies somewhere between the two; hence Pinch and Trocco’s dubbing of the synthesizer as a “liminal entity” or “boundary object.”<sup>6</sup> These terms take on a special significance, since there is no current new media studies ‘translation’ available—even despite the fact that a similar paradigm applies to the computer, its central object of study. While many have discussed the bipartite nature of the computer, it remains elusive. Even the most studied intellectuals strive for clarity using language that is grafted from other disciplines like literature or film studies, which often prioritize narrative at the expense of image, hardware, and software. But as Pinch and Trocco quip, “There are many souls in this new machine.”<sup>7</sup> So, too, with the computer: it has many origins, many functions. Theorizing the output from what is both a kind of ‘universal machine’ and an instrument of cultural production, it occupies a nebulous position that is in keeping with the times—and eminently under contention. As, for example, new media theorist Lev Manovich noted:

the computer layer and the cultural layer [of new media] influence each other. To use another concept from new media, we can say that they are being composited together. The result of this new composite is a new computer culture—a blend of human and computer meanings, of traditional ways in which human culture modeled the world and the computer’s own means of representing it.<sup>8</sup>

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<sup>5</sup> Pinch and Trocco, *Analog*, 125.

<sup>6</sup> Pinch and Trocco, *Analog*, 308.

<sup>7</sup> Pinch and Trocco, *Analog*, 308.

<sup>8</sup> Manovich, *The Language of New Media* (Cambridge, Mass.: MIT Press, 2001), 46.

The correlation between Manovich's idea of 'compositing' and Pinch's 'liminality' lies in the hybrid nature of their objects of study. The computer is a machine *and* a cultural instrument, just as the synthesizer is a machine and a musical instrument. Therefore its qualities are appropriately Janus-like—and in this respect the division between artists and 'engineer-artists' who use computational technologies is understandable.<sup>9</sup>

Manovich's writings in his *The Language of New Media* venture into a discussion of the more *conceptual* qualities particular to new media. The author names these as follows: numerical representation, modularity, automation, variability and transcoding.<sup>10</sup> Extending the characteristics unique to software into a grouping category for this area of study places an emphasis on particular *attributes* rather than a particular *medium*. Subsequently, all digital media may not necessarily fall under the category of new media, if it does not adhere to what Manovich calls the "semiotic logic" of those five qualities. While this presents an argument that is compelling based upon his ability to turn the more literalized conception of new media as strictly electronic or digital on its head, this definition is no less problematic. For while his delineation draws attention to the potential shift that accompanies the integration of software structures into all forms of cultural production, his boundaries still gradually erode until eventually all is subsumed.

Charlie Gere's *Digital Culture* takes an overabundance of disparate information regarding the computer's eclectic origins, and hones it down to a trim two-hundred-page primer. His samplings from popular culture, the history of

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<sup>9</sup> A reference to terminology used by Delle Maxwell to describe the split between traditional art and computer art. Please see Delle Maxwell, "The Emperor's New Art" in *Computers in Art and Design: SIGGRAPH 91 Art and Design Show* (New York: Association for Computing Machinery 1991), 96.

<sup>10</sup> Manovich, *Language*, 27-48.

hardware and software design, the Cold War, and artistic movement together suggest that “to acknowledge the heterogeneous nature of digital culture is increasingly necessary, as the technology through which it is perpetuated becomes both more ubiquitous and more invisible.”<sup>11</sup> His observation captures the scholastic frustration around forms like new media, whose qualities outstrip the current vocabulary to describe them. Manovich’s attempt to articulate a definition using words tied to computational languages, rather than terms of cultural production, shows his desire to stretch language to meet the challenge of capturing new media. Gere seems to see potential in this method as well, which grapples with the problematical dual nature of computers as both digital machines and digital mediums:

Digital refers not just to the effects and possibilities of a particular technology. It defines and encompasses the ways of thinking and doing that are embodied within that technology, and which make its development possible. These include abstraction, codification, self-regulation, virtualization and programming.<sup>12</sup>

Bound up in technology—as well as the *thinking* that results from and subsequently influences its own further development—new media cannot be contained within a single conventional sphere of academic research. A working definition of new media for the sake of this investigation would be one that incorporates these ever-evolving technological forms, but also their commingling, differentiations, and their collective impact on symbolic representation.

I draw such detailed attention to the varying definitions of new media in order to communicate the relative disarray that seems to surround its contemplation. More importantly, one can readily see the ways in which art historical debates

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<sup>11</sup> Gere, *Digital*, 201.

<sup>12</sup> Charlie Gere, *Digital Culture* (London: Reaktion Books, 2002), 13.

related to aura, originality, and the avant-garde are aggravated by new media, which is born equally from military-industrial arenas and creative artistic intervention.

Still, new media are externalized from traditional art historical discussions. Ultimately, one must wonder whether asking what new media *is*, constitutes the most productive and insightful way to approach the field. I would rather like to suggest that this discussion operate within the complex matrices of histories, socio-political influences, technologies, ideologies and a myriad of influences that have preceded it. There is a ribbon of continuity running through the knotty matrices of globalization, network complexity, and electronic mass media—namely, the waning, in certain instances, of entrenched identity. This not only warrants the discussion of identity politics as a vital facet of a discourse on new media, but it suggests that postcoloniality and technology are not mutually exclusive areas of study. Currently, the art world is negotiating the socio-cultural reality of globalization that is unfolding all around it, while the academy struggles to absorb and interpret the contributions of global artists and intellectuals. Interestingly, lines being drawn in the sand, whether by the entrenched canon or Marxist-influenced revisionist scholars, are being drawn abruptly before the presence of new media.

### ***III. Pierre Francastel and Key Debates Between Art and Technology***

The more general question of technology's admissibility into the scholarly structures of dominant art discourses surfaces periodically in history; this is no doubt tied to the underlying philosophical and social challenges with which a given culture wrestles. In his problematic but highly provocative text on the relationship between art and technology, French art historian and critic Pierre Francastel taps into the entrenched animosities that existed well before the digital:

Critics and historians argue that art has broken away from the human. They do not deny its revolutionary aspects, but they refuse to take it seriously. They turn it into a monster that many readily defend—a truly thankless and somewhat paradoxical task—and that others, less concerned about values and more self-important, stigmatize with vengeful imprecations.<sup>13</sup>

Writing on the substrative relation between artistic and technological innovation, he identifies—in addition to the above—two predominating responses to the debate. One postulates the positive societal impact of particular forms of artistic production, which can be used to shape a more utopian social order. The second demands a separation between mass production and the elusive, rarefied pursuit of pure beauty for its own sake. He writes of these latter two positions as having been derailed by a paradigm shift in technological civilization, for which their outmoded viewpoints are no longer sufficient. This contradicted the stances of philosophers who preceded Francastel, like Thomas Carlyle who in 1829 opined that the shift in everyday life toward the mechanized created a climate in which, “on every hand, the living artisan is driven from the workshop, to make room for a speeder, inanimate one.”<sup>14</sup> Concurring that the presence of technology in society influenced the way that artists both see and produce work, Francastel nevertheless rejected what he characterized as a “fundamental antinomy between Art and Technology,” asserting that art is in fact a *form* of technology.<sup>15</sup>

Francastel’s observations are startlingly apropos of the situation of art and technology in the canon today, though he first published them in 1956. Predating

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<sup>13</sup> Pierre Francastel, *Art and Technology in the Nineteenth and Twentieth Centuries* (New York: Zone Books, 2000), 18. Originally published in French in 1956.

<sup>14</sup> Thomas Carlyle, “Signs of the Times” in Charles Harrison, Paul Wood and Jason Gaiger, eds., *Art in Theory, 1815-1900* (Oxford: Blackwell, 1998), 263. First published in *Edinburgh Review*, volume XLIX, June 1829, 441-4.

<sup>15</sup> Francastel, *Art and Technology*, 24.

structuralism and post-structuralism, his stance on this subject presents a somewhat totalizing view of history and mechanical progress. It is perhaps for this reason, that his writing does not appear in anthologies of new media art, though he touches upon virtually every hot-button issue connected to art and technology. Among these is his conceptual linkage of an earlier “new” medium—photography—with developments in early modernist painting, specifically Impressionism. In addition he alludes, albeit briefly, to the relationship between art and technology as reducible to the conflict between art and industry; or more exactly, between rarefied handmade craft and mass production. He hints of—but then retreats from—a remarkably prescient parallel between the shift from a market-based to a capitalist society, and the shift in focus from an affluent leisure-consumer of luxury items to a laborer-consumer of inexpensive products:

instead of seeking light, expensive products to furnish to advanced countries, nations sought low-cost products to supply to poor countries in large quantities. Commerce was tied no longer to luxury but to labor. Such an upheaval was possible only when the masses were viewed as clients. The ideology behind the noble savage and an egalitarian society helped to develop colonialism and the mystique of productivity. Heavy industry and bulk transportation took the place of trade in rare products.<sup>16</sup>

In making this bold and eerily prescient statement, Francastel configures the conflict of art and industry as reducible to the division of rarefied craft from mass-produced items. This ideological linking of rarefied objects with high culture, and mass-produced items with low culture, is so ingrained today as to seem inherent. However, their ties are manufactured, *not* implicit, and even more so is the link between the masses and certain kinds of technologies. Media production, specifically

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<sup>16</sup> Francastel, *Art and Technology*, 35.

electronic media would subsequently become an area in which the association between the masses and low culture was naturalized.

Far from neutral, the concerns of art, technology and the aesthetics to which they give rise resonate with the concerns of the social, the industrial, and even the economic. Again and again, aesthetics prove to be shaped—perhaps even *delimited*—by more than just the imaginations of artists working in creative isolation. Rather, their artistic production both evidences and molds the social landscape in which these individuals work.

Artistic creation, especially following art critic Clement Greenberg's prescriptive interventions into the proper role of art, often incited strong response to the utilization of technology by artists. Among Francastel's richer discussions are connections drawn between the meaning of a work of art, and the technological developments that saturate the artist's milieu. Long before Wolfgang Schivelbusch's influential analysis of rapid transportation on modern subjectivity, Francastel argues for the importance of such developments in affecting the artist's vision of the world, declaring that "Only men living in the age of the airplane could make the transition from the conventions of Degas to those of Estève."<sup>17</sup> Impressionism and photography become a kind of harmonic refrain that he returns to repeatedly, though his dedicated primary focus is architecture. To the influence of photography on the traditional arts I will subsequently return, as the nexus between painting and mechanized vision signals some of the tensions to come.

The art/technology and human/machine binaries blur together in Francastel's writings, even becoming interchangeable in some instances. The correlation between the former dualism and the latter is as a symptom to its cause: tensions in art

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<sup>17</sup> Francastel, *Art and Technology*, 223.

discourses regarding technology reflect general social anxieties about the increasing role of mechanization in society. A fuller investigation of the human/machine binary will be taken up in Chapter Two, especially its relationship to mass culture and the avant-garde. But for the moment, I shall focus on symptoms; namely, the rift between art and technology. It is a tension that finds its antecedent in the onset of photography, a development that radically altered the trajectory of pictorial representation, both in production and reception.

#### ***IV. But Is It Art? Early Modernism and Photographic Debates***

As the first mechanical device to rival the artist's hand in accuracy and reproducibility, the camera threw the arts into profound crisis—especially due to its proximity to industry. For, while it produced naturalistic renderings made with light, a photograph was an *automatic* record from a mechanism, as opposed to an artist's *skilled* interpretation. A photograph was produced, not formed by an artist's hand. This separation of the artist from the finished artwork emulated the separation of the assembly-line worker from the completed product. This sudden replacement of human mastery with a superior machine function profoundly jarred accepted notions of artistic genius, as well as the standards by which one judged an artist's skill. Consequently, photography's impact upon the widely understood divide between technology and art cannot be underestimated.

Much of the early criticism around the then-revolutionary photographic medium was as polarizing as the late twentieth and twenty-first century debates around the artistic merits of digitality. Hence, in terms of the incursion of a significant new technology into all modes of production including the artistic, photography forms a historical foil for many of the sentiments expressed in relation

to digitality. As I will subsequently discuss, for many in the art world, especially those concerned with the impact of technology on everyday life, the proper place for the computer is in the business of information technology, not high culture. Indeed, the computer's relationship to capitalism—and its dualistic nature as both a machine for work and an instrument of creativity—grates against the dominant distinction between art and technology. Likewise, photography forced the rules of representation to be shifted from the pursuit of “realism” to a more diversified approach to image making.

Beyond its practical applications as an incredibly precise tool for mechanical record, photography opened up a Pandora's box of anxieties about what further dimensions of human creativity could be automated. Reflecting upon this, Walter Benjamin suggested that, “what makes the first photographs so incomparable is perhaps this: that they present the earliest image of the encounter of machine and man.”<sup>18</sup> The violence that many felt photography perpetrated against the original work of art resides in the tension inherent in the new form of artmaking it engendered: a kind of hybrid effort of man and machine.

Benjamin's observation eloquently encapsulates the critical convulsions caused by photography, since it constituted a site whereupon man's embattled relationship to modernization was enacted on the visual plane. His seminal consideration of the ‘aura’ under the duress of mechanical reproduction is perhaps the single most cited document of technology's influence upon artistic production.<sup>19</sup> Less cited is Benjamin's open acknowledgement that with new *technik* (meaning “techniques” but also “technologies”) comes new aesthetics.

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<sup>18</sup> Benjamin, *Arcades*, 678.

<sup>19</sup> Walter Benjamin, “The Work of Art in the Age of Mechanical Reproduction” in *Illuminations* (New York: Schocken Books, 1968), 217-251.

Aura, that intangible affect that emanates from an original work of art, demands a certain *romanticized* relationship to creative production; one that privileges the artist's role as a 'genius' with a unique vision that can be communicated through the mark. Photography interrupted that romance with its dispassionate mechanical observation, and the abruptness with which it effectively swept aside the formerly penultimate pursuit of conventional realism.

Those who supported photography early in its development cited its obvious utilitarian advantages and its freeing of artists from the drudgery of rote, figural depiction. From an historical standpoint, it has since been seen as egalitarian in a way that painting and sculpture was not. According to Susan Buck-Morss, for example, photography was a democratizing art form, since it was both accessible enough for amateurs to engage, and it made images available to the masses. As a popular culture form, photography blurred the distinction between the elite artist and the masses.<sup>20</sup> This idea of a particular medium as possessing democratic value will become important in relation to subsequent forms, like video and the Internet.<sup>21</sup> As I will presently describe, this democratic quality will greatly inhibit the reception of such media by the canon, through its eventual link with activism.

While some readily accepted photography as a faithful record of nature, this mechanical function was not to be confused with high art. Charles Baudelaire, for example, implored his public not to mistake the "photographic industry" for art, since it was a form inherently separate due to its relationship to mechanization:

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<sup>20</sup> Susan Buck-Morss, *The Dialectics of Seeing: Walter Benjamin and the Arcades Project* (Cambridge, Mass. and London: The MIT Press, 1999), 133.

<sup>21</sup> For an insightful assessment of the relationship between earlier photographic debates and video art, see Marc Mayer, "Digressions Toward an Art History of Video" in Willie Doherty et al, eds., *Being and Time: The Emergence of Video Projection* (Buffalo: Albright-Knox Gallery, 1996), 15-33.

If photography is allowed to supplement art in some of its functions, it will soon have supplanted or corrupted it altogether, thanks to the stupidity of the multitude which is its natural ally. It is time, then, for it to return to its true duty, which is to be the servant of the sciences and the arts—but the very humble servant, like printing or shorthand, which have neither created nor supplemented literature... But if it be allowed to encroach upon the domain of the impalpable and the imaginary, upon anything whose value depends solely upon the addition of something of a man's soul, then it will be so much the worse for us!<sup>22</sup>

Baudelaire's cantankerousness extended to most of the accoutrements of modernity; indeed, he elevated his complaints to a literary genre. However, this is not to say that his hyperbolic statements were in any way atypical of the prevailing intellectual attitudes during photography's formative years. In many respects, photography was a medium of the people, since it provided an affordable means to render portraits, document events, and convey the impressions of faraway experiences with comparative ease. By 1849, only ten years after the development of photography, it was estimated that 100,000 daguerreotype portraits had been produced in Paris studios alone.<sup>23</sup> With the popularity of the photograph, the city was literally inundated with images. As the art historian of photography Van Deren Coke asserted:

A veritable flood of landscape, genre pictures, and portraits were being made by amateurs and professionals; artists were making extensive use of these photographs in all these categories.<sup>24</sup>

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<sup>22</sup> Charles Baudelaire, *Oeuvres*, ed. Le Dantec, vol. 2, 224 "Salon de 1859: Le Public moderne et la photographie". Cited by Walter Benjamin, *The Arcades Project*, Trans. Howard Eiland and Kevin McLaughlin (Cambridge: The Bellknap Press of Harvard University Press, 1999), 691-2.

<sup>23</sup> Aaron Scharf, *Art and Photography* (London: Penguin Press, 1969), 20.

<sup>24</sup> Van Deren Coke, *The Painter and the Photograph: From Delacroix to Warhol* (Albuquerque: University of New Mexico Press, 1964) Revised 1972, 9.

That is, photographs engulfed modern life from every direction, from the studios of Paris to the farthest reaches of the French Empire. With this great proliferation of images, and the circulation made possible by developments in transportation, it became quite normal for Parisian homes to have collections of photographs. It stands to reason that, even if artists at this time did not choose to be photographers, they were certainly impacted by the presence of photography in the general surroundings. Though artists might not ever take up the camera, the sheer upsurge and circulation of photographic images contributed to a climate in which they gradually accepted such images as a naturalized or more unmediated depiction of reality. They were being taught to see *photographically*, or as one twentieth-century critic put it, artists “produced a *photographic way of thinking* that went well beyond the shots of their contemporaries.”<sup>25</sup>

Still, photography’s presence in the European art world was at first entirely barred from official exhibition. By 1859, it was subsumed under the general category of industry, existing on a parallel track to the accepted modes of artistic production at the time:

At the world exhibition of 1855, photography, despite its lively claims, could gain no entry into the sanctuary of the hall on the Avenue Montaigne; it was condemned to seek asylum in the immense bazaar of assorted products that filled the Palais de l’Industrie. In 1859, under growing pressure, the museum committee... accorded a place in the Palais de l’Industrie for the exhibition of photography; the exhibition site was on a level with that made available to painting and engraving, but it had a separate entrance and was set, so to speak, in a different key.<sup>26</sup>

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<sup>25</sup> Nicolas Bourriaud, *Relational Aesthetics* (Dijon-Quetigny: Les presses du réel, 1998), 67.

<sup>26</sup> Louis Figuier, *La Photographie au Salon de 1859* (Paris 1860), 2. Cited by Walter Benjamin, *The Arcades Project*, Trans. Howard Eiland and Kevin McLaughlin (Cambridge: The Bellknap Press of Harvard University Press, 1999), 684.

Sequestering photography from canonical forms (painting, engraving) betrayed ambivalence toward its dubious artistic value. At the time, it was—at best—a handmaiden to artistic practice, but never a polished work of art in the conventional sense.

Several dedicated studies on the use of photographic images as source material for artists already exist. Van Deren Coke's *The Painter and the Photograph: From Delacroix to Warhol* (1964), Aaron Scharf's *Art and Photography* (1969), and Dorothy Kosinski's *The Artist and the Camera: Degas to Picasso* (1999) represent three major investigations into the relationship between photography and traditional artistic practice. David Hockney's recent publication of *Secret Knowledge: Rediscovering the Lost Techniques of The Old Masters* (2001) argues that Renaissance artists clandestinely utilized the camera obscura to capture their subjects with photographic accuracy.

These examples broach the art world's hesitance to divulge too much about artist's methods. For some, the use of photography as a pictorial aid bears the stigma of the amateurish. Therefore, many art dealers, curators, artists, and critics hesitate to reveal source material—even though it provides valuable insight into the final works of art. Their fear that this information will cheapen the 'aura' of the artworks they study, own, and present is not entirely unfounded. Indeed, there remains within many circles a conceit that privileges the translation of imagery from life, as opposed to photographs.

These palpable tensions around aura under the duress of modern technology warrants reconsideration, due to the similarities between the early new media form of photography, and contemporary ideological rifts caused by the digital. If photography inflicted a kind of violence on the status of the art object, it is not only due to its machine quality, but also its ready adaptation to capitalism through the

visualization of its drives (i.e. advertising). Similarly, digitality ushers in its own specters and its own techniques, which reorganize vision and engage in new ideologically weighted visualizations.

Birthered in the milieu of capitalism, photography shares this inextricable entanglement with the visualization of power and its relationship to the pseudoscientific defense of the colonial imperative. While T.J. Clark in *The Painting of Modern Life* asks how the re-presentation of modernity in a flat (painted) picture plane instructs an understanding of how modernists attempted to capture their world, he does not explicitly connect this to the advent of photography. My question then, is, how does the presence of photography influence early modernist art, not only in terms of superficial similarities to its visual signifiers, but also photography's very logic as an extension of the modernist project?

To answer this question, one must consider the extent to which the radical modernization of Paris by Georges-Eugène Haussmann brought sweeping changes to the city, including a tremendous influx of rural peasantry seeking work in the city. Reportedly, some 2.5 billion francs were spent on city development, and approximately 350,000 unfortunates were relocated to modernize Paris.<sup>27</sup> Augmenting the physical proximity of otherness that greeted artists daily in the streets, travelers abroad produced an abundance of photographs depicting foreign peoples and places. Carl Dammann's encyclopedic collection of photographed natives from around the world, the first of its kind, was published in 1873-1876.<sup>28</sup> Often photographed in studios against solid backgrounds or grids, the depicted human subjects were decontextualized from their own surroundings. This

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<sup>27</sup> Clark, *Painting*, 37.

<sup>28</sup> Akazawa, Takeru, Kazuyasu Ochiai and Yuji Seki, eds. *The "Other" Visualized: Depictions of the Mongoloid Peoples* (Tokyo: University of Tokyo Press, 1992), 23.

reconfigured them as scientific specimens, devoid of individuality. Innumerable anthropological photographs of ‘types’ circulated, further reifying the prevailing ‘scientific’ belief in physiognomy.

In addition to the flat images that may have circulated in the modernized city of Paris, living ‘specimens’ were a part of the cultural milieu as well. The Universal Exposition of 1889, held in Paris, featured an impressive array of international pavilions. Often included within these architectural microcosms were native peoples who were imported to provide a more authentic cultural experience. Among the regions that were recognized with individual pavilions were: Bolivia, Brazil, Venezuela, Central Africa and Lapland, Persia, Germany, Brault, Annan and Tonkin, Cochin (China). Traditional Vietnamese actors performed in the theater. Perhaps the most architecturally striking designs, the “Egyptian Bazaar and Cairo Street”, as well as the “Pagoda of Angkor,” were extremely well-attended. In short, the presence of alterity literally surrounded the production of early modernist works. It is not difficult to imagine the utter shock of it, and the disconcerting presence of otherness.

At the same time, the railway network—which expanded from less than 2000 kilometers in 1850, to 17,400 kilometers in 1870—stretched as far as Italy, Russia and the Ottoman Empire.<sup>29</sup> This innovation in mass transit provided a steady flow of the new and exotic through Paris, and brought diverse peoples into close proximity. Voyaging by railway, many artists must have felt the “annihilation of space and time” that accompanied the increased speed of travel.<sup>30</sup> The reorganization of localities into the ever-increasing speed zones of market capitalism,

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<sup>29</sup> David Harvey, *Paris, Capital of Modernity* (New York and London: Routledge, 2003), 108.

<sup>30</sup> D. Lardner, *Railway Economy* (London, 1850, 35. As cited from Wolfgang Schivelbusch, *The Railway Journey: The Industrialization of Time and Space in the 19<sup>th</sup> Century* (Berkeley: University of California Press, 1977), 33.

contributed to a disconcerting new relationship to space and time. In addition, the seating arrangement of the railway car brought bourgeoisie and commoner into close proximity.

While developments in urban planning or the expanded possibilities of travel might seem to best exemplify the modernization of Paris, it is in the medium of photography that early modernity found its most potent visual expression. Allan Sekula, a contemporary photographer, writer, and critic, eloquently conveyed the explicit ties between photography and modernist imperatives:

Photography is haunted by two chattering ghosts: that of bourgeois science and that of bourgeois art. The first goes on about the truth of appearances, about the world reduced to a positive ensemble of facts, to a constellation of knowable and possessable *objects*. The second specter has the historical mission of apologizing for and redeeming the atrocities committed by the subservient—and more than spectral—hand of science. This second specter offers us a reconstructed *subject* in the luminous person of the artist. Thus from 1839 onward, affirmative commentaries on photography have engaged in a comic, shuffling dance between technological determinism and auteurism, between faith in the objective powers of the machine and a belief in the subjective, imaginative capabilities of the artist.<sup>31</sup>

For Sekula, the very ‘nature’ of photography is bound up in commodity exchange, bourgeois angst, and in the historical conditions that give rise to its existence. Photography as a kind of colonial invention contains all the hopes and anxieties of the society from which it is birthed. Its social reality informs photography’s very formulation, simultaneously creating a modernist crisis of authorship, even while it

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<sup>31</sup> Allan Sekula, “The Traffic in Photographs” in *Only Skin Deep*, ed. Coco Fusco and Brian Wallis (New York: Abrams, 2003), 80.

solves the modernist need for possessable, visual documents of empirical observation.

To be clear, Sekula disagrees with the overarching claim of a “photographic language.” I concur in the sense that photography is certainly not a *universal* visual language as might have been effusively confirmed by its early advocates. However I assert that a language does exist, in that the engagement with and immersion in photography can lead one to organize one’s thinking according to its visual regimes of space, representation, and depiction. It does represent a kind of semiotic order that one can be led, through repeated exposure, to adopt.

Muybridge’s stop-motion images would further influence the evolution of several artistic movements, including Cubism and Futurism, through their reinterpretation of motion conveyed through the still image (See Figure 1.1). Canonical works such as Marcel Duchamp’s *Nude Descending a Staircase No. 2* (1912), and Giacomo Balla’s *Dynamism of a Dog on a Leash* (1912) show an observable visual link to Muybridge’s descriptive photographs (See Figures 1.2 and 1.3). Although in retrospect, it is not through a literal restructuring of apprehended movement, but rather the mechanization of vision that Muybridge’s technology finds its most cogent impact. The regimenting of space and time was established through the measured recording of movement made possible through photography. This, combined with the influential texts such as Henri Bergson’s *Matter and Memory*—a philosophy of experience, in which perception, and memory is intimately bound up in elapsing time and physicality—energized creative movements by reinventing the artistic definition of realism.<sup>32</sup>

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<sup>32</sup> Henri Bergson, *Matter and Memory*, trans. N. M. Paul and W. S. Palmer (New York: Zone Books, 1991). Originally published in France as *Matière aet Mémoire* in 1896.

It is clear that visual production—including that of fine art—is intimately tied with the social reality in which artists move. Technology reorganizes interpretations of the visual through its ever-developing language. Unconventional framing, for example, became synonymous with the idea of a spontaneous “snapshot.” The photographic image was initially believed to replicate the unmediated view. The plausibility of truly “objective” viewpoints have since come into question, nevertheless, these constructs have shaped our language and framed our understanding of the visual within a particular set of qualities associated with mechanized vision. This is an aesthetic mindset that has since been innovated upon and reshaped through subsequent media.

As a medium, photography was birthed in the modernist era. It naturally follows, as one may infer from Charlie Gere’s research on the more recent ‘new’ medium of digitality, that much more than its strictly mechanical background informed its development. Just as Gere demonstrated that the computer arose from a particular socio-cultural moment, photography was an invention of modernist values and concerns, too. Therefore, as Sekula writings would seem to confirm, protestations against or acceptance of photography can be seen as more than reactions to a strictly technological form. They are also responses to what technologies like photography *mean* within the context of the social values being protected. If this is taken as true, then by studying the canonical art historical responses to new media art, it might be possible to gain insight into the values that the art historical canon may wish to preserve.

### ***V. A Initial Survey of the Canonical Response to Media Arts***

How might one characterize the canonical art historical response to art and technology, especially new media art? Art historical attention to media arts including video<sup>33</sup>, electronic, and the digital is a relatively new phenomenon, especially given their long-established cultural relevance. Nam June Paik presented the first instances of television art in 1963 at the Galerie Parnass in Wuppertal, Germany. The Sony Portapak first made its appearance in America in 1965. Though video existed and was creatively utilized several years before, the Portapak's relative affordability and transportable form dramatically broadened access to the medium. Almost immediately several artists including Paik, who is widely considered the father of video art, began producing works that utilized the medium. As I will enumerate, it was not until more than twenty years later that video art found its way into the art historical survey in America, and even then it initially only received a modicum of canonical attention.

Creative expression grounded in computer technology also emerged in the early 1960s, although its official inception date varies slightly according to whether one considers that creative output to be "art." For example, American artist A. Michael Noll is commonly attributed with having created the first computer art in the form of abstract images, completed at Bell Laboratories in New Jersey in 1963 (See Figure 1.4). However, *Spacewar!*, the first video game, was created one year earlier in a computer lab at the Massachusetts Institute of Technology (See Figure 1.5). *Computer-Generated Pictures*, the first exhibition of computer-generated works, was

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<sup>33</sup> While some survey texts include video art in their survey of "new media", I have shown that others define new media more strictly in terms of electronic and digital art that is uniquely tied to the computer and other contemporary forms of information technology. For the purposes of this general overview, I have noted the presence of video in order to be as inclusive as possible.

mounted in New York in 1965 at the Howard Wise Gallery. Today, some forty years later, Western canonical art history still has not fully opened its scholarship to electronic and digital art.

Distilling the elusive reasons why canonical scholarship remains relatively closed to new technologies largely motivates the research conducted in these pages. However, for the time being, consider one critic's response to art and technology—if only as a springboard for conversation rather than a definitive argument. In an interview conducted in 1969, Clement Greenberg was asked what he thought of new technologies in relation to art. His interviewer inquired:

Q. [Lily Leino:] What do you think of the invasion of art by technology—or do you consider it that?

A. [Greenberg:] No, I don't consider it an "invasion." I haven't yet seen much good art produced with the help of what's called technology, but that doesn't mean it can't or won't be. So far, however, all the kinetic effects and all the light effects and the whatever other effects haven't been able to cover up the fact that the artists involved were not inspired and had nothing much to say. There's nothing wrong with technology as such in art; anything you use as a means is okay if it produces results, results that have artistic value. But the present noise about technology appears to be more a matter of fashion and desperation than anything else. I say desperation because artists in despair will clutch at fashions. (And most artist are in despair, whether they know it or not.)...

Q. Why have so many artists turned to technology at this particular time?

A. Because fashions now follow one another in art faster than they used to—not styles, but fashions—and the fashion now is "medium-exploding"—that's part of the painting-is-finished cry. Technology is explosive in this sense all right, and it also has its own connotation of modernity, or "far-outness." But to repeat: so far the results are

paltry, and in art you always look at the results; you never talk about art that's not yet been made.<sup>34</sup>

The presence of technology is, according to Greenberg, not an inherent affront to artistic practice; however, the specific output thus far involving new technologies has been trivial. Further, the critic describes the presence of technology as trendy—although he is careful to mention that technological arts as media still harbor the potential to be utilized successfully. Still, in characterizing technology in art as “paltry,” generally uninspired, and the product of a desperate ploy to sustain relevance, he effectively ascribes minor status to a large area of creative production.

Greenberg's standpoint in many ways encapsulates the general sentiment of the field during his time. And while this position has wavered with further artistic developments during the last thirty years, there remains significant canonical hesitation around art and technology. In example, in 2000 British art historian David Hopkins of Oxford University echoed Greenberg's sentiments by suggesting that the technological arts have not yet produced results warranting canonical attention.<sup>35</sup> Although there may have been few instances of overt negativity toward technology, it has been noted by several contemporary scholars that the discipline has given insufficient attention to this area of research. Art historian Edward Shanken recently drew attention to this in his doctoral dissertation:

Scholarship on twentieth century art generally has ignored or disparaged the artistic current otherwise known as Art and Technology. Art History has failed to recognize and incorporate into

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<sup>34</sup> Lily Leino and Clement Greenberg, “USIS Feature” in *United States Information Service*, April 1969. Reprinted in Clement Greenberg, *Clement Greenberg: The Collected Essays and Criticism, Volume 4* (Chicago: University of Chicago Press, 1993), 303-314.

<sup>35</sup> David Hopkins, *After Modern Art, 1945-2000* (Oxford: University of Oxford, 2000), 245.

its canons the rich historical and theoretical underpinnings of this tendency. This oversight is especially conspicuous in the literature's inability to grasp how the sciences and technologies particular to the Information Age have shaped the formal and conceptual development of art since 1945.<sup>36</sup>

Quite in contradiction to the stance that there have been no great new media artists, I contend in accordance with Shanken that the problem lies not with the art but with the assessment of that work. Perhaps it is only that art history does not yet grasp its kinship with the languages of new media. Of great concern is the premature valuation of art and technology as unworthy of aesthetic study, and the ramifications of such an assessment. Still, it remains as yet unproven whether there is a definitive stance within the discipline, and if so, what that stance is. In order to move beyond conjecture or supposition, it is necessary to turn to the documents that define art history's canonicity.

Perhaps the most obvious, superficial litmus test for determining the canonical stance to such media is to examine art historical texts widely used for pedagogical purposes, since they perpetuate canonical knowledge to new generations of art appreciators. An initial inspection of pedagogical texts—those survey books

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<sup>36</sup> Edward Shanken, "Art in the Information Age: Cybernetics, Software, Telematics, and the Conceptual Contributions of Art and Technology to Art History and Theory" (Ph.D. diss., Duke University, 2001), iv.. See also Grant Taylor, "How Anti-Computer Sentiment Shaped Early Computer Art", Sylvie Lacerte, "Experiments in Art and Technology: A Gap to Fill in Art History's Recent Chronicles", Anne Collins Goodyear, "Technophilia, Vietnam, and the Rise and Fall of 'Art and Technology' in the United States, 1965-1971", and Caroline Seck Langill, "Hey, Look at Me! Thoughts on the Canonical Exclusion of Early Electronic Art" all presentations of Refresh! Conference, Thursday, September 29, 2005, Banff New Media Institute, Banff, Canada. Archived at [www.banffcentre.ca/bnmi/programs/archives/2005/refresh/lisiten.asp](http://www.banffcentre.ca/bnmi/programs/archives/2005/refresh/lisiten.asp). Accessed May 2006.

designed to give the student an overall view of modern and contemporary art—paints an elusive map of new media forms.

Of the better-known survey texts that focus on modern and contemporary art, there is varying attention to video and television art, and little or no attention to what would fall under the categories of electronic, digital, or computer art. In George Heard Hamilton's *19<sup>th</sup> and 20<sup>th</sup> Century Art*, there is mention of mechanical art and photography, but no other significant address of any technological arts.<sup>37</sup> *Art in Our Times: A Pictorial History 1890-1980* by Peter Selz includes video, television and film. Artists mentioned in the first edition include Wolf Vostell and Nam June Paik as television artists, with an array of video performance artists including Keith Sonnier, Ira Schneider and Frank Gillette, Bruce Nauman, and Dan Graham in a two-page summary. No electronic, computer, or digital art is presented.<sup>38</sup> Arnason's *History of Modern Art*, Second Edition mentions Paik as a pioneer of video, computer art, and robots, and includes Experiments in Art and Technology (EAT), and several events that surrounded the group in the context of light art.<sup>39</sup> The Third Edition in 1986 is similar in its coverage,<sup>40</sup> but by the Fourth Edition of 1998, video art is expanded to include the sole example of Peter Campus.<sup>41</sup> In an "Epilogue" section, artists Stan Douglas, Tony Oursler, and Gary Hill find their place in the last few pages of the text. The Fifth Edition, revised by Peter Kalb and published in 2004, includes a small section on video and performance, in which Paik, Acconci,

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<sup>37</sup> George Heard Hamilton, *19<sup>th</sup> and 20<sup>th</sup> Century Art*, general editor H.W. Janson (New York and Englewood Cliffs: Abrams and Prentice Hall, 1987), 406.

<sup>38</sup> Peter Selz, *Art in Our Times: A Pictorial History 1890-1980* (New York: Abrams, 1981), 502-3 and 554-5.

<sup>39</sup> H.H. Arnason, *History of Modern Art*, Second Edition (New York: Abrams, 1977).

<sup>40</sup> H.H. Arnason, *History of Modern Art*, Third Edition (New York: Abrams, 1986).

<sup>41</sup> H.H. Arnason and Maria F. Prather, *History of Modern Art*, Fourth Edition (New York: Abrams, 1998).

Nauman, and Burden form the representative examples, with mention of Campus as in the previous edition. Augmenting this is a Postmodern section with artists like Matthew Barney and Mariko Mori who have made use of projected art and digital manipulation, although no computer or digital is specifically referenced.<sup>42</sup>

*After Modern Art, 1945-2000*, which is part of the Oxford History of Art series contains a small section on video art, which includes a handful of recognizable names, but is significantly less inclusive than even the Arnason text. In it, modernist art historian David Hopkins writes:

On the whole, the technologies of the 1990s have not had a major structural impact on art. Digitalization [sic] has become widespread in photography and film, but the Internet, although potentially the means of generating a new pool of creative energies in the manner of 1960s Conceptualism, has yet to yield up much of consequence.<sup>43</sup>

This statement forms the final word on the text, being the last page of the survey. In a similar primer on modern and contemporary art, *Art Since 1960* by Michael Archer—a critic who teaches in Fine Art at Oxford University—the influx of communications technologies is noted. Archer includes coverage of media arts throughout, and weaves the presence of technological arts into the history of art much more thoroughly than any of the comparable texts above.<sup>44</sup> With similar coverage, Sam Hunter and John Jacobus's *Modern Art: From Post-Impressionism to the Present* includes a mention of video and computer art, the influence of “post-studio” and “post-object” art, the impact of the global, and even mentions several

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<sup>42</sup> H.H. Arnason, *History of Modern Art*, Fifth Edition, revising editor Peter Kalb (New York: Abrams, 2004).

<sup>43</sup> David Hopkins, *After Modern Art, 1945-2000* (Oxford: Oxford University Press, 2000), 245.

<sup>44</sup> Michael Archer, *Art Since 1960*, Second Edition (London and New York: Thames and Hudson, 2002). Originally published in 1997.

influential texts for new media like Marshall McLuhan's *Understanding Media* and Jack Burnham's *Beyond Modern Sculpture*. In addition, the collaborations between artists and corporations is considered briefly as a phenomenon of the contemporary period, and contextualized within a history of artistic movements that pushed beyond convention. Even in the first edition of the text, which was published in 1976, the authors wrote of such developments as consistent with accepted movements of the past:

The restless tendency to push ideas as far as possible, expanding the frontiers of artistic experience and individual consciousness, is still responsible for creating the most significant artistic work of today, as it was nearly a hundred years ago when Cézanne, Seurat, Gauguin, and van Gogh rejected the observation of natural reality for an art of ideas.<sup>45</sup>

This open stance would remain consistent in subsequent editions, although the number of media artists represented would expand only slightly.

The first edition of *Art Since 1900: Modernism, Antimodernism, Postmodernism*, published in 2004, is more inclusive than its predecessors in terms of its coverage of the technological influences affecting modern and contemporary art.<sup>46</sup> A collaboration of Hal Foster, Rosalind Krauss, Yve-Alain Bois and Benjamin Buchloh, the textbook provides an overview of key revisionist art historical scholarship. The remainder of the seven hundred-page document traces the development of art in the twentieth century, in the form of an extended chronology. It includes discussion of video art, projection art and even the ramifications of

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<sup>45</sup> Sam Hunter and John Jacobus, *Modern Art: From Post-Impressionism to the Present*, First Edition (New York: Abrams, 1977), 334.

<sup>46</sup> Hal Foster, Rosalind Krauss, Yve-Alain Bois and Benjamin H.D. Buchloh, *Art Since 1900: Modernism, Antimodernism, Postmodernism* (New York: Thames and Hudson, 2004).

digitality on traditional artistic photography. Still, there is neither attention to computer art, nor dedicated interest in electronic or digital artworks. One exception is a mention of the digital collaboration of artists Pierre Huyghe and Phillippe Parreno, who purchased a digital animation character and then made it available to other artists for collaborative purposes. Entitled *No Ghost Just a Shell* (1999-2002), its status as a digital work is undisclosed by the authors; the piece is discussed only in terms of its link to collaboration and the tradition of readymade art.

In researching the reception of media arts by canonical art history, what is most notable is the overall lack of dedicated study. Perhaps this is because it is perceived as too new, or too unstable as a medium to be readily assimilated into art's histories. Considering the often built-in, planned obsolescence of many technological devices, the display and preservation of such works does necessitate special attention to the frailties of the medium. Still, preservation issues plague *all* forms of art, presenting continuing challenges to museums and conservators.

There is less protest from within the discipline of art history to the presence of video, electronics, and the digital than there is a relative silence on the matter—a silence that in itself makes a strong pedagogical statement regarding the worthiness of technologically based art forms to occupy the canon's attention.<sup>47</sup> Artist and new media theorist Simon Penny has critiqued art history for its anti-technology bent, observing that:

It's no secret that art history has been profoundly Luddite. Some of the qualities of art history as a discipline which have caused it to

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<sup>47</sup> This is not to say that texts on electronic and digital culture have not been published. Indeed I have mentioned many texts have been published in this subject-area; however they proceed methodologically from other disciplinary spheres. I merely point this silence out in relation to scholars within the discipline of art history.

reject engaging machine art in any serious way are obvious, and some are more subtle.<sup>48</sup>

He attributes this aversion to its roots in what he identifies as “19<sup>th</sup> century European imperializing ideologies,” and indicates these roots as fundamentally incompatible with the aesthetic practices traditional to the discipline. While his characterization of art history as a “discipline of elitist antiquarian connoisseurship” is far less charitable than my own view, his sharp critique nevertheless gives voice to the frustrations being felt by media artists and scholars. Video artist Ann-Sargent Wooster’s similar identification of this silence regarding video art in her “Why Don’t They Tell Stories Like They Used To?” of 1985 is a challenge directed more specifically toward influential critics, but no less direct. She writes, “After condemning video art for being narcissistic and boring, art critics shifted their focus away from video and began to treat it as invisible.”<sup>49</sup> Media scholar and net critic Geert Lovink observed this lack of attention as well, stating that:

The acceptance of new media by leading museums and collectors simply will not happen...The majority of the new media artworks of display at ZKM in Karlsruhe, the Linz Ars Electronica Center, ICC in Tokyo or the newly opened Australian Centre for the Moving Image are hopeless in their innocence, being neither critical nor radically utopian in approach...It is therefore understandable that the contemporary (visual) arts world is continuing the decades old silent

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<sup>48</sup> Simon Penny, “Bridging Two Cultures: Towards an Interdisciplinary History of the Artist-Inventor and the Machine Artwork” presentation at Refresh! Conference, Thursday, September 29, 2005, Banff New Media Institute, Banff, Canada. Archived at [www.banffcentre.ca/bnmi/programs/archives/2005/refresh/lisiten.asp](http://www.banffcentre.ca/bnmi/programs/archives/2005/refresh/lisiten.asp). Accessed May 2006.

<sup>49</sup> Ann-Sargent Wooster, “Why Don’t They Tell Stories Like They Used To?” in *Art Journal, Special Issue: Video: The Reflexive Medium*, Volume 45, Number 3 (Fall 1985): 204-216. See especially page 204.

boycott of interactive new media works in galleries, bienniales and shows such as Documenta.<sup>50</sup>

These comments, shot through with skepticism around the viability of an arts canon that would include new media, seem to off-handedly discount the art and art historical texts that have begun to address electronic media (and which I will subsequently discuss). Setting aside for a moment the texts that have been developed around this subject, one must also consider art and art historical presentations, which rightly belong to the process of canonization as well. The published abstracts of the College Art Association's (CAA) national conference is a valuable resource for detecting raw academic interest in electronic arts and the like, since panel subject areas and their corresponding individual presentations are chosen on an annual basis. This allows for the potential that more current topics be represented, as opposed to scholarly books that may take years to publish.

In the CAA Abstracts available between 1974 and 2000, a pattern similar to that of the aforementioned art historical survey texts materializes.<sup>51</sup> A panel dedicated to nineteenth-century photography takes place during the 65<sup>th</sup> annual meeting of CAA in 1977, marking a conservative but nevertheless legitimate interest in a modern technological form.<sup>52</sup> By 1980, a murmur of interest in video art surfaces in a panel on film, video and twentieth-century art. Of the six presenters at this session, only one speaks on the subject of video art. Entitled "Video and the

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<sup>50</sup> Geert Lovink, "Fragments on New Media Arts and Science" in *M/C: A Journal of Media and Culture*, <http://www.media-culture.org.au/0308/10-fragments.php>, accessed May 12, 2006.

<sup>51</sup> Please note that at the time of this research, the College Art Association Annual Conference Abstracts were available for all years *except* 1986, 1987, 1991 and 1994.

<sup>52</sup> See the published abstracts collected by Robert A. Sobieszek, panel chair, "Nineteenth-Century Photography: Forms and Contents" in 65<sup>th</sup> annual conference of the College Art Association, *College Art Association Abstracts*, February 2-5, 1977, Los Angeles, 91-96.

Modernist Weltanschauung,” the presentation by Kenneth S. Friedman from the Institute for Advanced Studies in Contemporary Art introduces the work of Nam June Paik, William Wegman, and James Edwards.<sup>53</sup> The next few years of sessions would include the areas of photography and film, but no devoted attention to video or any forms that might fall under the umbrella term “new media.” Video art would not re-emerge as a significant topic of dedicated attention for CAA between 1980 and 2000.

Electronic and digital art fares somewhat more favorably than video in the sessions of the College Art Association’s annual conference for art historians, artists, and other professionals in the arts. In 1989 during the 77<sup>th</sup> annual conference, a session entitled “Computers and Art: Issues of Content” was organized by Terry Gips at the University of Maryland. It focused upon computers and photography, and upon the issues of authenticity, simulation, and appropriation as they related to the potential of digital media.<sup>54</sup> It is important to note, however, that this was a studio art session, dedicated to practice rather than academic scholarship. This is not to suggest that the studio sessions are lesser in the academic hierarchy. Rather, it becomes significant to differentiate theorists/practitioners operating outside the canonical spaces of art history as external “experts,” from art historians who choose to engage with issues of technology. In fact, according to the publications of the

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<sup>53</sup> See the published abstracts collected by Diane Kirkpatrick, panel chair, “Film/Video and Twentieth-Century Art” 68<sup>th</sup> annual conference of the College Art Association, as published in *College Art Association Abstracts*, January 3-February 2, 1980, New Orleans.

<sup>54</sup> This information taken from the published abstracts collected by Terry Gips, session chair of “Computers and Art: Issues of Content” in the 77<sup>th</sup> annual conference of the College Art Association, February 16-18, 1989, San Francisco, 263.

College Art Association including *Abstracts* and *Art Journal*, artists have overwhelmingly shown the most attention to art and technology.

During the next few years, a trend toward the inclusion of electronic media develops, though in not in CAA's art history panels but rather in its studio sessions. In 1990, computer artist Roy Ascott co-chaired a studio session in New York City.<sup>55</sup> Then, in 1992, another studio session took place entitled "New Art Forms from the Electronic Studio: The Vocabulary, the Aesthetics, and the New Audience."<sup>56</sup> It bears mentioning as well that since the mid-1990s, there appeared to be an increased attention to the transition from 35mm slides to digital in pedagogy, although these discussions rarely overlapped with analysis of specifically digital or electronic artworks. By 1995, technology's impact upon the arts was formally considered in two separate art historical panels. Discussions included cyborg bodies, bioinformatics, Marshall McLuhan's media theories, women and technology, computer-assisted artworks, and the digital spaces created by computers.<sup>57</sup> In 1996, a feminism panel coordinated by the Women's Caucus for Art, whose statement bore the clear influence of Donna Haraway's "A Manifesto for Cyborgs," linked art and technology with women's rights.

However, the watershed year for electronic and digital media—insofar as CAA is concerned—came in 1997, during which six separate electronic media

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<sup>55</sup> Roy Ascott and Tom Klinkowstein, session chairs, "Toward an Aesthetic for the 21<sup>st</sup> Century: Networking, Hypermedia, and Planetary Creativity" from the 78<sup>th</sup> annual conference of the College Art Association, February 15-17, 1990, New York City.

<sup>56</sup> Joan Truckenbrod and Kenneth O'Connell, session chairs, "New Art Forms from the Electronic Studio: The Vocabulary, the Aesthetics, and the New Audience," in the 80<sup>th</sup> annual conference of the College Art Association, February 13-15, 1992, Chicago.

<sup>57</sup> See the published abstracts of the College Art Association, 83<sup>rd</sup> Annual Conference, January 25-28, 1995, San Antonio, Texas.

panels took place. These included: “The Artificial Life Class”; “Crossing the Boundaries of Electronic Art, Within and Without”; “Cyberspace: Trojan Horse or Roman Holiday? A Discussion of Our Electronic Future”; “Art and Artist on the World Wide Web”; “Electronic Arts and the Concept of the Gesamtkunstwerk (Total Artwork)”; and “Content and Context: Art on the Net.”<sup>58</sup> Chaired by Ascott and Margot Lovejoy, both of whom are seasoned and respected artists/thinkers within media arts circles, the New York conference heralded an invigorated attention to all things technological. As of the late nineties, it appears that the presence of new media is more strongly integrated into the overall scope of the event and the interests represented, though certainly the individual panels may not exclusively focus on technological issues.

Approximately thirty years after the dawn of both video and computer art, it would appear—at least from superficial observation—that electronic and digital arts can indeed find a place in the American art historical canon. However, the research above illustrated underlying tensions between art practice, theory, and criticism. While artists grapple with art and technology directly, art historians display more reticence in this area. The critical response varies greatly from apathy and resistance to, as in the case of Francastel, a belief that art actually *is* technology.

As an overview of art-and-technology’s state of affairs in the American academy, the College Art Association conference provides some clues as to the art historical reception of technology. However, for a more comprehensive sense of the relationship between art and technology, one must also consider the knowledge production issuing from within the canon. Scholarly journals such as *Art Journal*, *Critical Inquiry*, *The Art Bulletin*, *Art History*, and *October*—among the most

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<sup>58</sup> See the published abstracts of the College Art Association, 85<sup>th</sup> Annual Conference, February 12-15, 1997, New York City.

reputable and widely read publications within the field—have wildly disparate histories in terms of their attention to technology. In regard to the inclusion of new media arts and their attendant historicization, *Art Journal* provides the most engaged intervention to come from within canonical American art and art historical scholarship.<sup>59</sup> As a peer reviewed journal dedicated to twentieth and twenty-first century art, *Art Journal* demonstrates the most solid commitment to exploring the art historical ramifications of new media. By the early 1960s, the journal was already tackling film as art and examining its social relevance to culture at large.<sup>60</sup> In the summer of 1961, mass communications professor Patrick D. Hazard included a discussion of the “new” media of television in his “Problems of the Arts in a Mass Society.”<sup>61</sup> In the late 1960s and early 1970s, a limited but suggestive awareness of computer arts and other emerging technological forms surfaced. Several essays considered the “new artist” through a discussion of technological media that began to inform the production of young artists, as well as the impact that these forms might have on art education.<sup>62</sup>

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<sup>59</sup> I am aware of many significant journals that publish regularly—or even exclusively—on the subject of art and technology such as *PAJ: A Journal of Performance and Art*, *Leonardo*, *Parachute*, *Parkett*, *Presence: Teleoperators and Virtual Environments* and *The Journal of Visual Culture*. However, for the sake of this initial survey, I was most concerned with scholars writing on media issues from within the art history canon. Therefore, though much of the most important writing on electronic and digital media comes from theorists in other disciplines or from practitioners, the initial search did not include publications that are not solidly art historical in their scope.

<sup>60</sup> See, for example, Robert Gessner, “An Introduction to the Ninth Art: A Definition of Cinema” in *Art Journal* Vol. 21, No. 2 (Winter 1961-1962): 89-92 and Rudolph Arnheim, “Art Today and the Film” in *Art Journal* Vol. 25, No. 3 (Spring 1966): 242-244.

<sup>61</sup> Patrick D. Hazard, “Problems of the Arts in a Mass Society” in *Art Journal*, Vol. 20, No. 4 (Summer 1961): 222-225.

<sup>62</sup> See Anonymous, “Contemporary American Art at Illinois” in *Art Journal* Vol. 28, Number 4 (Summer 1969): 404,455.

As the next section is dedicated to a specific inquiry as to the nature of these commentaries, I will not expand upon them here. However, of special note is the spirited exchange that occurred as a result of one essay by artist and instructor Kent Kirby, then Chairman of the Department of Art at Alma College in Michigan.<sup>63</sup> Kirby, who created a budget and program for computer work at the University of Michigan, wrote in the spring of 1970 on the urgency of integrating technology into studio art education. His charged essay drew two separate critical replies in the following the winter issue of the same year.<sup>64</sup> The first issue of *Art Journal* entirely devoted to video art appeared in 1985, and was guest-edited by the visual artist Sara Hornbacher.<sup>65</sup> Ten years later, a second special issue on video art and was co-edited curators John G. Hanhardt and Maria Christina Villaseñor.<sup>66</sup> Most impressive is *Art Journal's* presentation of a special issue on computers and art in the fall of 1990.<sup>67</sup> Again in 1997, another special issue was dedicated to “Digital Reflections: The Dialogue of Art and Technology.” This constituted the first new-media focused issue of the journal to be edited expressly by an art historian, Johanna Drucker.<sup>68</sup> By the late 1990s, coinciding loosely with the editorial direction of feminist art historian Janet A. Kaplan, video and electronic media were generously represented between the covers of the publication, compared to other scholarly journals mentioned. And

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<sup>63</sup> Kent Kirby, “Art, Technology and the Liberal Arts College” in *Art Journal* Vol. 29, No. 3 (Spring 1970): 330-333

<sup>64</sup> See Lawrence Rosing, “Art and Art Education in a World in Revolution” in *Art Journal* Vol. 30, No. 2 (Winter 1970-1971): 166-167 and Joseph Konzal, “Art, Technology and Liberal Arts Colleges: A Reply” in *Art Journal* Vol. 30, No. 2 (Winter 1970-1971): 167-168.

<sup>65</sup> *Art Journal* Vol. 45, No. 3 (Fall 1985)

<sup>66</sup> *Art Journal* Vol. 54, No. 4 (Winter 1995)

<sup>67</sup> *Art Journal* Vol. 49, No. 3 (Fall 1990)

<sup>68</sup> *Art Journal* Vol. 56, No. 3 (Fall 1997)

although individual stances to the commingling of art and technology may have run the gamut, the journal has included significant discussion of new media forms.

*The Art Bulletin*, founded in 1913 as the *Bulletin of the College Art Association of America*, contains miniscule reference to media arts.<sup>69</sup> In a review of issues published between 1960 and 2004, this journal mentioned photography (mostly early modernist) and classic film; however it did not have extended exploration of video or any subsequent media form. Given that *The Art Bulletin* is a publication of the College Art Association, and given that CAA also publishes the more modernist and contemporary oriented *Art Journal*, this information is not surprising. In general, *The Art Bulletin* operates as a venue for classical art historical study, although there are clear exceptions to that rule.

*Art History: Journal of the Association of Art Historians* has been published since 1978, and though British in origin, deserves consideration as a journal respected in the American canon. Equal to *The Art Bulletin* in its dedicatedly classical interests, it is unsurprisingly scant in its attention to modern visual technologies as art. Between its first issue and 1986, the journal's orientation is traditional, and no attention is given even to photography, much less the more cutting-edge technological arts. In 1986, photography makes a modest appearance in the journal in the form of a book review. Until the end of the 1990s, little consideration is made of photography and film, and virtually none to video or new media.

*Critical Inquiry*, published since 1974, is not focused specifically on art history but is an interdisciplinary journal of critical theory on the arts and humanities. As a space for criticality that is open to scholars in the field of art

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<sup>69</sup> In 1919, the journal's name was changed to *The Art Bulletin*.

history, it bore consideration as an outlying area of reputable scholarship with ties to the discipline. Overall, between its first issue and the end of 2004, the journal contains only miniscule engagement with the media arts, with the exceptions being in the areas of photography and film. Notable exceptions include W.J.T. Mitchell's call for art history to consider media in his published response to the Critical Inquiry Conference, and an essay by art historian Robert S. Nelson regarding the impact of technology on the teaching of art history.<sup>70</sup> Mitchell's mention of media is only sketched, and too brief to comment upon.<sup>71</sup> Nelson, on the other hand, is vociferous in his outpouring of anxiety around what the digital might mean for art history:

Where will the art historian stand in cyberspace, and what codes, disciplinary, performative, or otherwise, will control the content and guarantee the reliability of art presentations? Will not the new ability to seamlessly merge text, image, and sound dissolve distinctions between written and oral, past and present, primary and secondary, and art and criticism, and will it not also become difficult to write about these developments solely from within a print culture that fostered these categories?...will art history and other humanistic disciplines remain on the margins of technological development because of institutional parsimony or conservatism so that the knowledges that it produces are derivative of technology and the manifold assumptions that support it?...will the discourse of art history become increasingly American—at the moment the center of the computer industry—as Germany in its great optical industries dominated the discipline in the later nineteenth century? And with every word written or accessed will the gap widen between the technological haves and have-nots, in spite of the outpouring of postcolonial criticism? Or will computers continue to increase in

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<sup>70</sup> See W.J.T. Mitchell, "Medium Theory: Preface to the 2003 Critical Inquiry Symposium," in *Critical Inquiry* 30 (Winter 2004): 324-335. See also: Robert S. Nelson, "The Slide Lecture, or The Work of Art *History* in the Age of Mechanical Reproduction," in *Critical Inquiry* 26 (Spring 2000): 414-434.

<sup>71</sup> Mitchell recently published a book that seems to expand his discussion, giving considerable attention to media—and which I will discuss in the next chapter. See W.J.T. Mitchell, *What Do Pictures Want?* (Chicago: University of Chicago Press, 2005).

power and decrease in cost at a prodigious rate and with the proliferation of internet resources thus provide greater equality of opportunity for teachers and students throughout the world?<sup>72</sup>

In almost stream-of-consciousness fashion, the above closing comments move from the limited scope of the art historical classroom to issues of the technological world and art history's place in it. The ambivalence that surrounds digital media punctures the fabric of his essay, illustrating how the logical resolution of the argumentation conceals altogether more unwieldy sentiments. The tension is suddenly palpable, and despite the overall silence of the journal respective to media forms, this isolated instance—this outburst—ventures no closer to solutions, but regardless confirms the presence of a problem.

Other journals of note—particularly *October*—do critically assess contemporary art on a regular basis, but present a somewhat noncommittal engagement with electronics and the digital. To *October*'s credit, it contains far more frequent and detailed concentration on photography and film. Rosalind Krauss, a founding editor, addresses video art exclusively in her now-canonical essay “Video: The Aesthetics of Narcissism” originally published in *October*'s inaugural issue.<sup>73</sup> Krauss also considers video art within two subsequent meditations on American art of the 70s, published during the following year. However, the medium will not be foregrounded until 1981 in an interview with Martha Rosler. And even then, the artist downplays the formal attributes of video:

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<sup>72</sup> Nelson, “Slide,” 434.

<sup>73</sup> Rosalind Krauss, “Video: The Aesthetics of Narcissism” in *October* 1 (Spring 1976): 50-64.

The question of medium per se isn't terribly interesting to me. Meaning is, and I use the appropriate medium...Most of the video I do addresses television forms.<sup>74</sup>

Video recedes once again, reappearing in the middle and late eighties by way of artists' interviews. By 1993, N. Katherine Hayles' "Virtual Bodies and Flickering Signifiers" is published, marking the first and only dedicated reflection on the digital until 2002.<sup>75</sup> The hundredth issue of *October*, entitled *Obsolescence: A Special Issue*, squarely addresses the impact of the digital in relation to film-based (celluloid) cinema.

The editors' introduction to the hundredth issue presents an openly suspicious foreboding that new media theorists are sloughing off a valuable pre-digital legacy of photography and film, in favor of an intoxicated enthusiasm for an electronic future:

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 their merging with the computer in the über-archive of the database.<sup>76</sup>

The language suggests a threat of digital incursion, or more precisely, an apprehension that the "über-archive" will swallow up and naturalize all foregoing media as its own. This stance foreshadows the omission of the digital from the 2004 reader, *Art Since 1900*, written by four of *October*'s most prominent editors. The theme of embracing 'obsolescence' snaps sharply into focus as a preventative effort

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<sup>74</sup> Martha Rosler and Jane Weinstock, "Interview with Martha Rosler," in *October* 17 (Summer 1981): 77.

<sup>75</sup> N. Katherine Hayles "Virtual Bodies and Flickering Signifiers" in *October* 66 (Fall 1993): 69-91.

<sup>76</sup> Editors, "Introduction" in *October* 100 (Spring 2002): 3.

to ward off a crushing and disconcerting digital wave. Although there is no enumeration of exactly whom the specific digital media theorists alluded to might be, it is clear that—at least for the editors—these theorists occupy a space that is naturally removed from theirs as canonical art historians. It is this artificially-delineated separation that constitutes the greatest concern, since it diametrically contradicts the forty-year-strong history of new media as art.

What does this collation of facts suggest about the relationship between art history and technology? First, it indicates that what ever the affiliation is, it is not copasetic. Without investigating the subtle nuances of the limited discussions taking place, one might simply assert that a level of discomfort exists. One might further assert that this level of discomfort outstrips the superficial challenges that new media presents to the traditional gallery space, to traditional modes of viewing static art objects, and even to classical aesthetic sensibilities. Without doubt, there is more at play than a mere preference for tradition.

This overview also suggests that American canonical art historical discourses configure the presence of modern technology as something operating outside of themselves, and outside their primary objects of study (i.e. art). It is at present *extrinsic* to the discipline. This is not to say that a specialization in new media would unilaterally be considered illegitimate; exceptions can certainly be found, and the canon tolerates a certain degree of drift from its core standards, as a means of absorbing revisionist and activist movements that intermittently develop. However, this type of exceptional inclusion is separate from canonical validation and legitimacy that can grant historical longevity to a given area of study. Advanced technology is still considered the purview of scholarship *external* to art history.

This investigation has been intended to give a schematic view of the state of the field in terms of its attention to the technological arts. I would like to suggest that

both the abovementioned writings and the sizeable undercurrent of silence surrounding this subject (perhaps due to lack of expertise) gesture toward deep-rooted, ideological differences that inhibit the possibility of art-historical tolerance toward modern technology. These differences must be so great that mass media forms, electronic culture, and all those accoutrements of the Information Age are under-explored, even despite their increasing presence in the arts and in modern life. The following section will revisit several of the most provocative and significant statements made in the essays mentioned above, in the hopes of painting a more detailed image of the ideological quarrels that keep art history from embracing the socio-cultural and artistic relevance of modern technology.

#### ***VI. American Canonical Response to Media Arts, 1960s-1970s***

In the above overview, many of the published documents noted form lifelines between those maintaining the canon, scholars in the field, practitioners, and other arts professionals. In effect, these publications reflect an image of art history back to itself. What does that image express? This segment unearths the foremost difficulties with technology that are presented largely in periodicals. The following section will address some of the more important arguments made within art historical texts and journals; however, the materials reviewed do not strictly issue from the scholarship of art historians per se. Included among these are scholars in relevant areas such as mass culture and communications, studio arts and cinema—colleagues of art history from other visual forms, so to speak. Their inclusion is essential as they often endeavor to characterize the lack that they also see, from a perspective external to the canon. As such, their testimony bears relevance upon this discussion.

Even predating the existence of video and digital art, one may find instances of scholars seeking to expand the narrow range of acceptable art forms. In the case of mass communications professor Patrick D. Hazard, his concern is for the scholarly admissibility of what he called the “newer media”<sup>77</sup> forms of his day such as photojournalism and television as new arenas for aesthetic appreciation and patronage. In his 1961 commentary, he writes:

The most important single fact about Culture in contemporary America is that patronage of the arts has been democratized and criticism of them has not been. Most of the difficulties arising from this lag have been falsely imputed to the emergence of “the mass society.” A great many “crises” in taste would gradually disappear if the energies of our cultural institutions were systematically and imaginatively reinvested in these new contexts of patronage.<sup>78</sup>

Hazard makes an important link between mass culture and democracy, and is fairly outspoken in his opinion that art criticism—and the humanities in general—have not lived up to this democratic tendency. He advocates the development of patronage and criticism of mass communications and mass culture production, believing it will improve the daily standard of living in America. If consumers (or “patrons” as he calls them) are given an aesthetic education, they will demand better design in the mass arts such as television, architecture, and urban planning.

According to the essay, elite culture should not be thought of as “a kind of highbrow escapism from the inadequacies, moral and aesthetic, of our work-a-day culture of automobiles and television.”<sup>79</sup> This is especially true for Hazard, since he believes that it is ultimately the collective middlebrow consumer demand that

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<sup>77</sup> Patrick D. Hazard, “Problems of the Arts in a Mass Society” in *Art Journal*, Volume 20, Number 4 (Summer 1961): 222.

<sup>78</sup> Hazard, “Problems,” 222.

<sup>79</sup> Hazard, “Problems,” 222.

determines the aesthetic quality of everyday life in America. As a solution, Hazard suggests greater communication between elites and mass consumers, as a means of raising the visual literacy of the average consumer “patron.” He believes this to be a means of developing a more humane and aesthetically meaningful daily life, through the encouragement of good design that addresses consumer needs. Sharply criticizing the current educational and entertainment systems for their continued loyalty to the classics, he instead lobbies for a more forward-thinking approach:

Instead of becoming becalmed by recollections of the glories that were the pride of Greece and the grandeurs that were becoming to Rome, the humanist must learn to identify more quickly the first glimmerings of excellence characteristic of the arts of mass production and mass communication. Having identified this new aesthetic excellence, he must teach the mass patron how to recognize and do more of the same.<sup>80</sup>

In this interpretation, it is the responsibility of humanities scholars to bring together the aesthetic potential of the mass product and the aesthetic education of the mass patron (i.e. consumer). He claims that mass media like photojournalism, animation, and television are “potentially great art forms, and all they need to fulfill their potential are great artists and great audiences.”<sup>81</sup>

Hazard’s decidedly apolitical ideas about both the impoverished aesthetic education of the mass consumer and how much that affects the quality of their lives are easily critiqued. He does not take into account the more pressing social realities that might shape a mass-consumer’s interest in aesthetics (or lack thereof). Living under the poverty line, for example, would necessarily affect one’s choice of abode, transportation and lifestyle. Other forms of disenfranchisement and adverse social

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<sup>80</sup> Hazard, “Problems,” 225.

<sup>81</sup> Hazard, “Problems,” 225.

realities would naturally influence this as well, although no such concerns are even summarily addressed. Barring this, the piece does draw together mass culture with new media forms and their perceived democratic potential. Also, he clearly indicts the elite for conceiving of democracy as antipodal to high culture. It is in its inaccessibility and rarefied form that high culture finds its value. For him, this negatively impacts the quality of daily life. The revulsion toward mass culture and its production, criticized by Hazard, will play a central role in the art historical understanding of what technology is and what technological arts can amount to in the academy.

In reviewing the issues of *Art Journal* between 1960 and the present, one of the first mentions of electronic and new media arts is made in an article on contemporary American art from the University of Illinois. Writing on the “new artist,” the unnamed author describes the social and political dimensions of American life that have engendered new artistic forms:

The artist today often reflects the major social concerns of our society—the Viet Nam War, police brutality, violence, racism, materialism, sexuality, man’s inhumanity to man, drug addiction, and the vulgarity and banality of many aspects of American life. He frequently develops a language which breaks with the immediate past.<sup>82</sup>

The new artist is, according to the author, in synch with the technological age in which he operates. Calling forth the examples of Earl Reiback and Jack Burnham, the essay demonstrates how artists often come to their craft through more

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<sup>82</sup> Anonymous, “Contemporary American Art at Illinois” in *Art Journal* Volume 28, Number 4 (Summer 1969): 404.

scientifically oriented professions like engineering or inventing.<sup>83</sup> Similarly to Hazard, the author communicates his burgeoning enthusiasm for mass consumer and technological forms.

Though written in 1969, perhaps the most prescient comments of this short review<sup>84</sup> regard the practical and philosophical challenges that technological art presents to scholars and conservators. Among these hurdles, named are issues of longevity and expense, both of which greatly limited the production of technological artworks at the time. On the philosophical and art historical front, the “manufacturing” of art in a manner that reflected a factory more than an atelier presented new questions about the status of the art object. These included issues of whether technological arts can bear the same rarefied value as classical art objects. What did it mean if the art object was manufactured, not made by the artist’s hand? What was the limitation on copies, and could they also be considered genuine works of art? The most provocative of these concerned the status of the artist: if the work of art was produced through mass means, how did it affect the long-standing notion of the artist as separate from the masses? As then Dean Allen Weller of the College of Fine Arts and Chair James R. Shipley wrote in the exhibition catalog, “Will technological art become the new popular art? Is art created with a full utilization and awareness of the unique resources of our age [become] the bridge across the chasm which has so long separated the fine artist from most of society?”<sup>85</sup> These are some of the deeper questions that address the status of originality, or artistic aura, in the digital era.

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<sup>83</sup> The author writes of Reiback and Burnham, “Such men are, technologically speaking, in complete harmony with our age.” Anonymous, “Contemporary,” 404.

<sup>84</sup> The exhibition reviewed was the Kranner Art Museum’s biennial Exhibition of Contemporary American Painting and Sculpture, at the University of Illinois, 1969.

<sup>85</sup> Anonymous, “Contemporary,” 455.

None of these queries are answered in the course of the essay, nevertheless their very asking points to difficulties on the horizon. Each of the aforementioned articles is quite brief and ostensibly dedicated to interests that overlap with art and technology, though their true subject matter lies elsewhere. But beneath their superficial investigations of the aesthetic improvement of everyday life and the review of a university exhibition, lie apprehensions about the relationship of art and technology.

More intensive concerns are brewing, and soon they boil over as well. In 1970, artist/educator Kent Kirby engages in more direct discourse of art and technology, albeit from a liberal arts perspective. His essay, "Art, Technology and the Liberal Arts College," makes the claim that in the twentieth century, key developments in virtually every major artist's style or artistic movement are in some capacity indebted to modern technology. In the course of his opinion piece, he capitalizes upon polarizing language to make his point. For example, he describes the state of the small liberal arts college under the duress of technological change:

This institution, so long at the heart of American education, once again is threatened, this time with the danger of being alienated anachronistically in a cultural backwash. Like the abstract expressionist who could fight the last skirmishes against the industrial revolution alone in his studio, still using materials largely of Renaissance origin...the liberal arts college in America seems determined to cling to last vestiges of its traditional style...<sup>86</sup>

Kirby sees the integration of the computer and other forms of high technology into the arts as a positive development, and in fact pins the survival of small liberal arts colleges upon how they respond to and integrate new technologies into their programs. The 1970 essay impressively forecasts the central importance that the

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<sup>86</sup> Kirby, "Art," 330.

“graphic display computer console” will have on pedagogy and artistic practice.<sup>87</sup> The author openly worries about what he describes as the coming “obsolescence”<sup>88</sup> of small colleges that are unable to compete with more moneyed and equipped institutions in the budding technological revolution. He warns that artists should not too highly esteem the past; rather, they should resolve themselves to face the future.

For Kirby, the humanistic philosophy of the liberal arts education presents a disjunctive model from the reality of the pressing technological revolution. Quite simply put, to refuse to embrace technology signals impending extinction. This stance is strongly opposed by artists Lawrence Rosing and Joseph Konzal, whose replies to Kirby are published in the winter of 1970.<sup>89</sup> Rosing flatly denies Kirby’s attempt to vilify the humanistic approach, and refuses the claim that technology drives the innovation of twentieth-century art. In equally strong language to Kirby’s he argues that in a society enmeshed in technology, the focus must return to the human, not jettison it:

Art must not, in the face of what can easily become a depersonalized existence, withdraw into playing self descriptive games with technological toys.<sup>90</sup>

Contradictory to the technological optimism of Kirby, Rosing’s words resonate with anxiety around the dehumanization that can result from the modern condition. The remainder of the reply is dedicated to poking holes in Kirby’s inflated sense of contemporary art as implicitly tied to technological innovation. By

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<sup>87</sup> Kirby, “Art,” 331.

<sup>88</sup> Kirby, “Art,” 333.

<sup>89</sup> Lawrence Rosing, “Art and Art Education in a World in Revolution” in *Art Journal* Vol. 30, No. 2 (Winter 1970-1971): 166-167.

<sup>90</sup> Rosing, “Art,” 166.

comparison, Konzal's criticisms are similarly sharp, though they differ in approaches.<sup>91</sup> He insists—and rightly so—that setting up a simple binarism between electronic art and humanism is not valid. Though he admits that values are shifting in the new electronic era, he asserts that the educator's role should not be one of acquiescing to trends. While openly unimpressed with the progress of electronic art at the time of writing, Konzal's criticism differs from Rosing's in that he does not seem rejecting of technology on the whole. Still, the technological determinism saturating the stance of Kirby's original essay is notably off-putting to Konzal, since the latter describes the proper role of a liberal arts education as operating in a much broader sense, namely of introducing students to their own creative potential.

These limited published responses in the sixties and seventies are a valuable documentation of ideological struggle, and their appearance in *Art Journal* points to the fact that art historians are being exposed to these debates—and invited to partake in them. In the first case, Patrick Hazard identifies the democratic potential of new media, via its ability to re-educate a mass audience. The review of the Illinois exhibition considers the status of the technological art object in terms of aura, and the status of the artist who operates in close proximity to mass culture. Kent Kirby advocates virtually utopian benefits that he attributes to modern technology, while one of his critics calls for greater humanism in a dehumanizing world. A second critical response is more tempered, but similarly doubtful of Kirby's logic in setting electronic technology against the humanist values that heretofore defined liberal arts education.

Within these seeds of discontent lie the coming flowers of the art world's ideological rejection of technology as a legitimate mode of expression. The first of

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<sup>91</sup> Joseph Konzal, "Art, Technology and Liberal Arts Colleges: A Reply" in *Art Journal* Vol. 30, No. 2 (Winter 1970-1971): 167-168.

these blossoms in Donald Kuspit's 1976 essay, "Pop Art: A Reactionary Realism," in which the critic and professor of art accuses the Pop movement of colluding with mass media. According to Kuspit, Pop mirrors the media in its casting a nihilistic reflection of the world:

Pop art in effect encourages the assumption that the world as known through the mass media fatalistically confirms the actual world. The media seem to say: this is the world, make the best of it, for it cannot be changed, since it has already happened. It can only be made newsworthy, for better or worse. In Pop art this celebration of the inevitable is in itself celebrated.<sup>92</sup>

By the conclusion of his analysis, Kuspit has torn away all of Pop's deadpan criticality, so that what remains is an empty fetishization of media rather than a critique. Even worse, Pop takes on totalitarian dimensions. Especially in his interpretation of Andy Warhol's serial imagery of Coca-Cola bottles, celebrities, and the disasters that occupied the public consciousness at the time, Kuspit identifies the marriage of mass-media technology and fascism:

Warhol enforces—polices—our moronization, rather than leading us out of it, and thus shows a peculiarly technological kind of fascism.<sup>93</sup>

This presumes that the proper role of art is on some level didactic, or that it should have a politically oppositional function. Essentially, Kuspit argues that Warhol is neither counter-culture nor avant-garde, an important distinction that will inform my forthcoming investigation of the relationship between technology and the avant-garde.<sup>94</sup> The significance of Kuspit's linkage of mass culture and fascism

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<sup>92</sup> Donald Kuspit, "Pop Art: A Reactionary Realism," in *Art Journal*, Volume 36, Number 1 (Fall 1976): 33.

<sup>93</sup> Kuspit, "Pop," 38.

<sup>94</sup> See Chapter Two.

should not be taken facetiously as mere hyperbolic posturing or an isolated moment of slippage. It is in fact thoroughly grounded in modern social theory, most notably the writings of Theodor Adorno regarding the melding of the aesthetic with the commercial under capitalism. Adorno advocated the elevated separation of high art from the mass culture on the grounds of mass culture's relationship to capitalism.<sup>95</sup> Clement Greenberg, as I will subsequently discuss, was a staunch opponent of Pop, also on the basis of its perceived celebration of mass culture.

Pop, though formally divergent from the technological arts, enthusiastically addressed itself to the modernity made possible through technological innovation. In seeming to appropriate without critique qualities like mechanical repetition and the visual spectacle of capitalist production, Pop can be construed as wholeheartedly embracing and even celebrating technological advancement. Toward the end of his life, Andy Warhol even began using the Commodore Amiga 1000 computer as speedier means of experimenting with color schemes on his screen-printed portraits (See Figure 1.6).<sup>96</sup> Critics who associated technologized, mass-culture society with dehumanization, however, sometimes held Pop art in suspicion. Greenberg famously disparaged the movement as “minor,” although history has since revealed him to be off the mark in regard to this subject. Among many others, this highly studied scholar precedes Kuspit in his dislike of the industrialism that heralded the ever-increasing mechanization of society. For Greenberg and others, it is this mechanization that devalues and squashes individualism, resulting in society's development into a totalitarian machine such as was evidenced in Nazi Germany.

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<sup>95</sup> See Theodor Adorno, “Culture Industry Reconsidered,” in *The Culture Industry: Selected Essays on Mass Culture*, ed. Jay Bernstein (London: Routledge, 2001).

<sup>96</sup> According to Cynthia Goodman, Warhol experimented with the Amiga 1000 in 1986. See her *Digital Visions: Computers and Art* (New York: Harry N. Abrams, Inc., 1987), 86-89.

### ***VII. Media Art, Media Theories***

What constituted media-inspired transformations in terms of visual production? As early as 1959, Nam June Paik was already modifying television sets and placing them in the gallery context. His *Magnet TV* of 1965 and *Zen For TV* of 1963-5 intervened in the expected and understood function of mass media (See Figures 1.7 and 1.8). Artists such as Vito Acconci, Dan Graham, and Joan Jonas among others explored the possibilities of live feedback made possible for the very first time with video technology. In Acconci's *Corrections* (1970), using only the live feedback image shown on a monitor—which issued from a camera trained on the back of his head—the artist attempted to singe off unwanted tufts of hair along his neckline. The use of video as a 'mirror' continued into later works such as his *Centers* (1971), a twenty-minute recording depicting the artist pointing repeatedly toward the center of the monitor (See Figure 1.9).

Joan Jonas often integrated live-feedback and video recordings into performances that interrupted the viewer's perceptions of image and space. Her *Left Side, Right Side* (1972) among other works, plays with depth and non-contiguous imagery to this end (See Figure 1.10). Dan Graham's *Present Continuous Past* of 1974 introduces a time-delay to the live-feedback, allowing those in his mirrored and video-surveilled spaces to view their own actions in the moments after they have occurred (See Figure 1.11). Gary Hill's longtime experimentations with video imagery began with his *Hole In The Wall* (1974). In this work, the artist cut a hole from the gallery wall through to the exterior. The video record of the hole, as it was being cut, was then played in a repeated loop on a monitor that was fit into the hole (See Figure 1.12). In the same year, Paik's *TV Buddha* capitalized upon the self-reflexivity implied by the closed-circuit video loop to suggest a contemplation more

internal and profound than generally associated with the watching of television (See Figure 1.13).

With the integration of new media into the arts (including television and video in the fifties, sixties, and seventies) the theoretical grip on the meaning of these new forms began to take hold. Marshall McLuhan, often misinterpreted as intoxicated by technology, considered the impact of media not in terms of a value judgment of their content, but rather their impact on the human experience of his/her environment. His *Understanding Media*, first published in 1964, suggested that media transformations had profound cultural implications. Significantly, he observed that these transformations were precipitated by the fundamental properties of a medium, rather than the information it delivered.<sup>97</sup> In other words, media reorganizes thinking and frameworks for understanding the world. According to him, in order to use media successfully, the primary objective should be to pinpoint the effects of a medium on a given society or culture; we must understand them as prostheses of the body that directly impact our engagement with the world.

A dozen years after the publication of *Understanding Media*, the presence of video would be sharply critiqued, not for its extension of the body, but for turning attention toward the body inward. Particularly, the medium was thought to hold potential for a closed-circuit relationship to image production, a narcissistic self-reflexivity. In her essay, "Video: The Aesthetics of Narcissism," Krauss asked pointed questions about the 'psychology' of the medium of video and its relationship to the psychoanalytic notion of excessive self-involvement.<sup>98</sup> Building upon the

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<sup>97</sup> Marshall McLuhan, *Understanding Media: The Extensions of Man* (Corte Madera: GINGKO Press, 2003). First published in 1964.

<sup>98</sup> Rosalind Krauss, "Video: The Aesthetics of Narcissism" in *Video Culture: A Critical Investigation*, ed. John G. Hanhardt (New York: Visual Studies Workshop Press, 1986).

concept of the video monitor as a mirror, Krauss unpacked the subject/reflected-image relationship as constituted through the paradigm of ‘feedback’ that video uniquely provided at the time. (This feedback was achieved through the possibility of a closed system with a live camera on one end, a monitor on the other, and the body of the artist in the middle.) During the early days of video art, artists often called upon this ‘mirror’ allusion. However, by focusing upon what she identified as the “narcissistic enclosure inherent in the video medium,”<sup>99</sup> Krauss isolated the performance-oriented dimensions of artistic video, especially as it relates to the suspension of time/space that evokes “a kind of weightless fall through the suspended space of narcissism.”<sup>100</sup>

This a-temporality or a-historicity implies a lack of progressive movement due to a closed, circular system of relations. Key to note is that her argument was subsequently related to the relationship between video and mass media—one that has, according to Krauss, become the primary means by which a work of art is reified to the public. “In the last fifteen years,” Krauss submits in her 1978 essay, “that [art] world has been deeply and disastrously affected by its relation to mass media.”<sup>101</sup> In keeping with Greenberg’s intellectual legacy, the essay effectively pushed back at the technology that was breaking down the door of the museum space.

Certainly, Krauss’ document must be considered within its own context, namely its coming on the cusp of electronic media, which would exponentially propel the anxiety expressed above. And what was video? Video provided a relatively inexpensive means by which those who had little or no access to mass

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<sup>99</sup> Krauss, “Video”, 190.

<sup>100</sup> Krauss, “Video”, 186.

<sup>101</sup> Krauss, “Video”, 186.

image producers like Hollywood or other institutional behemoths, could assert their own presence. Martha Rosler and Barbara London, among many others, have noted the readiness with which video was appropriated as a means of talking back to formerly unidirectional corporate mass media, especially television.<sup>102</sup>

In its early years, video functioned largely as an activist form taken up to address social inequities and draw attention to particular underrepresented issues, and viewpoints. Though it was certainly not universally democratic in the utopian sense, it did present the possibility for airing a greater spectrum of concerns that could readily be disseminated in mass form. While Krauss discusses Acconci, Dara Birnbaum, Joan Jonas and others who utilize the camera-body-monitor enclosure, she conceives of their choice of medium through purely psychoanalytic terms. The consideration of these artists' works as radical interventions into commercial media forms, does not enter into the discussion. As such, it limits the degree to which their use of a particular technology can be understood within the context of artistic activism. To be clear, I suggest not that Krauss ignores video art that could be considered activist; however, she does downplay the activist dimensions of the works she chooses to consider.

Krauss' argument exemplifies an anti-technology stance that is familiar to American art discourses for many reasons, not the least of which is video's adjacency to commercialism.<sup>103</sup> But beneath the formalist theoretical discussion of

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<sup>102</sup> See Martha Rosler, "Video: Shedding the Utopian Moment" in *Illuminating Video*, Doug Hall and Sally Jo Fifer, eds. (New York: Aperture Foundation and the Bay Area Video Coalition, 1990), 31-50. See also Barbara London's commentary on video in "From Video to the Web: New Media Yesterday and Tomorrow—An Interview with Barbara London," in *Art Papers* 25, Number 6 (November/December 2001): 25-29.

<sup>103</sup> Though video as a medium is often associated with commercialism due to its utilization in mass media, it bears mentioning that video theorist Margaret Morse suggests that, as a form of installation art, video also focuses a critical lens upon the

narcissism lies an implication that video art and its purveyors are—by virtue of the medium—inherently trapped in an a-temporal bubble constructed by their attention to their own subjectivities. Encoded in what appears as a discussion of formalism, the narcissism construct—insofar as it relates to video and video installation—suggests that introspective focus upon one’s self or selfhood is inappropriate for artistic discussion. Therefore, video as a medium whose “inherent” qualities included “narcissistic enclosure” would be inconsistent with the universal formalism championed by Greenberg. Krauss, a protégée of Greenberg’s, extended his intellectual legacy into the medium of video, ultimately theorizing it—and by extension certain artists—out of proper art history. As an “art of experience,”<sup>104</sup> video necessitates a perspective from which that experience proceeds—an embodiment, so to speak. But that subjective viewpoint interrupts high modernist notions of universality that abstraction supposedly offers.

### ***VIII. Conclusion: New Media in Art History***

Within the existing chronologies of new media art, there remains as yet little agreement about the official genealogy of the form. Scholars such as art historian Oliver Grau, and practitioners like Margot Lovejoy situate these media within a continuum of an increasingly ordered, mechanized vision that dates back to the European Renaissance and even before. New media theorists, on the other hand,

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commercial slant of the museum itself, and the “penetration of corporations with economic agendas of their own into the command of the art world.” See Margaret Morse, “Video Installation Art: The Body, the Image, and the Space-in-Between” in *Illuminating Video*, ed. Doug Hall and Sally Jo Fifer (New York: Aperture Foundation, 1990), 166.

<sup>104</sup> Margaret Morse, “Video,” 167.

orient their research around the medium or ‘object’ of study, often focusing on the formal properties of hardware and software. The recent publication of survey-style readers like Thames and Hudson’s World of Art series including *New Media Art* by Michael Rush, *Digital Art* by Christiane Paul, and *Internet Art* by Rachel Greene, for example, signals an accumulating interest in how new media might be integrated into American discourses. Other notable scholars, hailing from an array of traditional academic fields like film, biology, literature, and sociology find traces of the logic of new media in pre-existing constructs like narrative structure, or human-machine interaction.

In highlighting the marginalization of digitality by the American canon, this is not to suggest that studies of new media within art history are completely nonexistent, or that the art world unilaterally refuses to acknowledge its presence. Lovejoy’s *Postmodern Currents: Art and Artists in the Age of Electronic Media* (1989), Michael Rush’s *New Media in Late 20<sup>th</sup>-Century Art* (1999), and Christiane Paul’s *Digital Art* (2003) are all oriented similarly to the art historical reader, and dedicated to providing a survey of new media. Nevertheless, the predominant scholarship of new media has largely come from outside of the art world altogether.<sup>105</sup> As traditional art historical discourses linger while determining the

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<sup>105</sup> See Delle Maxwell, “The Emperor’s New Art” in *Computers in Art and Design: SIGGRAPH 91 Art and Design Show* (New York: Association for Computing Machinery 1991), 96-97. See also the following texts: Mark B.N. Hansen, *New Philosophy for New Media* (Cambridge, Mass.: MIT Press, 2004). Sherry Turkle, *The Second Self: Computers and the Human Spirit* (New York: Simon & Schuster, 1994). N. Katherine Hayles, *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature and Informatics* (Chicago: University of Chicago Press, 1999). Lev Manovich, *The Language of New Media* (Cambridge, Mass.: MIT Press, 2001). See also the highly interdisciplinary gathering of key texts on new media in, for example, Noah Wardrip-Fruin and Nick Montfort, eds. *The New Media Reader* (Cambridge, Mass.: MIT Press, 2003) and Timothy Druckrey, ed. *Electronic*

historical valence of earlier media forms like analog video, the analysis of new media forms for their aesthetic value, cultural relevance and thematic concerns clearly remains outside the field as a kind of counter-discourse or specialty.

This is contradictory since the presence of technology has comprised a chief dimension of artistic innovation in the modern era, if not motivated it altogether in some cases. In example, consider why at the dawn of industrialism in France, landscapes and peasants were depicted so frequently, if not for the encroaching trauma of mechanical technology (railroads, industrialization, etc.) upon the physical and psychical landscapes of the nation.

Consider the technological optimism of the Constructivists, Futurists, and the architects of the International Style, who embraced the aesthetics and the promise of modern machinery. Futurists attempted to capture the vitality of modern life embodied in the driving energy of activated machines. The Constructivists appropriated non-traditional sculptural materials associated with industrialized existence, such as sheet metals and plate glass, in order to create modern art. Architects of the International Style believed in the modern building as a mechanism for shaping experience, and ultimately the social order. Architects like Walter Gropius and Le Corbusier innovated by incorporating machine aesthetics into their constructions. Situationists, conversely, staged a conceptual rebellion from the mechanizing purpose of modern architecture and urban planning, and the socializing functions these forms imposed on the human body.

Though the study of mechanical reproduction's influence upon artistic practice is considered 'cutting edge' within the field, digitality has been only spottily received within the art world as a legitimate form. It is time that the languages and

constructs of digitality—which have been present for more than a generation—should enter the mainstream discourse rather than remaining separate.

Aside from the political or philosophical differences between art history and technology, many practical challenges exist for the presentation of electronic media within the traditional museum space. Schwarz's aforementioned *Media Art History* of 1997 and *Curating New Media* of 2001, approach the curatorial issues that currently limit new media from two very divergent approaches. The former is a nuanced survey of multimedia art, with an accompanying catalogue, while the latter summarizes the published conference proceedings of the Third BALTIC International Seminar. But both overlap in their in-depth considerations of what it will take for the modernist construct of the white-cube-style gallery to effectively absorb new media into its spaces. *Curating New Media* primarily engages debates around the production and exhibition of net-based art by bringing together eighty practitioners, curators, and museum administrators to discuss the challenges of new media within traditional art spaces.<sup>106</sup> One might argue whether, in the end, this document presented workable solutions or grand conclusions. It nevertheless remains a valuable and spontaneous testimonial of the practical problems and frustrations that net art has elicited for the pre-electronic establishment.

Taking a more comprehensive viewpoint, Schwarz provides a lucid survey of the relationship between the museum and media art. His text, *Media Art History*, first examines the logistical problems of displaying new media art within the traditional art space. Of course, these include the financial challenges of dealing with fragile, expensive equipment; the complication of clashing sound elements; and a general resistance to new social developments. However, setting these obvious and

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<sup>106</sup> Sarah Cook, Beryl Graham and Sarah Martin, *Curating New Media: Third BALTIC International Seminar 10-12 May 2001* (Gateshead: Baltic, 2002)

ultimately surmountable hurdles aside, Schwarz's writing moves on to the real challenges. Namely, these are comprised by the fundamental differences between mass media and the museum. The quality of the relationship between the two, he asserts, is defined by competition. By this he, in part, must refer to museum attendance—since it constitutes a form of entertainment that competes with mass media entertainment.

In addition, Schwarz identifies the sometimes-painful appropriation of artistic tactics by a more powerful mass media industry. He crafts an art historically oriented language for an in-depth engagement with technology within canonical practice. To be clear, this text proceeds from a European trajectory. Specifically, Schwarz worked from within the German art historical tradition, whose concerns and prohibitions around technology vary from the American canon. In fact, Germany supported electronic and digital art much earlier than the United States. Schwarz's openly self-critical stance as a museum professional is refreshing in its open acknowledgement of the museum's traditional role as a repository of high culture, its pedagogical functions, and its off-putting elitist reputation.

Conversely, he counterbalances this uncharitable—but not entirely inaccurate—characterization with some insights into what the museum has to offer new media. He describes the museum space as unique in its potential to explore issues considered too incendiary for popular entertainment venues. At least theoretically speaking, museums present spaces for the potential outstripping of these limitations. In addition, he suggests that museums provide a dedicated site for the exploration of material culture. Furthermore, he indicates the benefits that the study of art provides to electronic mass media:

In view of the surfeit of mass media, through which everything appears accessible everywhere and at any time, the need becomes increasingly great to give back to the technical media a cultural meaning and artistic quality, which in earlier times was an obvious characteristic of image production.<sup>107</sup>

It remains to be seen what relationship will ultimately be forged between these two competing entities. Either way, new media challenges the boundaries of traditional art history through its relations to capitalism, globalization, and its appropriation by those underrepresented in the rarefied modernist structure. These are territories, however, into which Schwarz's text does not venture. Do existing modes of art historical scholarship suffice to illuminate the place of digitality within its canon? Given the schism that has so long existed between its technical, aesthetic and philosophical dimensions, an interdisciplinary approach is imperative.

After having dedicated study to the many new media anthologies with their proposed intellectual lineages, it seems that each is—in its own way—plausible, and that any attempt to domesticate it into a single history will fall short of capturing what new media has become in the twenty-first century. What matters is not the identification of a single originating narrative for new media art, but rather a nuanced understanding of how it informs human experience and expression. In fact, new media art's methodological openness, while initially disorienting, becomes invigorating since it represents an area of study that has not yet yielded to codification.

Within canonical art history, there are fundamental concerns that inhibit the inclusion of electronic and digital forms in dominant Western narratives. These concerns are ideologically rooted in an art-historical past; before it is possible to

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<sup>107</sup> Schwarz, *Media*, 14.

consider the present-day question of the digital, it was first necessary to understand these foregoing debates. By focusing upon key theoretical collisions of art history and technology, perhaps their subsequent resolutions, absorptions, or expulsions begin to illuminate the nature of this uneasy relationship.

In the first instance briefly considered, photography provided a mechanical means to achieve the objectives of “naturalistic” image making with minimal intervention of the artist’s hand. In the second example, which will be further considered in Chapter Two, video becomes a malleable tool with which to lodge critique against an overbearing and increasingly corporatized media culture. The third example to come presents the digital as the possibility of making an artwork completely realizable through code rather than the artist’s direct material labors—and with even broader opportunities for dissemination and augmentation. Through these instances of ideological friction, I hope to establish a bird’s-eye view of an embattled geography, with its many limitations and potentials. While ultimately I share the opinion of new media arts curator Christiane Paul and art historian Andreas Broeckmann that new media art is “just art,” it is nevertheless vital to consider the art-and-technology question that persistently incites such turbulent canonical responses.<sup>108</sup>

Aesthetically oriented studies of electronics and the digital are needed to complement the pragmatic, technical dimensions of new media’s multifaceted character. Its new, flawed, and visually compelling forms should be engaged, not stifled in their infant stages. This is not to say that the canon has the ability or the desire to single-handedly invalidate these media—certainly it does not. However,

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<sup>108</sup> Christiane Paul, “The Myth of Immateriality – Presenting and Preserving New Media,” presentation at REFRESH! Conference, Friday, September 30, 2005, Banff New Media Institute, Banff, Canada.

each of these two separate spheres can benefit from increased openness to the other. Even with the most superficial interaction, new media practitioners and theorists can share insights into the technical (i.e. formal) aspects of electronic and digital art. Conversely, the execution and theorization of new media would greatly benefit from increased exposure to the store of aesthetic and critical expertise that art history has accrued over time.

The spaces of the museum and of art historical scholarship currently function as custodians of cultural heritage. Museum presentations and art historical survey texts reflect an image of culture back onto itself, and project a cultural legacy into the future for posterity. Such forms of historicization record how cultures are remembered, denote their accomplishments, and situate them in terms of perceived greatness. Far from a mere leisure activity of the cultural elite, art history represents a vital dimension of the very making or unmaking of cultures, played out through their inclusion or exclusion from history. The looting and destruction of art and cultural artifacts that typically occur during times of war comes as no surprise when considered in this larger context of the struggle for history.

While the American art historical canon's ambivalence towards technology in art seems problematic to those for whom social relevance is a priority, one might equally argue that the canon is under no obligation to be socially relevant. Is it the high art elite's obligation to protect traditional art historical practice from the incursion of globalization and advanced technologies? No, and truly, art history's function may lie elsewhere. Through its many permutations, art history as yet bears no consensus around its proper function. Therefore it is difficult to argue that the discipline is not functioning "properly" when technology is written out of its histories. However, the canon's reluctance to address the particular formal and ideological qualities of new media represents a crisis of connoisseurship, formal

interpretation, and criticality, regardless of one's stance in form/content debates. This is not to mention large degree to which art history as a discipline isolates itself from contemporary artistic practice. In both content and form, advanced technology increasingly affects Western culture and therefore its aesthetic production. Additionally, and much more seriously, the *preemptive* determination by the canon that technology is incongruent with its aims or values threatens its ability to project a representative history into the future.

Artists do not labor in isolation of the tectonic shifts in culture and technology. As a defining part of the late twentieth and early twenty-first centuries, the presence of electronics and the digital inevitably shapes the social and cultural landscape of the West. The technological arts warrant canonical study typically associated with earlier major movements in history. In reuniting the polarized duality of the automatic and the skilled, it is possible to see the artist as engaging their talents and concentrated insight, and as wielding technology as a tool, rather than becoming hypnotized or victimized by it. It is in the grappling with and stretching of these new media, especially the resulting discontinuities and abnormities, that truly innovative expression begins. The monster—technology—is already, always, and inherently a part of art.