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Aporias of the Digital Avant-Garde

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Abstract

This article maps two divergent trajectories within a narrowly defined sphere of short-form, time-based digital media created between 1995 and 2005. These works are considered in relation to the historical avant-garde - particularly the Structural film movement of the 1960s and 70s - and analyzed as responses to a range of cultural concerns specific to the digital age. The analysis identifies movement toward two terminal points: first, a mode of remix-based montage inspired by open source programming communities and peer-to- peer networks; and second, the emergence of a mode of imaging termed the “digital analogue”, which foregrounds the material basis of digital production.

Introduction

The title of this article refers to Hans Magnus Enzensberger's 1962 essay “The Aporias of the Avant-Garde” [Enzensberger 1974], a cautionary tale and critique of the dangers that arise from tying the ideology of the “avant garde” to radical social agendas. Enzensberger warns against the pretensions of movements like Futurism that were so easily swept up into the political ideology of fascism, and the avant-garde's general tendency to slip toward variously doctrinaire forms of political sloganeering. As Enzensberger argues, an avant-garde that is unconscious of its aporias — its internal contradictions and obfuscations — is even more dangerous than the reactionary politics that inevitably surface to resist it. Criticism about digital media, which has too often strayed into the realm of the utopian, would do well to heed such warnings. And while my present argument is largely framed in optimistic terms, it is particularly important to recognize the limitations of contemporary “avant-garde” media practices, given the largely hostile political and economic climate in which they have emerged. 1

As lines between categories of digital art making continue to blur, it is also necessary to re-examine outmoded distinctions between the practices and tools of cinema, video, music, animation, graphic design and motion graphics. Just as digital practitioners move fluidly across these boundaries, theorists and historians of new media must develop similarly mobile strategies of critical practice unencumbered by the burden of past media and analytical paradigms. Whereas the Modernist avant-garde privileged materiality as a means of exploiting the formal potentials of medium specificity, the privileged objects in this essay preserve a relation to the material world that grounds them historically. Ultimately, it is not an avant-garde free of contradictions that we seek, but one that illuminates the position of digital media in relation to systems of control — including the rules of representation, technology, and history. 2

To do this, we will focus on a small number of short-form, time-based, digital media — a disparate array of music videos, short films and motion graphics created during the past ten years. Despite the fact that the work under consideration here has rapidly proliferated and resonated with many of the key theoretical issues in cinema and visual culture studies of the past three decades, it has been largely neglected by theorists and critics of digital culture.[1] Part of the reason for this neglect is practical. The works themselves are often ephemeral or difficult to access and they tend to occupy a liminal position between what is called “experimental” or “avant-garde” film and video, and the equally broadly defined field of practice termed “new media.” These works therefore do not fit into any consistent curricular or publishing niche, are rarely a part of mainstream culture, do not receive theatrical distribution or broadcasting, and are often regarded 3

with suspicion as proper objects of study within an academic context.[2] Nonetheless, I will argue that much of this work may be productively understood as a processing ground for some of the most compelling issues in contemporary digital culture.

4 I am particularly interested in these works' expression of the status of narrative, of relations between technology and material culture, and of emergent conceptions of space, time, and bodies. As a point of entry, I will ask whether this work may be meaningfully understood in relation to the historical avant-garde, particularly the Euro-American Structural film movement of the 1960s and 70s. I do not, however, wish to spend much time justifying my use of the term “avant-garde,” which admittedly carries specific historical connotations that are not all applicable to the present discussion.[3] Instead, I will focus on two primary vectors of consideration. The first is the movement toward what may be termed “open source” video authoring, modeled after the combined practices of open source programming communities and peer-to-peer file sharing networks. The second is the emergence of what I call the “digital analogue,” a mode of representation that foregrounds material aspects of production seemingly in defiance of the conventional wisdom that digital media are characterized by dematerialization and disconnection from the physical world.

5 Because the title of this essay features the rather glaring oxymoron “digital avant-garde,” it may be useful to define these terms in isolation in order to frame the use I hope to make of them in juxtaposition. The term “digital” rarely denotes a set of cohesive practices. Digital media are notoriously hybrid, often bringing together images, sounds, and objects that are computer-generated or mediated with others that originate in the analogue, photochemical, or textual worlds. There is, however, a certain utility to “digital” as a historicizing term, particularly as it implies its own eventual obsolescence. I am less interested, therefore, in defining “digital culture” in terms of technology than in attempting to identify the social practices and preoccupations that are particular to the digital age. One of the things at stake within the consumer culture that surrounds digital media is the growing invisibility of its underpinning technology. Given the current movement toward ubiquitous computing and wireless networks, this is of particular relevance; even flat panel monitors and microprocessors that are embedded in everyday objects seem to negate the physical infrastructure of the computer and by implication, its socio-industrial base.

6 For the purposes of this essay, the “avant-garde” may be defined as a non-singular and contradictory range of minor practices that are dialectically related to — i.e., both resistant to and constitutive of — dominant media systems. These works are characterized by multiplicity, micro-politics and formal experimentation, and perhaps most disquietingly, they are often exo-commercial — that is, positioned in a marginal but necessary relationship to the economically sustaining infrastructure of the entertainment and advertising industries. This working definition is indebted to David James' work on American avant-garde film of the 1960s, which debunks the old avant-garde / commercial binary as both false and misleading.[4] At the level of both institutions and individuals, James argues for a historical model that acknowledges the fundamentally cross-pollinating relationship between commercial and experimental film practice.

7 My desire to reclaim the concept of the avant-garde for the digital age stems from a firm belief in the relevance of media to politics and culture. I see great potential benefit in developing a critical apparatus for understanding these exo-commercial practices as embedded in a broader context with economic and social implications. Holly Willis has further argued for the value of seriously considering these works as symptomatic indicators of cultural obsessions:

> Despite the general dismissal of these works, many music videos, as well as design shorts, offer a compelling examination of some of the central issues that we face as a culture, and indeed, one might argue that these rather disparate artworks offer a map of contemporary anxieties, fascinations and concerns. [Willis 2005, 51]

What is ultimately at issue in both “digital” and “avant-garde” is our ability to relate these terms to the needs and struggles of everyday life. Put more simply, the goal is to ascribe relevance to particular practices of digital culture in a historical context. Thus, I believe it is possible to deploy the term “avant-garde” with respect for its historical specificity, but at the same time, to make a claim for its continuing usefulness in discussing contemporary art practices that have evolved in parallel with commercial-industrial media.

Digital Ontology

Within visual culture, digital imaging has come to signify an ontological shift away from the indexical trace of the photograph. Where photochemical imaging could lay claim to a direct relation to the physical world, both conventional wisdom and everyday experience suggest that digital images more commonly function as hybrid constructions of the world they purportedly represent. Although the problematic of representing reality long predates the appearance of digital technology, the early 1990s marked a point of no return for the representational capacity of images. In his 1991 book *Representing Reality*, documentary film theorist Bill Nichols offered this almost sheepish disclaimer:

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> [through digital sampling] The image becomes a series of bits, a pattern of yes/no choices registered within a computer's memory […] There is no original negative […] against which all prints can be compared for accuracy and authenticity. There may not even be an external referent. The implications of all this are only beginning to be grasped. They clearly set a historical framework around the discussion presented in this book, which continues to emphasize the qualities and properties of the photographic image. [Nichols 1991, 4]

The previous year, in his influential book on 19th century visual culture *Techniques of the Observer*, Jonathan Crary noted that digital imaging constitutes a categorical break from the photographic processes that were developed in the early 19th century. With digital imaging, Crary asserts, vision is relocated to

> a plane severed from a human observer […] Most of the historically important functions of the human eye are being supplanted by practices in which visual images no longer have any reference to the position of an observer in a "real," optically perceived world. If these images can be said to refer to anything, it is to millions of bits of electronic, mathematical data. [Crary 1990, 2]

The problem with digital images, as Crary defines them, is that they are not linked in an indexical relationship to the "real world" (which he revealingly equates with the "optically perceived" world).[5] What is at stake here are not merely the technical affordances of competing technologies of vision but a philosophical metaphor describing the way we attain knowledge about the world. But in characterizing the ontological shift represented by digital imaging in terms of loss, it is all too easy to find ourselves in a nostalgic desire for the prelapsarian authenticity of the photograph — a concept that is itself dubious at best.

In his essay "Avant-Garde as Software," Lev Manovich extends this loss to the failure of the avant-garde to sustain the convergence of formal and political interests:

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> The old media avant-garde came up with new forms, new ways to represent reality and new ways to see the world. The new media avant-garde is about new ways of accessing and manipulating information […] The new avant-garde is no longer concerned with seeing or representing the world in new ways but rather with accessing and using in new ways previously accumulated media. [Manovich 1999, 12]

Manovich aptly describes the development of database structures and recombinant media that are crucial to networked culture. However, his model overlooks the potential of this new media avant-garde to engage new ways of seeing the world that are rooted not in optical perception but in the harnessing of data flows. This shift, summarized by Peter Weibel as a move "from the ruins of representation to the practices of processing" [Weibel 2002, 2], highlights the need for rethinking networks in epistemological terms. This article aims to position the functioning of digital networks as not merely a vehicle for the transmission of data, but also a means of "seeing" and understanding the world. At stake in this investigation is an emergent understanding of the ways media practitioners are enacting new forms of networked subjectivity and creativity that are characteristic of an "open source" authoring mode. These networked practices should not be uncritically privileged — they are as readily deployed for evil as for good — but I want to probe the transformative impact of networks on historical avant-garde tactics of appropriation and recombination.

Modernism and Avant-Garde

In her book *The Originality of the Avant-Garde and Other Modernist Myths*, Rosalind Krauss challenges the discourse of originality on which the concept of the Modernist avant-garde was based, arguing that “the actual practice of vanguard art tends to reveal that 'originality' is a working assumption that itself emerges from a ground of repetition and recurrence.” Indeed, she argues, originality and repetition are often bound together through shared formal and structural constructs, and she identifies one such construct — the grid — as a privileged technique of spatial organization within the painted modernist frame. For Krauss, photography provided the final seeds of destruction of originality as the *sine qua non* of modernist art. Her argument turns approvingly to the photographic work of Cindy Sherman and Sherrie Levine as marking a break with the modernist notion of origin, moving instead into an era characterized by the postmodernist discourse of the copy. Now, the operative question is whether the “discourse of the copy” that so aptly described the Appropriationist movement of the 1980s (of which Levine and Sherman were a part) still applies to digital media. 10

In digital media, the act of copying has moved from figure to ground, whether at the level of the individual pixel, the sample, or the peer-to-peer network. In other words, the status of the copy is no longer at stake — it is as much of a given to digital composition as brush strokes are to painting. To further update Krauss' take on the dynamic interplay between originality and repetition, we must revisit her privileging of the grid as a structuring framework. The grid, for Krauss, marked Modern art's categorical withdrawal from representation and mimesis. 11

> Flattened, geometricized, ordered, it is antinatural, antimimetic, antireal. It is what art looks like when it turns its back on nature. In the flatness that results from its coordinates, the grid is the means of crowding out the dimensions of the real and replacing them with the lateral spread of a single surface [Krauss 1993, 158]

Krauss goes on to ruminate on the irony of the avant-garde artist turning, again and again, in a celebration of his own originality to the form of the grid for its realization:

> That so many generations of 20th-century artists should have maneuvered themselves into this particular position of paradox — where they are condemned to repeating, as if by compulsion, the logically fraudulent original — is truly compelling [Krauss 1993, 160]

She further argues that nothing less than the collusion of museums, historians, and makers of art has served to continually assert the superiority of originality over repetition in modern art, a conundrum that was left to postmodernism to outstrip.

Within digital media, however, it seems clear that the two-dimensional X-Y axis of Krauss' modernist grid has given way to work that places equal if not greater fetish value on the Z-axis, and the possibility, if not the imperative, of composing in depth using 3-D modeling software, video game engines, immersive and telepresent technologies, mobile media, etc. In his book *Snap to Grid,* Peter Lunenfeld identifies the two-dimensional grid as the enemy of the digital designer, whose first act upon opening an application is to turn off the snapping function so as not to be constrained by the quantum logic of arbitrarily imposed Cartesian coordinates [Lunenfeld 2000]. In the work under consideration here, it is possible to identify two responses to this tendency that suggest alternatives to the privileging of the Z-axis. Within the realm of the “digital analogue,” there is frequently a gravitation toward work that foregrounds the tension between flatness and depth, a kind of resistance to immersion that arguably un-privileges three-dimensionality. And in the zone of networked communication, a figurative Z-axis may be understood to signify the dimensional structure of the Internet or the datasphere of wireless media that concerns practitioners of mobile and distributed media. 12

Open Source Paradigm

Within the realm of what may be termed “open source video” — i.e., re-edited videos that are distributed online and via file-sharing networks — it is possible to view the rhizomatic structure of the Internet as a corrective to the Cartesian coordinates of three-dimensional space. This is particularly realized in the structure of global peer-to-peer distribution networks, which can no longer be regarded as external and posterior to the digital artwork itself. Instead, I believe we are witnessing a transformation of the digital artwork's position as fundamentally entangled with circuits of replication, 13

recombination, dissemination, and along with them, endless potentials for productive mutation. Both Lunenfeld and Manovich have described this transformation as a shift to “information-based aesthetics,” impacting a broad base of digital practices from art and architecture to film and computational media. When addressing works that emerge from the informational space of the network, we are dealing not with originals and reproductions but memes and mutants — circuits of data flow and transformation that assert their own ontological status. Perhaps most importantly, we must address these networks in both material and functional terms, as cultural formations that are the products of material and ideological necessity and not merely passive conduits for data.

A recent cultural object to emerge from this space is the *Grey Video*, which was created and released anonymously in October 2004, only to be shut down by the record label EMI as part of its continuing efforts to enforce control over their copyright of the Beatles' *White Album*. The background to this story is widely known: on February 24, 2004, a group called Downhill Battle organized a day-long electronic civil disobedience action called Grey Tuesday. Downhill Battle sought to protest the legal action taken by EMI to suppress a remix by DJ Danger Mouse that combined rhythm tracks from the Beatles' *White Album* with vocal tracks from Jay-Z's *Black Album* to create the underground sensation, the *Grey Album*. During the 24 hours of Grey Tuesday, over 100,000 copies of the *Grey Album* were reportedly downloaded from hundreds of sites across the Internet and an estimated million more copies were traded over file sharing networks. At the same time, hundreds more websites demonstrated their support by converting their home page color palette to all grey. Although its impact was largely symbolic, Grey Tuesday is still regarded as the most successful instance of organized civil disobedience against the music industry. Nine months later, the *Grey Album* was followed by the *Grey Video*, which was created and released anonymously by the design firm Ramon & Pedro. The “official” *Grey Video* website was predictably shut down within a few weeks of its launch, although the video continues to circulate on mirror sites and peer networks across the Internet.

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The *Grey Video* begins with a performance by the Beatles before a live television studio audience. Just moments into the song, images of the rapper Jay-Z begin to encroach on the performance and his own lead vocals are added to the background music of a cut-up Beatles song. Images of bumbling and ineffectual broadcast engineers may be understood as a metaphorical jab at the RIAA, who are powerless to recover control of the images being disseminated, first as Jay-Z's image appears on one and then all three television monitors in the control booth and later as the musical

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remix causes a breakdown of both artists' performance. As Ringo's drum kit is replaced by a set of turntables and the words “DJ Danger Mouse,” the vestigial musicians Paul and George are perfunctorily replaced by dancers, and John performs a virtuosic break dance punctuated by a protracted round of spinning on his head and a screen-exiting backflip that leaves the singer's signature mop-top wig lying symbolically on the stage. On one level, all of this amounts to little more than a parodic gesture, but the electronic civil disobedience of Grey Tuesday and the visuals of the obviously hastily produced *Grey Video* eloquently speak both to consumer frustrations with increasingly restrictive copyright laws and to the growing power of peer networks to subvert their enforcement.

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Apart from the barely noticeable R+P logo that flashes on screen at the end of the video, Ramon & Pedro nowhere acknowledge responsibility for the *Grey Video*, which was made with no possibility of direct profit for the design team. Indeed, a disclaimer at the head of the video announces that it was made as an experiment and not for commercial purposes. But the video was also made in full knowledge that the official site would be shut down and trusting in the hope that a decentered grassroots network would step in and take over distribution of the video. I don't necessarily want to offer Ramon & Pedro as outlaw media hackers — they are rather savvy entrepreneurs who understand the economy of value in viral marketing and the power of aligning themselves (albeit slightly disingenuously) with the anti-industry, anti-commercial sentiments of today's remix culture. Taken in aggregate, however, I believe the Downhill Battle protest, coupled with the widespread, illicit circulation of the *Grey Video* is exemplary of a mode of practice that is defined by the logic of the open source network at the level of production, distribution, and reception. Another direct legacy of Downhill Battle's Grey Tuesday action is the group's own spinoff organization, The Participatory Culture Foundation, a non-profit advocacy group which seeks to create tools that facilitate the conjunction of culture and politics.[6] As legal and cultural struggles over copyright and control of the internet continue, the networks and tools of such organizations, along with widespread cultural practices based on participation and collective action, offer crucial sites of potential resistance.

Digital Resistance?

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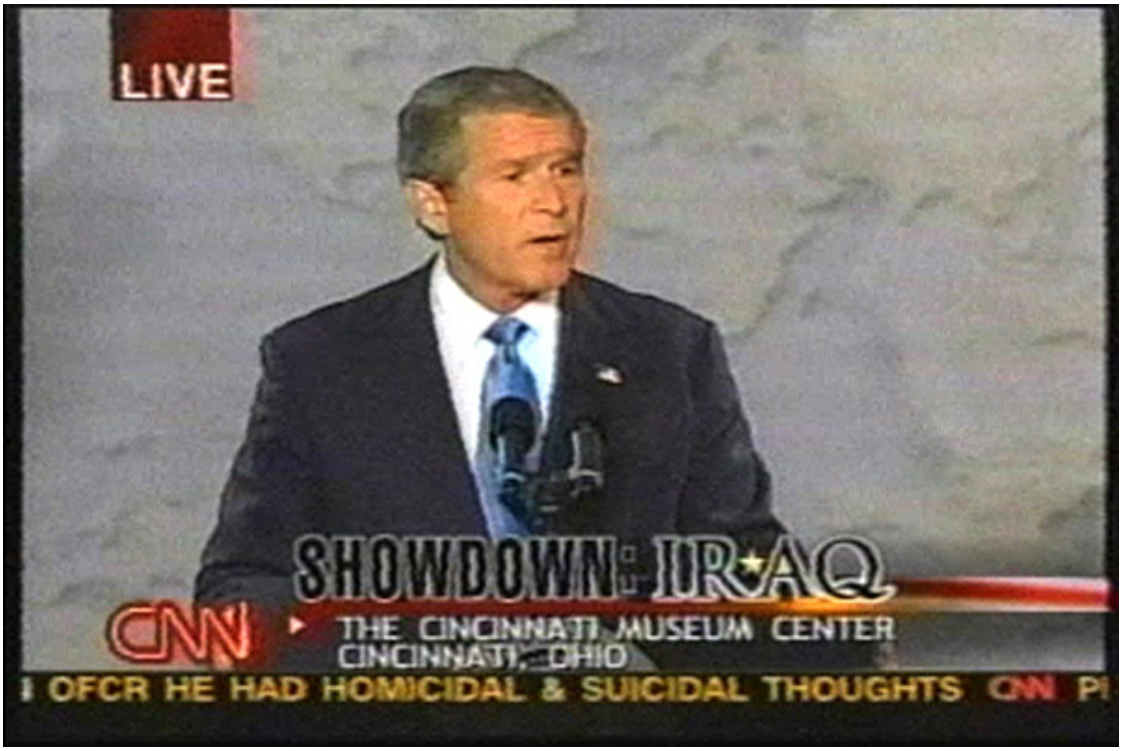
Among the most vocal advocates of the concept of a digital avant-garde that is directly engaged in resisting corporate domination of media is the Critical Art Ensemble (CAE), which argues unabashedly for work that places “a high value on experimentation and on engaging the unbreakable link between representation and politics.” [7] In their 2002 manifesto *Digital Resistance*, CAE elaborate on their call for a critically engaged “electronic civil disobedience” [8] that explicitly works to bridge the formal and political dimensions of avant-garde practice. CAE argues that, just as capitalism has become increasingly nomadic, mobile, dispersed and electronic, artists and activists must respond in kind: modeling forms of digital resistance that are equally liquid, but preferably operating by means that are less compatible with the status quo functioning of the entertainment industries:

> After all, an avalanche of literature from very fine postmodern critics has for the past two decades consistently told us that the avant-garde is dead and has been placed in a suitable resting plot in the Modernist cemetery alongside its siblings, originality and the author. In the case of the avant-garde, however, perhaps a magic elixir exists that can reanimate this corpse [CAE 2002]

The elixir they refer to is digital technology and the increasing dependence of late capitalist economics on global communication networks and their vulnerability to cultural hacking. As CAE insists, “The avant-garde today cannot be the mythic entity it once was. No longer can we believe that artists, revolutionaries, and visionaries are able to step outside of culture to catch a glimpse of the necessities of history as well as the future.” In practical terms, CAE propose “cellular constructions aimed at information disruption in cyberspace.” They thus advocate hacking as both an art form and political weapon, which points to the importance of thinking not just in terms of media objects and practices but also of their evolving contexts of distribution and exhibition. Unfortunately, the vocabulary of Hollywood film distribution obscures the functioning of networks and communities — some physical, some online or virtual — within which digital files are copied, reproduced, and traded. Within such a network, distinctions between viewers and producers are irretrievably blurred, and the one-way logic of television broadcasting and theatrical distribution becomes the multi-directional, many-to-many dialogue of the BitTorrent network. But how might this abstract cultural transformation manifest itself in terms of actual production? Part of the answer may be found in the extraordinary proliferation of remix-

based videos currently in circulation via the internet and peer-to-peer networks.

Remix as Politics



Mike Nourse's short remix video *Terror Iraq Weapons* is one of many short, remix videos that appeared during the lead-up to the 2004 American presidential election. The video was created by means of executing a single algorithm: each occurrence (or variation) of the words “terror,” “Iraq” and “weapons” was extracted from a single speech by President George W. Bush and grouped in the order in which they occurred. Nourse's deceptively simple conceit poses a surprisingly effective critique of both the Bush campaign's mendacious association of al Qaeda's attack on the World Trade Center with the regime of Saddam Hussein and the central canard of the administration's advocacy of war, namely the existence of weapons of mass destruction in Iraq prior to the American military onslaught in 2003. At the same time, Nourse's video invites us to think about the functioning of the news media as a passive echo chamber for campaign and administration talking points. The low-tech simplicity of Nourse's process invites viewers to imagine creating their own variations on this project, transforming virtually any electronic broadcast into potential raw materials for re-editing and redistribution.[9] 18

Nourse's deployment of an explicitly algorithmic process also exemplifies one aspect of art production in the database age by emphasizing the importance of keywords as a means of understanding and reprocessing the content of media broadcasts. The attribution of metadata, such as keywords, to any media set constitutes a similar process — the distillation of key concepts from a field of possibilities. The result, as with the information-handling capacity of a database system, is to amplify the power of recombination and use of the data set, in this case, turning media consumers into producers of alternative or resistant meanings.[10] Nourse's video and many others like it, including Lenka Clayton's *qaeda quality question quickly quickly quiet* (2002), operate in a specifically linguistic realm, with almost total disregard for the visual. Clayton's film, which has also been released in audio-only format on LP (thereby underscoring its relation to DJ culture), takes every one of the 3814 words in Bush's infamous “Axis of Evil” State of the Union speech and simply re-edits them into alphabetical order. In both Nourse's and Clayton's videos, the image of the president jumps spastically around the screen, enslaved by the syntactic rearrangement taking place in the verbal register. This welcome reversal of the usual image-sound hierarchy has its most disruptive impact on the performative aspects of the political speeches, whose constructed inflections and cadences are simultaneously subverted and revealed by the imposed structure of the re-edit. 19

Structural Film as Archetype

20 This type of algorithmic manipulation strongly resembles the Euro-American Structural film movement of the late 1960s and early 1970s, which was associated with filmmakers such as Michael Snow, Hollis Frampton, Ernie Gehr, Paul Sharits, Joyce Wieland, and Peter Kubelka, and which finds an active legacy in the continuing work of filmmakers such as James Benning, Su Friedrich, Morgan Fisher, and Martin Arnold. Although highly influential among experimental filmmakers, this work was deservedly criticized for its makers' decision to pursue a set of artistic interests that were fundamentally apolitical and inward-looking, even in the midst of the cultural turmoil surrounding the Vietnam war and civil rights movements. For David James, this movement aligns seamlessly with the conceptual and minimalist movements in the art world — posing an institutional critique of the art world's persistent effacement of the materiality of its objects. “Pure film,” as James calls it, constituted cinema's response to Clement Greenberg's call for medium specificity, drawing attention to the surfaces and planes of the film image and its unique, artistic properties by using techniques such as scratched emulsion, loop printing, and mathematically derived editing structures.

21 Structural film is often misunderstood as a fundamentally reductive and solipsistic practice when, in fact, much of the most interesting work is engaged in broader questions of historiography, narrative, memory, perception, and cognition in the cinematic processing of space and time. Ernie Gehr's work is exemplary in this regard, fulfilling both the rigid structural impulse of the movement's most extreme adherents, while simultaneously engaging in broader philosophical, historiographical, and perceptual concerns. Likewise, Morgan Fisher's body of work, which offers cinema's most esoteric and monomaniacal examination of the processes and mechanics of the cinematic apparatus, also constitutes one of its most erudite commentaries on otherwise too-easily-suppressed aspects of the Hollywood film industry.

22 While Structural film has been largely regarded as a footnote within film studies, it has resonated with remarkable tenacity in certain sectors of digital media art. Lunenfeld's decision to include a chapter on Structural filmmaker Hollis Frampton in *Snap to Grid*, for example, has been much commented upon as a bizarre anachrony in a book ostensibly devoted to digital culture and design. But Lunenfeld's gravitation toward work by Frampton and other Structuralists is not merely idiosyncratic. The majority of Structural films are themselves mathematical or algorithmic in conception — characteristics that are consonant with the workings of digital media. Indeed Lunenfeld argues, “the ascendancy of the digital image has rendered experimental film ripe for a renaissance […] the experimental cinema can serve as a model for computer-inflected art. I believe, in fact, that the most interesting new media works aspire to the condition of the experimental cinema without quite realizing it.” [Lunenfeld 2000, 120–1]. In her book *New Digital Cinema*, Holly Willis likewise identifies Ernie Gehr's Structural classic *Serene Velocity* (1970) as a key progenitor of digital media's fascination with space as “our era's primary focus of concern,” noting that *Serene Velocity* was created within a few months of the prototype network that would become the Internet.

23 A somewhat more literal case in point may be found in the work of artist Barbara Lattanzi, who has created a series of image processing systems called “idiomorphic software,” which function as handlers for online media.[11] These include *EG Serene*, which is named after Ernie Gehr's *Serene Velocity* and which takes any piece of Quicktime video and provides controllers that allow users to approximate the editing patterns found in *Serene Velocity* (1970)[12]; and *HF Critical Mass*, which operates on the same principle in order to mimic the editing of Hollis Frampton's *Critical Mass* (1971).[13] Lattanzi's tongue-in-cheek homage to Gehr and Frampton, whose obsession with film's materiality represents the apotheosis of cinematic medium specificity, highlights a key distinction between film and digital media. Structural filmmakers' fetishistic relationship to their apparatus of production is largely denied to makers of digital media, whose creative interactions largely take place within the domain of software and therefore rarely reference the role of the computer as object-machine. Lattanzi's work instead places its emphasis on interface over physicality and on constructing systems that handle and reconfigure pre-existing media into new patterns. Idiomorphic software offers users a form of empowerment and control that is of an entirely different order than conventional interactive narratives. It also suggests ways to talk about the specificity of digital media that do not simply replicate the formalist impulses of Structural film.

The Digital Analogue

Although materiality is often elided within digital media, the physicality of film images remains a source of explicit fascination for certain media artists. Perhaps the most remarkable of these is Austrian experimental filmmaker Virgil Widrich. Along with the filmmakers Peter Tscherkassky and Martin Arnold, Widrich is part of a “third generation” of Austrian experimental filmmakers who all share an obsessive interest in fragmenting and decomposing film frames and working with movement and repetition within the frame. Until recently, Widrich was the only one of the three to work digitally. Both Arnold and Tscherkassky have prided themselves on rejecting digital technology, even as they create works that are deeply connected to the logic of digital media in their use of repetition and recombination. Widrich's work is additionally provocative in its return to paper as a substrate for moving images. In the last few years Widrich has completed two films — *Copy Shop* (2001) and *Fast Film* (2003) — that are based on a method of production that requires thousands of digital video frames to be printed out on paper, folded, torn, and then re-animated. On one level, this work constitutes a return to primitive cinema, the kind of frame-by-frame, hand-made production described by Lev Manovich as characteristic of digital cinema[14] — but on another level, it demonstrates a process that calls an unusual degree of attention to the material substrate of cinema. The result for viewers is an acute awareness not only of the materiality of the film they are watching but also of the layering of moments in time that is allegorized through the production process. 24

Fast Film also presents an extreme and literal use of intertextuality, in which characters from nearly three hundred different films move seamlessly through a single narrative space. The film suggests a re-assertion of the individual subject as the associative consciousness of the narrative and assures that each viewing experience will be different, as viewers recognize different clips, characters and moments from each sampled film. The structure of *Fast Film* is that of a recombinant database that serves as both homage and parody in its affectionate pillaging of Hollywood history. Arguably, it is the anxiety attending the ethereality of digital technology that occasions this extreme foregrounding of material processes — namely the crazy, obsessive work of printing, numbering, folding, tearing and then re-photographing tens of thousands of film frames. Another factor is our immersion in an era when questions of copyright and intellectual property have moved from the expert discourses of litigation and technology into the forefront of many people's everyday lives.[15] 25

Widrich's rejection of the ease of digital compositing in favor of laboriously captured, printed, torn and folded origami animations provides part of the justification for its existence. This labor, in fact, gives the lie to contemporary discourses about the ease and simplicity of digital piracy and the lack of creativity among those who remix copyrighted materials. The underlying labor is self-consciously referenced only once in the film, when a train chase ends by plummeting off the side of a cliff. After plunging downward through space, the animated cutouts crash through the Mardi Gras cemetery 26

scene from *Easy Rider*. The chaotic trains puncture this moment of relative calm, burrowing down through the film plane into a thick stack of animation cells as if descending through the earth's core. In this moment, Widrich lays bare the part of his filmmaking process that would ordinarily be suppressed. We may view this as a return to Krauss' modernist grid, which has been deliberately tipped over and laid on its side along the Z-axis, while a similar violence is done to the frame — that other inviolable rectangle of modern art: nearly every image is torn, folded, sawed or crinkled and thereby committed to a new context before being rephotographed. *Fast Film* is perhaps the quintessential instance of the “digital analogue” — a small but growing subset of work that attempts to renegotiate the basic terms of digital representation as something that requires attention to the material substrates of even the most ephemeral practices.

Against Convergence; For Syncretism

27 It is a truism of the digital age that media have lost their specificity, that art history's cherished formal properties have been consigned to the dustbin of history, replaced by elaborately sequenced but otherwise undifferentiated combinations of zeroes and ones. The rhetoric of digital convergence began in the research laboratories at Xerox PARC in the late 1960s and has been a powerful trope of digital culture ever since. The concept proved agreeable to the computer and entertainment industries as they sought to articulate a vision of technology to consumers eager to purchase each successive generation of media technologies en route toward one vast interoperable digital system. Convergence also works effectively at the level of practice by describing the multifunctional software tools used by digital designers who often move fluidly across boundaries of sound and image editing, visual effects, CGI, interface design, and animation. Finally, convergence offers a useful model for understanding what is happening at the corporate level through mergers and the vertical conglomeration of media and technology industries.

28 For some theorists, however, convergence marks a dangerous turn away from the specificity of individual media. Friedrich Kittler, in *Gramophone, Film, Typewriter* [Kittler 1999], describes the situation with what seems to be a rising sense of panic:

> Before the end, something is coming to an end. The general digitization of channels and information erases the differences among individual media. Sound and image, voice and text, are reduced to surface effects, known to consumers as interface. […] And once optical fiber networks turn formerly distinct data flows into a standardized series of digitized numbers, any medium can be translated into any other. […] a total media link on a digital base will erase the very concept of medium [Kittler 1999, 1]

For Kittler, these undifferentiated streams of digital information threaten to obviate not only discrete media, but the human bodies once capable of perceiving them. The euphoric dissolution of media and bodies resonated in digital theories of the late 1990s that emphasized the transition from atoms to bits, and the celebratory figuring of digital media as ethereal, disembodied, *cyber*. The ideology of dematerialization — what Lunenfeld calls “vapor theory” — divorces the products and practices of digital culture from their position in history and in the socially and materially grounded circumstances of their construction.

29 According to this model, not only is it impossible for non-specialists to *understand* the workings of digital technology, but a concomitant “myth of transparency” identified by Laura Marks renders the material substrates of computer technology *invisible*.[16] The promise of transparent, ideally functioning technology, Marks argues, taps into latent desires for virtual immortality. When we are reminded of the physicality of computers (e.g., via their propensity for crashing), we are also reminded of their imminent obsolescence and with it our own mortality. As a corrective, Marks suggests looking for “digital artworks that refer to the social circumstances in which they were produced, or that draw attention to the physical platforms on which they were built” [Marks 2000]. For Marks, one such response lies in the fetishization of older, deliberately low-tech art forms such as ASCII art that draws attention to the physical shapes of letters on the printed page.[17]

30 Another alternative to the homogenizing effect of convergence may be found in the language of cultural anthropology. The term syncretism, which is used to describe the layering of cultural practices brought about by colonialism or

immigration — the pantheistic worship of Catholic saints in the Santeria religion, for example — may also be repurposed to designate the layering of technological practices within digital culture. Unlike convergence, a syncretic relationship does not imply the erasure or collapse of distinct practices. Rather, it describes the combination of disjunctive elements into a functional relationship that bears the continued traces of each object's former existence. One consequence of the rhetorical shift from convergence to syncretism is the potential foregrounding of historicity. Where convergence tends to be ahistorical, syncretism emphasizes the temporal gaps between objects and artifacts that remain embedded in their historical and cultural moments — not simply in a technological register, but in terms of their original cultural resonance. The concept of technological syncretism, then, permits an understanding of digital media with respect for the material elements of which they are constituted. The hybrid works examined here announce a relationship to their medium that invites us to ask the *right* questions about how they are constructed and about the potential relevance of medium specificity for understanding their importance. Arguably, it is through the foregrounding rather than the effacement of the material substrates underlying certain instances of digital media, that we find the most suggestive and historiographically relevant traces.

Notes

[1] Of course there are notable exceptions, especially Holly Willis' *New Digital Cinema: Reinventing the Moving Image* [Willis 2005]. This is as good a time as any to acknowledge my profound indebtedness to Holly Willis' thoughtful engagement with this body of work during her four year tenure as editor-in-chief of *Res Magazine* and co-curator of the ResFest, a traveling festival responsible for promoting and exhibiting some of the most interesting short form media of the past decade. Also of interest is Andrew Darley's *Visual Digital Culture: Surface Play and Spectacle in New Media Genres* [Darley 2000], which dealt with a previous generation of music video, and Scott Bukatman's *Matters of Gravity: Special Effects and Supermen in the 20th Century* [Bukatman 2003], which is particularly useful for its commentary on the problematic role of pleasure for academics who are concerned with popular media.

[2] The primary cultural vehicles for this work have been limited to festivals, trade publications and specialty DVD releases, such as the US's *Res/fest*; the UK's *onedotzero* and *Ninjatune*; and Japan's *Gas TV*.

[3] I would argue that this term is capacious and porous enough, even acknowledging its previous uses, to suggest a type of media art practice that is formally or politically experimental, innovative or provocative and I ask the reader's indulgence in accepting this as an operational definition of “avant-garde” media art.

[4] See David James, *Allegories of Cinema: American Film in the Sixties* [James 1989].

[5] From my perspective, both Nichols and Crary choose highly unfortunate terms for describing the *real* world. Where Nichols writes about the “historical” world; Crary opts for “optically perceived” world, both of which introduce more complications than they dissolve.

[6] The group's initial software release, Democracy Player, is a free, open source program that supports a democratic vision of Internet-based television: http://www.getdemocracy.com.

[7] This position, of course, grows increasingly ironic in light of the case mounted by the Justice Department against CAE member Steve Kurtz as retaliation for the group's activism with regard to biotechnology.

[8] *Electronic Civil Disobedience and Other Unpopular Ideas* was also the title of CAE's previous book [CAE 2001].

[9] Robert Greenwald's well-meaning but overwrought documentary about Fox News, *Outfoxed: Rupert Murdoch's War on Journalism* [Greenwald 2004], performs a similarly manipulative rhetorical maneuver in illustrating its critiques against the network with rapid fire montage sequences culled from hundreds or perhaps thousands of hours of recorded broadcasts. The result is a kind of temporary, rhetorical assault that might seem discursively dishonest and unconvincing to anyone who is not already aligned with the film politically. For me, what makes Outfoxed interesting is Greenwald's decision to release his original interview materials into the public domain to be freely used by others — which again underscores the importance of the peer network over the individual artwork as a primary site of political resistance.

[10] I view the linguistic mutation of Nourse's video as distinct from other appropriative practices in politically engaged documentary and avant-garde film, such as Emile de Antonio's *In the Year of the Pig* (1968) or Charles Ridley's *Panzer Ballet* (1940), in which propaganda images are given oppositional meanings through reediting and recontextualization.

[11] http://www.wildernesspuppets.net

[12] The system works with any piece of video footage but Lattanzi recommends using content such as pornography, surveillance footage, or home movies.

[13] Another example is Japanese filmmaker Sueoka Ichiro, who has completed a series of short films and gallery-based installations titled "Requiem for Avant-Garde Film." Sueoka's body of work includes titles such as *A Film in Which There did NOT Appear Sprocket Holes, Edge Lettering without Dirt Particles*, which references George Landow's *Film in Which There Appear Sprocket Holes, Edge Lettering, Dirt Particles and etc.* (1966, 16mm, 4mins, US); *A flick film in which there appear Liz and Franky is composed under the score of ARNULF RAINER by P. Kubelka on NTSC* (2000), which uses footage of Elizabeth Taylor from *Elephant Walk* (1954) and Frank Sinatra from *Come Blow Your Horn* (1963) to substitute for the alternating white and black frames of Kubelka's *Arnulf Rainer* (1960); and *Studies for Serene Velocity* (2003), which offers a direct homage to Ernie Gehr's *Serene Velocity*, exploring the length of a hallway through rapidly varying focal lengths.

[14] In *The Language of New Media* [Manovich 2001], Manovich somewhat ominously predicts a day when "given enough time and money, one can create what will be the ultimate digital film: 90 minutes, 129,600 frames completely painted by hand from scratch, but indistinguishable in appearance from live photography."

[15] Ironically, *Fast Film* shares a material mode of production with the films in the Library of Congress' Paper Print Collection. This collection was responsible for the preservation of about 3000 films made prior to 1912 when printing images on rolls of paper was the only way to register a copyright; and while the nitrate originals have long since disintegrated or combusted, the paper prints have remained in good condition. A related area to consider are the continuities with the paper base of early computing, including the Turing machine and the punch card-based Hollerith machine.

[16] Another way to think about this is in terms of a shift, which has roughly straddled the turn of the 20th - 21st centuries, from a culture that was defined by visuality — e.g., the image saturation of television, movies and advertising — to one that is on its way to being defined, if not by invisibility, then by the tension between visibility and invisibility as intangible global networks and an information economy continue to serve as a staging area for cultural anxieties. This is perhaps most painfully apparent in the practice of color-coded terror alerts which seek to articulate the nation's fear of invisible "sleeper cells" and international terror networks in the visible register.

[17] Indeed a sub-genre of ASCII-based videos has appeared in recent years including the Beck video for *Black Tambourine* directed by Associates in Science; the all ASCII short film *The Case of the Eidetic Child* directed by Ryan McGinness and panOptic; and Yoshi Sodeoka's *ASCII Bush*, which converts George H.W. Bush's 1991 and George W. Bush's 2003 State of the Union addresses into online ASCII files; http://www.turbulence.org/spotlight/ASCII_BUSH/.

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